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NEW ORLEANS
MEDICAL AND SURGICAL
JOURNAL

INDEX TO VOLUME SEVENTY-TWO

JULY, 1919

TO

JUNE, 1920

NEW ORLEANS,
L. GRAHAM CO., LTD., 430-432 COMMON STREET

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 (Lieut. Col.)
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 (Capt.)</p> |
|---|--|



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EDITORS :

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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Vol. 72

JULY, 1919

No. 1

EDITORIAL

DREAMS.

There was never a time when psychanalysis was so extant as at the present. Individuals, groups, nations and the world at large have been in psychic chaos for the past five years. It is not certain when they will emerge from this state. The conflict of forces of communistic growth and those of conservative democracy is on, and already the doom of royal prerogative has been sealed. The struggle must continue until the grinding of crude theories into finished programs is complete. The morbid exuberances of riot and unmeasured massacre seem necessary to a world's revolution into

better planes; whether necessary or not, the worst of the evils of civilization do occur and the expressions of savagery seem a part of the scheme.

The life of the world in sane directions depends upon optimism among the righteous, for the logic of all revolutions points to the survival of the best and of the most wholesome. The trials are hard and the way uncertain, but the end must sometime be reached.

To every man, whatever his plane in the social structure, there comes the dream of his ideal, and he may change the scene, or alter the landscape, but always there survives his optimum desired.

We may all sit by the wayside and watch the world go by, engaging no part of its endeavor. For a time one may stop, but each is a part of the machinery, and, as his cog mates with its fellow, it must turn and move on.

Along the way of every life there is now and then a resting place, and to some it is permitted to abide, but, to many, only when the day's work is done and when the evening shadows fall, only too fast.

Meantime, to all it is permitted to dream, some while the stress of labor is at its height, to others as half-conscious harbingers of better things—but to all as the fulfillment of the other brain which guides the lesser part.

Dreams are unconscious thoughts; continued vaporings of events transpired; froth of deeper feelings under control; breaks in the system of logical physiological function, finding expression in subconscious emotions, out of control and irresponsible, carrying the dreamer into picture-land, bounded by the limits only of the imagination, free to span the universe, and to compass its worlds and all that in them is.

To Kipling, in the "Brushwood Boy," there were many and devious ways in his land of dreams, but they were often navigated as his dream recurred.

To the seer, dreams of moment prophesied their own realization, not, perforce, in kind, but usually by contraries.

If dreams came true! How often in the world of every one does this question arise? How we would frame our dreams to meet that realization, if we could!

That dreams are more than brain-cells on a holiday, history takes oft occasion to refute. Our societies of psychic research have too

many instances of waking dream experiences to make it doubtful that there is short distance from a waking and a sleeping dream.

The visions of far-distant events, in space and even in time, have been often verified, and it is no longer doubted, with persons so psychically attuned as to know without speech the thoughts of each other, that distance is no barrier to the transference of such mental energy. We have come to know that thought is ponderable, therefore physical, and perhaps as material as sound, which is energy transformed. Such transformation is capable of so vast a number of interpretations that it stands for the measure of the higher senses of speech and of expression, as well as of emotion. If thought parallels sound in its physical existence, it is only a question of interpretation to allow its use—in psychophysical ways. The voice carries over space in the wireless telephone; thought is almost a part of speech; in fact, it is the principle of speech, as it is its factor. Thought, therefore, may carry as well. If we may project speech through space so that it reaches its receptor when properly attuned, so may thought; and if speech and thought may carry from one being to another being, we may project our dreams for other minds to ponder, or we may incite them in ourselves by repeated subconscious sounds.

Unfinished thoughts sounding in a receptive mind, just half asleep, may grow into waves of potency, and so develop into story or into practical purpose as the power to interpret them is controlled.

The emotional side of man is constantly reaching for the invisible world. Thoughts projected may lie about us as do the particles of sound or more material things—floating in the ether without course or direction, making for a receptive mind to take them on and carry them to their conclusion. Spiritually we are on the eve of discovery. The hypnotic subject commits acts of involuntary direction, under the control of the mental force of the brain directing the suggestion. We are ready to accept suggestions at all times, either from without or from within. The emotions, mental and physical, are often directed without the necessity of speech, and it is only when death stops the physical that we realize the limitations of such contact. Does it go on after? Let us dream on.

OUR THANKS.

We wish to express our keen appreciation of and our sincere thanks for the many kind words of congratulation offered the *JOURNAL* on the occasion of its seventy-fifth anniversary.

In order to convey the gist of most of them to our readers and friends, without the least intention of minimizing the value of any other mention, we may be pardoned for quoting the following from our old friend, the *Indianapolis Medical Journal*:

“The editors have lived up to the ideal of the founders, which was a high standard. Whatever can be said of the best journals, can be said of this one. It has been our pleasure to abstract from it frequently. Dr. Brayton has often made complimentary and personal reference to the editors. We offer, in the highest sense, congratulations, and may the *Journal* and its eminent editors and their co-workers continue to be blessed with success, prosperity and the best the world affords.”

S. E. EARP.

THE A. M. A. 1920 MEETING.

Well, we have got it! The next meeting of the American Medical Association will be held in New Orleans in 1920, probably either the last week of April or the first week in May. We hope the exact date will soon be decided upon by the Board of Trustees, not only for the benefit of our preparations locally, but also because, in our opinion, it should have a bearing on the date of our State Society meeting, and there should be time enough given to weigh the matter carefully.

The delegates from Louisiana and the delegation from New Orleans deserve a great deal of credit for obtaining the meeting, as it was at first claimed that another city had it secured. The younger members of the Orleans Parish Medical Society, especially, have been very enthusiastic in their desire to have the meeting held here, hence they deserve the greater glory, while the greater share of the work will fall upon them.

All of us, however, must stand by them loyally; also, as the invitation came as well from the State Society, the profession of the whole State must contribute its share towards making the 1920 meeting an immense success.

PRESIDENT'S ADDRESS.*

By W. H. KNOLLE, M. D., New Orleans, La.

As I sat in my coach on the way to the convention in this beautiful city I watched the raindrops trickling down the window-panes. They caused me to marvel at the enormous possibility of each raindrop as it trickled down on its ultimate way to form some pellucid and sparkling stream which, gurgling and laughing merrily on, like an elfin sprite on its way to an engagement with some other stream which it would join to form a rivulet, which in turn, united with scores of other rivulets, would form an enormous, thundering stream, catapulting its way onward to whatever obstacles it might reach, and, reaching it, would cascade thunderously over its side into a gigantic waterfall, striking on the bottom with crashing force and breaking into a spray of iridescent beauty borrowed from the sparkling rays of the sun, leaving on the rocks forever its mark, so that in future generations one would know that a force had visited there. This, gentlemen, symbolizes your Louisiana State Medical Society.

In the beginning of its integral unit the doctor, gravitating into his local organization, uniting into a body, forceful with possibilities and resourcefulness—in its humaneness and good to the people as beautiful as the iridescent spray of such a powerful waterfall.

Fearing that I may become poetic or esoteric, I revert to other channels and make, what is usual, the President's recommendations.

It is painful to drop back to the commonplace, but recommendations cannot be overlooked. Recommendations, I said, and might also say, with emphasis, commendations, because commendations are indeed apropos.

Your body, through its integral parts, its executive body, the House of Delegates and other enthusiastic, hard workers amongst the members, has made commendations necessary. I wish to extend my thanks to them, because without their assistance I feel that my term, on account of inactive conditions which existed due to the enormous demands of the war and marring ravages of epidemic diseases, which took enormous toll, not only from the life, but from the activity and the working possibilities of our Society, would have made my term very unpromising. Therefore my enthusiasm and

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

thanks, you see, are sincere, because, laboring under these enormous disadvantages, these men have helped me to complete what is to-day, to my mind, a brilliant meeting.

As I have before stated, this series of commendations would not be complete without a reference to the work done by the Louisiana State Board of Medical Examiners and its worthy Secretary. As Dr. Pierson took occasion to tell you the other day, the task undertaken by our worthy colleague was colossal and monumental. Of course, the achievement of it was facilitated by war conditions, but this does not detract either from its size or its work, and my hope is that each one of you individually will unite to form a solid unit to stand behind the Board and help enforce the medical law and requirements enacted and asked for by them. When you have done that you will have in a small way helped do your share toward measuring up to the efforts of the Secretary.

While I am in the mood for commendation let me commend the committee which inspired the thought for unification of the domiciles of the Orleans Parish Medical Society, the Louisiana State Medical Society and the Board of Medical Examiners. The idea was a rare one and its fulfillment was an achievement. The work has become thoroughly systematized, wonderfully efficient—not that it was not efficient formerly, because your former Secretary and his working force had established a magnificent standard of efficiency, and to call for a vote of commendation when such a marvellous precedent had been established demonstrates how greatly this combination is beneficial to this organization. This efficiency any one of you may readily ascertain by stepping down to our little burg, New Orleans, which, God bless it, may remain as ever splendidly smiling and cosmopolitan, in spite of prohibition. If you gentlemen, as I have said, will step down there at any time and see the workings of this trebly combined institution you will also marvel at its efficiency.

And while I am commending I would recommend to the executive body of this organization and to the Budget and Finance Committee that the salary of the present incumbent of the position of secretary-treasurer-stenographer be increased from \$37.50 to \$45 per month as our pro rata of his salary. This, to my mind, would be nearer the requirements for the importance of the position and the wonderful manner in which the work is being fulfilled.

I desire also to commend the stand taken and work done by the House of Delegates in permanently instituting a fixed form of program. We may have had such a fixed form before, but time and the exigencies of impelling conditions have permanently altered and marred such arrangements, and I would recommend that, in furtherance of this program, the heads of each section would communicate with the Secretary six months before each meeting and let him know what has been done toward the preparation of a program for that year, and at that time the head of each section communicate with the different members of his special branch and ascertain the possibilities of preparing a paper, and also the nature thereof, and that, two months before the date of the meeting a complete list of authors and texts be in the hands of the Secretary, so that a fully-finished program be in the hands of the members of the Society at least forty-five days before each meeting, so that each member reading said program may be influenced by its text to attend the meeting.

I wish to commend the action of the executive body and also of the Budget and Finance Committee in urging the installation of a voucher system of checks, so as to facilitate the auditing of the finances and accounts of the Association, and believe this is a wise method, the wisdom of which will be demonstrated by the fruit it will bear.

Last, but not least—because we always save the best for the last—I wish to commend, thank and in whatever other way it may be possible to express gratification, the local committee, the dwellers in the beautiful land of Caddo, for their munificence and general geniality in their successful efforts of providing entertainment and accomplishing a most successful meeting. When war had reaped its tribute they resurrected the remnants and, like the prestidigitator, they brought forth the flower of hospitality, fragrant and pleasing.

A traveler, savoring of nature's beauties, on his way to his Eldorado, marvels at the length of the road. His goal reached, its beauties and magnificences lull him into quietude and comfort, leaves him forgetful—as a man is when interested in a beautiful production—to the final drop of the curtain—the play over. In other words, his habitat removed, his position relinquished, how short is his way home! Gentlemen, I am the traveler, homeward-bound. To you I wish to say that in the future the presidential chair of the Louisiana State Medical Society is to me like the peep

of the Peri at the gates of heaven. I have had it but to relinquish it. The relinquishing of it into competent hands is a satisfaction, because, in whatever path in life we may work, ever afterwards we feel a tender impulse in the interests of that estate, and whereas I am not in a position to state that it is without regret that I am no longer the President, yet I can state with absolute truthfulness the regret is tinctured with the pleasure of knowing that a capable man, a good man and a learned doctor is to assume the reins which I now relinquish, and I thank you for your kindness and assistance during the past year. I also congratulate you and feel that ultimately my congratulations will be yours in having as your worthy President the able representative from Rapides.

In the days to come, whereas I will no longer be your President, I will be proud to say I am still a member of a big, true-hearted, loyal and able institution of co-workers.

SMALL BUT VALUABLE POINTS IN PHYSICAL DIAGNOSIS.*

By ALLAN C. EUSTIS, B. S., Ph. B., M. D., New Orleans, La.

The importance of a correct diagnosis before any rational treatment, whether medical or surgical, is resorted to, is daily becoming more appreciated by the clinician. The older method of treating symptoms has given place to scientific study of our patients in an effort to find rather the cause of the symptoms, and even in the most remote rural settlements the microscope is fast ceasing to be merely an ornament in the physician's office. The routine examination of the blood and urine of all patients has long since ceased to be considered, even by the patients, as anything unusual, so that any knowledge that will aid in arriving at a correct diagnosis should be welcomed by the medical profession and should be sufficient excuse for the following brief review of a few points in diagnosis which have been of distinct assistance to me in the past few years.

(a) *Bronchophony Over Liver in Perforating Sub-Phrenic Abscess.*—Castaigne and Chiray¹ have called attention to signs of consolidation of the base of the right lung in certain cases of abscess of the liver in which the abscess has perforated the diaphragm, but also mention the frequency with which the con-

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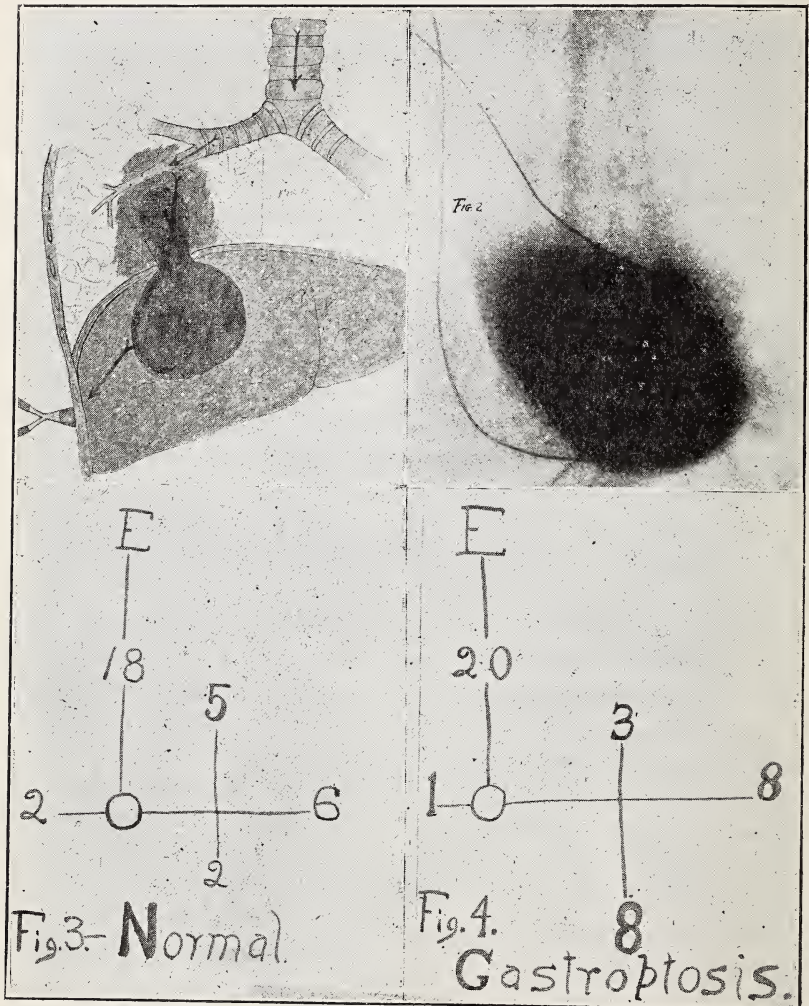
dition is associated with hydrothorax. When the latter exists, abscess of the liver is often never suspected, and such a case was reported by me several years ago.² In this case, bronchophony over the entire liver, especially marked in the axillary region, was the most prominent sign noted, with normal physical signs over the lung. In explanation of this, I will state that the hydrothorax had been drained and the abscess had ruptured into a bronchus when I first saw the patient.

The accompanying diagrammatic sketch illustrates how the voice-sounds are transmitted from the bronchus, through the abscess tract to the substance of the liver, and should be an unfailing sign of this fairly common emergency, so often overlooked until rupture of the abscess into the bronchus. (See Fig. I.) In each of the eight cases which I have seen the sign was uniformly present, and in four the diagnosis was made upon this sign even before the X-ray was taken. That, even after rupture, a correct diagnosis is often difficult, is well illustrated by a case which I recently saw. The patient was supposed to have tuberculosis and had been treated for bronchitis, which he undoubtedly had, for ten years. The marked bronchophony over the liver, with normal lung signs, except for a few mucous râles, led to the correct diagnosis of a perforated subphrenic abscess, which was first confirmed by a skiagraph, and later by operation by Dr. Carroll W. Allen.

(b) *An Improved Method for Outlining the Stomach by Scratching Auscultation.*—Scratching auscultation, with the bell of the stethoscope over the stomach, after distending the stomach with air or carbon dioxide from a Seidlitz powder, at one time was very much in vogue with gastro-enterologists, but after the advent of the Röntgen ray the results were proven to be so discordant that the method has fallen into disuse.

It is often important to determine the position of the stomach, especially in suspected visceroptosis, inasmuch as the colon is suspended from the latter by the gastro-colic omentum, and yet circumstances are often such that an immediate skiagraph of the gastrointestinal tract is not available. I was often confronted by these circumstances during my earlier rural practice, and to improve the technic of scratching auscultation of the stomach, then in use by gastro-enterologists, I substituted water for air in distending the stomach. This transforms the hollow organ into one of greater density, surrounded by more or less gaseous intestines and colon.

By observing certain precautions, the method has given me uniformly accurate results, except in very obese individuals, when checked up by skiagraphs, as will be noted in the accompanying print from a skiagraph taken in the erect position after the skin



ILLUSTRATING DR. EUSTIS' ARTICLE.

outline of the stomach had been rendered opaque by fastening a lead wire over the markings on same. (See Fig. II.)

With the abdomen exposed and the patient standing in front of the observer, who is seated in a chair, the former is instructed to

drink as many glasses of water as possible, during which the bell of the stethoscope is held over the normal position of the stomach. The water can be heard falling into the stomach with a splash, and a mark is made at this point upon the skin with a dermatographic pencil. As the patient continues to swallow, the bell of the stethoscope is moved downward and markings made at the lowest point at which the splashing is distinctly audible. This precaution is necessary, as it was found that a very atonic and dropped stomach would distend and come in contact with the abdominal walls only in the left iliac region, while splashing could be heard during deglutition over the entire area overlying the organ. After full distension of the stomach with water, which in the average individual requires from five to six ordinary glasses, but may require as many as ten or twelve where there is much dilatation, the scratching auscultation is proceeded with. The stethoscope is placed about two inches above the lowest markings, and, inasmuch as the anterior wall of the stomach is in contact with the abdominal walls at this site, the sounds from the scratching finger will be distinctly audible as soon as the finger overlaps that area. Markings are made at the points on the skin at which this occurs, and measurements made for comparison with skiagraphs. (See Figs. III and IV.)

In demonstrations of the method before my classes, even when tap-water is used, the area within the markings has been repeatedly observed by the men in attendance as distinctly colder than the surrounding skin. I do not even suggest this method as a substitute for the skiagraph, but believe there is a wide field for its usefulness when the latter is unobtainable.

(c) *Old but Neglected Points.*—Albumosuria in lobar pneumonia as a sign of impending crisis has been recognized for many years, but is seldom sought for in the management of such a case. This is no doubt due to the fact that we also find albumoses in the urine, in empyema and other conditions where large accumulations of pus occur, also in the stage of involution of the uterus after parturition. However, when these conditions can be excluded in a case of lobar pneumonia, it is very gratifying to note the advent of albumoses in the daily examination of the urine, and to feel that within the next twelve to twenty-four hours crisis will take place, and if proper stimulation is resorted to at this time all danger will have passed. The test is so simple that I am surprised that it is not oftener used. To about five c. c. of filtered urine in a test tube

is added an equal amount of Esbach's solution, which is a saturated solution of picric acid containing 10 per cent of citric acid, and the formula for which can be found in the appendix to the National Pharmacopœa. In the presence of albumoses a yellow precipitate is formed, causing a distinct cloudiness, which disappears on heating and reappears on cooling. In the presence of albumin or globulin, the coagulated precipitate of these two proteins is filtered off while hot, and the albumoses, which will pass through the filter while hot, will reprecipitate on cooling the filtrate. When I was engaged in general practice this simple test was often, to me, what the sight of shore is to the shipwrecked mariner, and having had occasion recently, in consultation, to again observe its value, I feel justified in calling it to your attention.

In closing, I wish only to mention other important points often overlooked, viz.; the routine percussion of the mediastinal dullness, reminding you that a large aneurism may exist without any bruit, and to urge a fluoroscopic examination of every case in which the area of mediastinal dullness anteriorly is in excess of five centimeters. By early diagnosis of aneurisms of the aorta we can, I believe, by absolute rest for a short while and by only moderate muscular exertion thereafter, combined with proper medicinal treatment, greatly improve the prognosis of such cases.

I wish also to mention the great frequency with which myocardial degeneration is found in cases of chronic cholecystitis, as well as the frequent association of the latter in cases of chronic appendicitis.

The more frequent use of the phenolsulphonephthallein test for renal function, the routine examination of the urine for urobilinogen and for indican, as well as for other abnormalities, a complete blood count of each new case and the more frequent use of the X-ray, will tend to more accurate diagnosis and greater benefit to mankind.

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DISCUSSION OF DR. EUSTIS' PAPER.

Dr. C. L. Eshleman, New Orleans: Dr. Eustis refers to my having written a thesis on albumosuria when I graduated. This is correct. I carried out the test on quite a number of cases, and continued to use it for a few years after I graduated, but then I began to find it was commonly positive in so many different conditions that I finally discontinued it. I have not used the test in cases of pneumonia recently.

Dr. Eustis spoke about a case of aneurysm where the man choked. Aneurysms of the aorta which cause choking usually lie between the sternum and the spinal column posteriorly. This is the narrowest part of the chest. If you keep that in mind you will very often realize why the patient with a small aneurysm chokes. If the aneurysm begins to point to one side or the other it gets out of the area of the middle line and the pressure signs are very materially relieved.

Dr. Oscar Dowling, New Orleans: The need of accurate diagnosis of many troubles has recently been forcibly brought to my attention. I know a case where a man was all ready to have one of his eyes removed on account of some trouble he had and it was discovered that it was due to a tooth, and when the tooth was corrected this trouble in the eye disappeared. Another instance, where a patient was brought to New Orleans, the doctor saying he had appendicitis. The doctor insisted that this patient be operated, but it was found later on that it was kidney trouble instead of appendicitis. Not long ago a doctor was treating a patient for septicemia following childbirth, and bacteriological examination revealed the fact that the patient had malaria, and the proper administration of quinin brought about prompt relief. I could tell you many other instances of this kind which would show the need of accurate diagnosis.

The Board has laboratories in different parts of the State, and any time these laboratories can give service to the doctors of the State they will be very glad to do so. I simply want to emphasize the point of Dr. Eustis' paper—that we should have accurate diagnosis.

Dr. E. M. Ellis, Crowley: The subject of diagnosis brings to my mind very forcibly a case which is impending now at Crowley, and one in which a number of people—in fact, the whole state—are now beginning to be interested. Two weeks ago to-day the woman began to complain of prostration and a little headache. She was then at full-time pregnancy and was expecting to be confined any day. The doctor thought she had a toxemia of pregnancy and proceeded to examine the urine, but found nothing in the urine to justify that. The patient was also running a little temperature—about 102°. The second day she grew somewhat stupid, and the third day she had a temperature of 103°, and was practically comatose. The doctor then brought her to Crowley and placed her in a sanitarium, where I saw her, and thought it was a case of pregnant toxemia, she had an unusual temperature for that. We examined the urine and found it absolutely negative; the blood was negative. Then we thought we perhaps were dealing with a dead fetus. We had an expert obstetrician there, who can always find the fetal heart, although I could not find it, and thought the uterus should be emptied. To make a long story short, he did find the fetal heart, so we eliminated that, but we could not tell what was the matter with the patient. We thought of sleeping sickness, but that night she had a normal delivery, the baby was living, and, although small, the delivery was normal and no infection of any kind. Next day she was more comatose than ever; her pupils reacted very little, though she did rouse to answer questions and to take nourishment. We were a little prejudiced against making a diagnosis of sleeping sickness, but the patient is there yet, Sunday night, with a temperature of 104° and thoroughly comatose. We tapped the spine and found the fluid negative. Dr. Paul made the laboratory test and reported negative. So we finally decided the patient has sleeping sickness. Her tem-

perature did go as high as 106°, the pulse was bad, and the respirations were from 24 to 30. I wish you could see her, because it is an interesting case.

Later—May 9, 1919.—The patient is still living, but somewhat improved, but yet comatose. She was seen during the interim by Dr. Smith, the Government expert, and he concurred in a diagnosis of true encephalitis.

Dr. P. J. Gelpi, New Orleans: I would like to present the facts in a urological case, showing most strongly the position taken by Dr. Eustis in his peroration—the necessity of accurate diagnosis. The case is this: A woman pregnant five months, taken with chill and high temperature. In the evening, depression; next morning, feeling about normal. About the same hour next day the same condition. This is repeated for several days, until the attending physician decided to administer quinin, thinking it was malaria. This was done for several days, but there was no abatement. As the patient complained of pains in the back, the possibility of kidney involvement was thought of; the urine was examined and some pus found. The case was referred to me, and on double catheterization I found a pure culture of colon bacilli in the right kidney. The reason for the doctor's anxiety was that the patient was getting weak, and it was a question of whether nature would cause an abortion or whether it would be necessary to bring it on. We proceeded to use a lavage of the kidney, with nitrate of silver, and following the first application there were no more chills or fever. This treatment was continued for two weeks, every other day, and I am glad to say that this woman went on to term and had a normal delivery. I think this strongly emphasizes the point Dr. Eustis wanted to bring out.

Dr. William Harris, New Orleans: I think we should not overlook the fact that Dr. Eustis is bringing before us some original work that represents observations of his own. Certainly, at least two of his procedures are original with him.

Dr. Eustis (closing): I want to say a few words more about albumosuria. Whenever you break up a proteid molecule in any way you will have albumoses formed. That is why you have albumosuria in large accumulations of pus in the body. The reason you have it in the parturient woman is that, after birth, there is an enzyme action whereby the muscle fibers of the uterus are digested, and this was the basis on which the Abderhalden test was developed. Likewise in lobar pneumonia. You will find albumosuria in lobar pneumonia during the period of crisis and the period of resolution. If you examine the urine of such a case every day, and if albumoses suddenly appear, one can predict the crisis in from twelve to twenty-four hours. This happened in a case quite recently, in consultation, and recalled the many times that the reaction had been of inestimable value when I was engaged in general practice.

AN EASY APPROACH IN THE OPERATION OF STRANGULATED HERNIAS.*

**AS FAR AS GETTING INTO THE SAC AND RELIEVING THE
CONSTRICTING BAND HAS BEEN STANDARDIZED.**

By J. A. HENDRICK, M. D., Shreveport, La.

GENTLEMEN—All the text-books that I have seen advise us to “make an incision over the center of the swelling, the successive layers of tissues being elevated between two pairs of dissecting forceps and divided, care being taken not to injure the gut.” If the strangulation had existed for any length of time, all the tissues are discolored, swollen, may be smooth and shiny, or may be roughened and adherent to adjacent tissues.

The operations I have seen by the most competent surgeons use the method of approaching the sac and relieving the constricting fibrous band. This operation is very difficult and time-consuming in some cases, and occasionally the intestine is punctured, as I saw done in Chicago, on my last visit, by a most competent surgeon. About five years ago, after about the same complication, it occurred to me that a different method of approach, where one would not have to go through the adherent, swollen, inflamed tissues to get to the ring, would certainly make the operation more simple. In my next strangulated hernia I made my incision as in an ordinary non-strangulated hernia, separated the tissues down to the peritoneum, just above the internal ring, entered the free peritoneal cavity about one inch internal to the constricting band, introduced my finger through the constricting ring, divided it over my finger, separated the adhesions between the sac and intestines easily with my fingers, and dealt with the condition as in an ordinary hernia. Since then I have used this method of approaching the sac in all my cases, and a number of our men in Shreveport have adopted this method with most gratifying results. It makes a strangulated inguinal hernia, where the parts are swollen, discolored and adherent, as easy as the simple hernia, and saves time, which is an important factor in this class of cases. This method is just as applicable under local as under general anesthesia.

DISCUSSION OF DR. HENDRICKS' PAPER.

Dr. H. B. Gessner, New Orleans: The technic described by Dr. Hendricks as applied to inguinal hernia is something new to me. The

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

only analogous technic with which I am acquainted is that employed in umbilical hernia. Here the operator enters the sac from below, so as to avoid the omentum or colon, both of which often adhere to the sac and makes it difficult to open the sac either anteriorly or superiorly. I would suggest that, in opening the peritoneum on the one side, it will be well to definitely expose or retract the deep epigastric vessel. If this is done, the operator might divide these vessels, a matter of no great consequence so far as the patient is concerned, but a source of annoyance to him as a piece of bad technic. I think Dr. Hendricks' suggestion an excellent one and intend to apply it the first opportunity that affords.

Dr. H. Leidenheimer, New Orleans: Dr. Gessner's remarks in regard to the method of reduction of umbilical hernia remind me of the Moskowitz principle in the cure of femoral hernia. He goes above Poupart's ligament, reduces the hernia from above, and closes the opening by suturing Gimbernat's ligament to Cooper's fascia. Dr. Hendricks has applied the same principle to strangulated inguinal hernia—reducing the bowel from above. It deserves a trial.

THE SIGNIFICANCE OF TONSILITIS IN THE CHILD.*

By C. P. GRAY, M. D., Monroe, La.

It is not the purpose of this paper to bring out anything particularly new or any new discovery, but to call your attention to what repeated attacks of tonsilitis or the chronically infected tonsil may mean to the growing child. It is more especially the after-effects to which I wish to call your attention. You all know what tonsilitis is and the treatment of same. You also know that it is more frequently found in childhood than in adults. The reason is that the tonsil of the child is largely composed of lymphoid tissue, which has a very low resisting power, after having been infected. This being true, I would first call your attention to the lymphatic supply of the tonsil and that these lymphatics empty into the deep lymphatics, and these in turn into the main lymphatic stream.

About ten years ago I read a paper before this Society calling attention to the tonsil as being a gateway of infection. Since that time we call it focal or metastatic infection, and to-day we look after the focus of infection, just as the dentist looks for the cause of toothache. I am thoroughly convinced that in the child we will find many of his ailments directly traceable to several past attacks of tonsilitis or to a chronically enlarged tonsil with its crypts full of pus. In other words, the child is carrying with him the source

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of infection and a quantity of poison, and is receiving a daily dose through the lymphatics. It is the after-effects on the child, which result from this daily dose, of which I wish to speak.

We all know that the old theory of rheumatism has been exploded and, as the late Dr. Murphy so well expressed it, we should call it metastasic arthritis. In many children who are sent to the doctor for supposed rheumatism and so-called "growing pains" we find the cause of this trouble in the tonsils.

Another very important after-effect is the anemia, especially in the poorer classes, whose children, through lack of proper nourishment, have a low resisting power.

I more especially want to call your attention to three conditions which result from these chronic tonsils, namely: Nephritis, mental apathy, and irregular heart action. If you gentlemen will examine the urine in these cases, or have it done by competent men, you will be surprised at the number of cases in which you will find both albumen and casts. The mental apathy is at times most marked. The child in school fails to be promoted to the next grade; he is called lazy by his playmates, because he does not join in the play games. The little fellow is not mentally insufficient nor is he lazy; he is a sick child and needs the attention of a good throat specialist. I daresay but what you throat men will bear me out in this. The irregular heart is a peculiar one; at times the heart's action is perfectly normal and at other times it is irregular in action, and on careful examination you will frequently find murmurs. There is no organic trouble which is evidenced by the fact that the condition is almost immediately removed as soon as proper attention is given.

Now, why do I say these conditions are the after-effects of the chronic tonsil? My best proof is how quickly the little fellow improves, how quickly the albumen disappears from his urine, how quickly his mentality improves, and how anxious he is to compete with his playmates and how rapidly the color comes back to his cheeks after the tonsils are removed.

Every child that has these chronic tonsils should be referred to a good throat man, and both the family physician and the child's family abide by his decision, which, if I am allowed to pre-judge, will be a complete removal of the tonsils.

DISCUSSION OF DR. GRAY'S PAPER.

Dr. D. C. Iles, Lake Charles: I want to say a word with reference to albumin found in children who suffer from chronic tonsilitis. Dr. Gray

probably has left the impression that all children do not have albumin in the urine who suffer from chronic tonsillitis. When I first began to do tonsillectomies I had all my patients examined and I found it present in nearly all of them, so much so that I could not get a man to give the anesthetic. Finally I gave up examining children, because I found it in all cases.

I also wish to say that I do not agree with the doctor when he says that children suffer so much from young teeth. The children four or five years of age who suffer with tonsillitis have baby teeth, and you do not get systemic infection from baby teeth as you do in grown people.

Dr. M. P. Boebinger, New Orleans: Dr. Gray's paper is interesting, not only to the general practitioner, but to the oto-laryngologist as well. I cannot agree with the doctor when he asserts that you find pus in the crypt. What one often finds is a caseous material, which is probably due to a degeneration of the delicate epithelium lining the crypt, plus certain organisms, food, etc. Pus seen in a crypt may mean a peri-tonsillar abscess.

Follicular tonsillitis in a chronic form may be treated by the suction, direct application to the crypt, or, if this fails, resort to surgical interference. This usually gives results, and one is surprised at the wonderful improvement in the patient.

Remember, that the tonsils are known as portals of entry, and the amount of trouble caused by tonsils is being daily minimized, as the laryngologist, general practitioner and public become more enlightened on the subject of diseased tonsils and their deleterious effect upon the human organism.

Dr. Homer Dupuy, New Orleans: There are two extremists on the question of tonsils—the one who recommends that the tonsils of every child should be removed, and the other who condemns the removal of any kind of a tonsil. The happy medium is that in which we surgically attack only diseased tonsils. Dr. Gray emphasizes that nephritis, cardiac trouble and systemic poisoning are frequently brought about in children through diseased tonsils. The supreme question is, What constitutes a diseased tonsil? If on inspection the tonsillar region is of a deep red, in marked contrast to the delicate pink of the soft palate and hard palate, we should have here a latent, pathologic affection of the tonsils. Milking such tonsils will bring out foul secretions. Certainly, a foul breath always argues one of three things: either diseased teeth, gastric troubles, or diseased tonsils. The history of recurrent sore throats is good evidence that the tonsils should bear the brunt of the blame in just such conditions as described by Dr. Gray. I do not quite agree with the doctor, however, relative to the cause of mental apathy in these young subjects. With him, I would admit the possibility that a low-grade toxemia from diseased tonsils can greatly hamper mental activity, but as the greater number of children who present diseased tonsils also have enlarged adenoids we are not justified in placing all the blame on the former. Let us not forget that the child with hypertrophied adenoids is frequently the victim of slight degrees of deafness. These subjects are called the "deaf of the school." The bread-and-meat questions of home life are easily handled by these, but submit them to some of the abstract work of the schoolroom, such as arithmetic, grammar and other studies, and we soon have a mentally apathetic child. This I do not believe is so much due to toxicity as to slight deafness.

Dr. J. L. Adams, Monroe: I will not attempt to improve upon the paper that has just been presented, but there is one feature I would like to call attention to, one of the after-effects, as he calls it, giving you a picture that I had forcibly brought before me a short time ago. This was a little girl about seven years of age sent from a neighboring town from a good physician. The parents brought along an open letter—and, let me tell you, when you send a patient to another man, do not send an open letter giving a description of the patient. In that letter he set forth this fact: "This is a case of rheumatism that has baffled everything in my text-books. The more I do, the worse the child grows. Please treat her and let me know the results."

On examining that child she had an exhausted, tired appearance, was unable to walk, and, on more careful examination of the heart, every symptom known to the cardiac region could be heard. Examining the urine, I found albumin present in large quantity. In fact, the child looked as though she was well-nigh beyond relief. After going over her I removed her tonsils, which were very much infected, not much enlarged, but carrying pockets of pus, and after these tonsils were removed in a remarkably short time the child had regained her normal appearance, began to brighten up, was able to walk, and in about three months was back in school and able to walk upstairs. Some men object to operating for this trouble, because they consider a general anesthetic unsafe in such cases. That experience has proven to me that you need not fear giving a child a general anesthetic. Remove the tonsils, remove the focus of infection, and you clear up the rheumatism.

(It was moved by Dr. Homer Dupuy that Dr. Gorman, a dental surgeon of New Orleans, have the privilege of the floor. Motion carried.)

Dr. J. A. Gorman, New Orleans: I thank you very much for the privilege of the floor. Dr. Dupuy stole some of my thunder right off the bat. Whenever you see infected tonsils, look for diseased teeth—gum-boils. Very often you will find the cause in the teeth. Inasmuch as I practice a specialty in dentistry—orthodontia—I want to call your attention to another cause of deformed mouth and face. We all know that large tonsils have a tendency to cut off the air passages as well as adenoids, and along the line of the teeth you will notice that where there is a pronounced defect of the tonsils they have a tendency to throw the lower jaw forward. This can be corrected so much better at the early ages by a slight appliance, so go back and look for the cause of these infected tonsils, which may be in the tooth.

MEDICAL ASPECTS OF SURGICAL CASES.*

By G. M. G. STAFFORD, B. A., M. D., Alexandria, La.

The vastness of the field to be covered by the student of modern medicine makes it imperative that he devote his attention to certain branches only, in order to reach any degree of perfection in the

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

practice of his profession. We may become expert in one or more specialties of this broad subject, but the whole is beyond the scope of any one mind. He who attempts it all will do so to the detriment of his patients, and yet there is not a branch which is not applicable in some manner to the average case; therefore the necessity of a close relationship between those aspiring to proficiency in the various allied subjects. This is particularly true as to internal medicine and surgery. The surgeon should either be an internist or he should have one at his elbow. On the other hand, the internist should not fail to recognize the surgical borderline, and he should have no conscientious scruples about referring the case, nor any "self-created" doubts as to the necessity of so doing. Unfortunately there has existed an undercurrent of feeling between the followings of these two greatest of the medical branches. It is not unusual to hear caustic remarks on both sides, each failing to appreciate the usefulness and necessity of the other. The internist takes upon himself the responsibility of curing a gastric or duodenal ulcer, and a few years later the poor patient pays the penalty. And, on the other side of the picture, we see the surgeon successfully removing a "chronic appendix," and the patient's pains and discomforts of auto-intoxication origin continuing as before, because the diagnosis had not been completed. The first important deduction to be made is that each side be conscientious enough to recognize where the usefulness of one ends and the other begins; and the second is that both branches are so closely allied that one constantly stands in need of the other.

I believe that, except in cases of dire emergency, no surgical operation should be attempted until the patient has been "gone over" by an internist, and furthermore that, after an operation of any magnitude, the medical man as well as the surgical should be in attendance on the case. Take the common operations upon the gall-bladder, intestines and pelvic organs; why should a patient be subjected to all the necessary risks involved until we know what his emunctories are doing and the condition of his respiratory and circulatory organs? There is no need of doing so, and surely he will take less risk and have less post-operative discomforts if the medical phase of the case is considered.

It is nothing unusual for cases to be operated on without even a urinalysis having been made, and once in a great while a poor

fellow will be subjected to a general anesthetic with a true diabetes existing, and then follows coma and the trip through the back door. The personal equation in every case is essential, and the surgeon can only obtain an insight of it by calling on the internist. Surgeons haven't time nor are they trained to think about bad teeth, infected gums and the various phases of auto-intoxication resulting, and yet all these and many other pathological conditions are of prime importance in every surgical case. The liver, kidneys and lungs are going to be put to the test after a major operation, and they should be in good "trim." The various imperfections of these organs can be either eliminated or improved, and how much safer for the patient, especially if he takes a general anesthetic.

You will often hear professional men say that some of the best surgical results they have seen were the cases who walked in from the street to be operated upon. That may be true, for every man who goes into battle is not killed, but such a step is not justified when a fatality occurs as a result of this carelessness, even once in a thousand cases. This fatal case might have been avoided had all the pathological possibilities mentioned above been looked into. The surgeon has a big responsibility on his shoulders in every case he undertakes, and why should he bear it alone, when a portion of it by right belongs to the medical man.

Let me give an example of the advantages of the two working together, a case which was related to me by a professional friend: A man in bad health and suffering from the usual symptoms of auto-intoxication, as shown by albuminuria and a heavy percentage of indican, was given the rest, purgation and dietetic treatment, but a cure was not effected. He improved under this treatment and the albumin disappeared, but the indican remained and the main symptoms did not clear up. The X-ray suggested trouble with the appendix and showed a stenosis of the splenic flexure of the colon. The case was referred to a surgeon for operation. A very long appendix, without any adhesions, but filled with fecal concretions, was removed. This would account for the entire condition of the patient, but after consultation it was decided to investigate the splenic flexure. A lump was felt, which proved to be a diverticulum filled with feces. This was corrected and the case turned out very nicely. Now if, by the proper treatment, the albuminuria had not been corrected, the kidneys might have been blocked up and a fatal termination ensued; and if the diverticulum had not been remedied

the constant absorption from the fecal mass and the colonic stasis, which would have resulted from the narrowing of the lumen, would have kept up the auto-intoxication. Much benefit necessarily results from the association of the representatives of both of these branches of the medical science in the post-operative care of patients. Great comfort will result from the avoidance of gas pains by the proper dietetic treatment, and surgeons, as a rule, are poor dietitians. To my certain knowledge the feeding of the patients is in many cases left to the discretion of the nurse and carried out in a routine manner.

We know that an intestinal paresis exists after abdominal operations; we also know that albuminous foods will increase the distension and pain, and furthermore that our patient, being at rest, requires very little protein nourishment; so, if we will put him on a strict carbohydrate diet to begin with and gradually increase it, we will save him lots of discomfort and relieve his liver and kidneys of much work and he will make a better recovery.

How often have we seen a patient after a gall-bladder operation given milk, and even eggs, within two days after leaving the operating-table, and then wonder why his nausea and vomiting returned and he was so slow in reaching the normal? We all know that a cholangitis, after such operations, is not unusual, and the subsequent symptoms of liver disturbance are necessarily manifested, and the patient who is sick and already toxic is given a rich protein diet. You can readily see how the medical man is muchly needed in every surgical case. There are so many medical features in every operative case and so many complications arising in a great number of them that one wonders how any patient can get along without the attendance of both of these representatives of the profession.

The plea I am making, and I believe rightly so, is that every surgical case has its medical phase, and, such being true, it is not fair to the patient nor to the surgeon himself, unless he be an internist—and few of them are—to go through with an operation of any magnitude, especially if a general anesthetic is given, unless a competent medical man is in attendance.

DISCUSSION OF DR. STAFFORD'S PAPER.

Dr. A. P. Crain, Shreveport: Coming from a town where there are nothing but surgeons, I want to express my appreciation of Dr. Stafford's paper. I heartily agree with everything he has said, with possibly one

exception, and that is in regard to duodenal or gastric ulcer. As a man who does quite a bit of surgical work, I want to say I do not believe in operating every gastric or duodenal ulcer I see. Frequently, unless the patient shows very marked surgical symptoms, I refer him to some of my confrères who can handle the case medically. I firmly believe that not every case of duodenal ulcer is a surgical case. I know of two cases I have had that have been referred, and have been cured medically. I believe that 50 per cent of these cases will do better under competent treatment than surgically. Every abdomen that is opened for gastric or duodenal ulcer is not always cured. We do not have many internists, but I am satisfied we would do better if we had a few more good internists at our elbow.

Dr. J. E. Knighton, Shreveport: I agree most heartily with most of the statements made by Dr. Stafford in his paper. His argument that surgeons and internists should work hand in hand is unanswerable, for in many instances the cases that were looked upon at an early date as medical cases have later proved to be surgical cases.

To my mind, the doctor's strongest argument in favor of the surgeon and the internist working together is his statement that cases of gastric and duodenal ulcers are treated medically and four or five years later pay the penalty for not having the surgical treatment early. His point of view seems to be that all cases of gastric and duodenal ulcer are surgical conditions. I would take issue with this view, and believe that if the doctors were more familiar with the work of the internist he would agree that there are cases of gastric and duodenal ulcer that are amenable to medical measures. I shall read a paper this afternoon dealing with this phase of the subject, and hope to bring the matter more clearly before you at that time.

Dr. A. E. Fossier, New Orleans: There should be, and there will be, a very much closer and better relationship between the surgeon and internist. There was a time when the surgeon held his ground alone, when he thought he was supreme as to diagnosis; consequently many a case was operated, and with after-results good as long as the case was in a sanitarium. But as soon as they were discharged the same old symptoms returned. Dr. Stafford mentioned one type of cases that particularly illustrates this—the cases in which a good appendix is taken out. I once heard a surgeon remark that the worst cases of appendicitis were those that did not have appendicitis. We know that in a good many of these cases as soon as there is a pain in the belly and a little temperature the surgeon wants to operate. Of all the cases that come to the internist, these post-operative cases and those neurotic are the very hardest to treat. I want to say this: no surgeon has any business to open up a belly unless he has good cause, unless he has given the case time and attention, and is morally certain of his diagnosis, because any man who puts his hand into the abdominal cavity leaves his traces behind, and the patients are sometimes worse after the operation than before. Of course, when it is necessary, it must be done, but when it is not necessary I think it is the worst injury you can possibly do to any human being.

Dr. G. M. G. Stafford (closing): I want to say that I believe that all cases of gastric and duodenal ulcer are primarily surgical cases. I have treated them both medically and surgically; I have seen both sides of the case. I have treated gastric ulcers and had them improve and ap-

parently be well for a number of years, but when I follow these cases they invariably come back later on, and then it is too late. The only time to do anything for them is in the beginning, and when the internist flatters himself that he can cure a gastric or duodenal ulcer he will find, if he follows that case, that he is mistaken. It is a surgical case from the beginning. That is my belief.

AN OPERATION FOR AN UNERUPTED TOOTH AND THE RESTORATION OF THE PARTS BY ARTIFICIAL DENTURE, WITH PRESENTATION OF A CASE.*

By ANDREW G. FRIEDRICHS, M. D., New Orleans, La.

Colored female, age thirty, married, with two children, about two years ago began suffering with a severe pain about the face; this was followed with a swelling of the face on the left side, the pain continuing all the time. When the patient presented herself to me I found a dense, hard, bony mass; the growth was slow. Upon examining the mouth I found an abscessed tooth and concluded that the swelling was due to this abscess. The tooth was extracted. I thought this would have explained the condition. The socket was cureted and the abscess drained. The patient was discharged and I thought that the trouble would be relieved. She came back a few weeks later, with no improvement in her condition; the pain still very severe, especially at night.

I might mention that I had an X-ray picture taken before I extracted the tooth, as it is my custom never to proceed with any unusual condition without one. The skiagraph gave no indication of anything unusual. I made a further investigation and found the swelling to be an enlargement of the bone. I then concluded that it might be an odontoma adentigerous cyst, as both the bicuspid and cuspid were missing and in the arch, and had not been erupted. I had another skiagraph taken, with no better result than the first. The patient complained so much that it was necessary for me to make an attempt to relieve her. I concluded that I would chisel into the bony mass, through the alveolar process and superior maxillary bone. I found the bicuspid tooth imbedded in the bone. Position of the crown: The lower part at about the ala of the nose, extending upward towards the inner canthus of the eye; the position

*Read before meeting of Orleans Parish Medical Society, April 28, 1919. [Received for publication May 21, 1919.—Ebs.]

of the tooth is shown in the piece of bone which has been removed. The operation was performed on the 25th of last February, the wound healed up, and she has been free from any discomfort since, excepting the loss of bone in the mouth, which left a large hole in the upper jaw. Her phonation and mastication were interfered with; she ate with difficulty and could hardly speak. Being responsible for her condition, it behooved me to make her comfortable, so I have restored the removed parts with the missing teeth by an artificial denture. Her future existence will be without trial and tribulation, as she can now phonate and masticate and swallow as well as she ever did.

One of the most surprising things about all operations on the jaw and face is the fact that the surgeon who operates seems to give very little attention to the deformities which they occasion as the result of the operation. They seem to be satisfied whenever they operate and remove the cause of the trouble; no matter what may be the resulting deformity, they consider their effort a great success. In amputation of the limbs, they would consider themselves poor surgeons if the resulting stub was not of a character to make the use of the artificial limb practicable.

You would be surprised, in operating on the jaw, how seldom it is necessary to make external incisions. I contend that whenever an operation is contemplated upon the face or jaw the resulting deformity should be considered, and the incision should be so arranged as to occasion the least disfigurement. One of the most pitiful evidences of this was a case of removal of the superior maxillary. This patient was a man of refinement. The loss of tissue occasioned such a deformity that, being a man of an extremely sensitive nature, he shrank from society, would not even go back to his family, and finally drifted to a crosstie camp. As he expressed himself, he was hardly human and was forced to eat like an animal. His phonation was difficult, he could hardly speak above a whisper, and his disfigurement was very pronounced. He came to my clinic in the hospital, suffering with a lesion from a tooth on the opposite side, with the story above related. He told me that life had become a burden to him, that he had about reached the limit of his endurance, and he did not believe that life would be worth living if his condition could not be relieved. The lost maxillary was restored by an artificial appliance, his face deformity re-

lieved, his phonation, mastication and deglutition restored. He was a happy man.

This operation (removal of maxillary) was performed by a surgeon of prominence in Buffalo. This unfortunate man had suffered for five years before I saw him, and what appeals to me as most remarkable is the fact that this matter was allowed to go on so long, apparently unconscious that he could have gotten relief. This case occurred about twenty-five years ago. I could call attention to a great number of instances, but it would be but an iteration of the same story. You see a number of deformities walking around the streets of this city; these people must have some friend in our profession that could advise them, and, should they not be able to get the necessary attention anywhere else, at least send them to the Charity Hospital.

The literature of the profession is full of the many wonderful restorations of lost parts and in relieving the mutilations occasioned by injuries in this war. Even if you have not read about them you could not help but hear of them, so there can hardly be any reason why such conditions could exist with the present lights before us.

DISCUSSION OF PAPER OF DR. A. G. FRIEDRICHS.

Dr. Provosty: Emphasizing the necessity of having such pictures taken correctly, I would recite a case occurring some years ago in my service at the Charity Hospital. A young woman had come in with an enormous tumor of the upper jaw. On inspection I made a diagnosis of sarcoma, and the X-ray taken at the Charity Hospital confirmed the diagnosis. I was unwilling to do a disfiguring operation without better evidence of the existing condition. I had a picture taken again outside of the hospital, and the new picture showed an enormous tooth in the antrum, which was removed, and the patient recovered rapidly without disfigurement.

Dr. Gessner: I should like Dr. Friedrichs to explain why the impacted tooth did not show in the skiagraph he had taken. Further, I should like to know whether impaction is more common in the upper than in the lower jaw. Some twenty years ago I removed an upper-jaw osteoma in which was imbedded a cuspid tooth; the gap made was filled with an obturator made by a student of the New Orleans College of Dentistry.

Dr. Guthrie: The question is not put to me to answer. However, I will undertake to tell Dr. Gessner the reason why the radiograph did not show the unerupted tooth. The reason is that the radiograph was not taken at the proper angle. There is no reason why the picture should not show an unerupted tooth. If the radiograph is taken at the right angle it will show very well the shadow of an unerupted tooth.

Dr. Friedrichs (closing): In answer to Dr. Guthrie, I would say that

possibly the angle in which the picture was taken may explain why it did not show the two impacted teeth.

In reference to Dr. Provosty's case, he need not have feared the resulting deformity, as any deformity occasioned by the removal of any of the fixed part of the face can readily be corrected.

In reference to the frequency of impacted or unerupted teeth in the lower and upper jaw, the relative frequency, I would suppose the lower wisdom tooth represents the most frequent tooth in which this condition occurs; with this exception, the lower jaw seems to be free from complications of this kind. In the upper jaw all the teeth centrals, laterals, cuspids, bicuspid and molars are all at times involved, the cuspid leading in frequency. I do think the dental plate would not have shown the bicuspid tooth in my case, as it was above the alveolar process and in the maxillary bone. The dental film did show the cuspid.

THE CHARLATANRY OF A GENIUS.

By JOHN L. MARCHAND, M. D., New Orleans, La.

It now appears that the pronouncement and appeal of the ninety-three German professors to the civilized world, made in September, 1914, soon after the beginning of the world-war, was considered by the Hun to be a weak document, not on account of any lack in its intrinsic merits, but for the reason that it was subscribed to by an insufficient number of Hunnish men of letters and scientists; for, after the entrance of the Allied armies into Strasbourg, a similar document was found, promulgated in October, 1914, but subscribed to by *three thousand* professors and other scientists of Germany and German countries. This document, like its predecessor, was in extenuation of the barbarisms of the Hun.

In this open pronouncement it is stated that "Germany was not responsible for the outbreak of the war; that she did not violate the neutrality of Belgium; that she did not destroy Louvain; that her soldiers did not oppress the Belgian people nor commit any atrocities, and that militarism is the only safeguard of German civilization.

The open appeal is couched in the following words:

"Have faith in us. Believe that we shall carry on this war to the end as a civilized nation, to whom the legacy of a Goethe, a Bethoven and a Kant is just as sacred as is its hearths and homes.

"For this we pledge you our names and our honor."

This mess of untruths, the veracity and justice of which were vouched for by the honor of the ninety-three of Germany's scientific

élite, caused the French Academy of Medicine to drop from its list of associated members those German scientists who signed it. These names include that of Prof. Paul Ehrlich.

The finding of the identically worded manifesto with the voluminous affirmation had an effect evidently contrary to that expected by the Hun, for it increased the number of those with whom all connection has been severed by the Academy by eight, two of these being Austrians.

This "slap on the wrist" practically constitutes the extent, so far, to which retributive justice has been meted out to a self-convicted body of medical scientists by the medical profession, and this would naturally promote the belief that the full extent of the guilt of German medicine is to be measured by the stain placed upon the intellectual and moral integrity of Germanic scholars and men of science by their amazing prostitution to national lust, as demonstrated solely in the above pronouncement.

It requires only a cursory examination of medical history, however, to elicit very strong, if not really conclusive evidence, both direct and circumstantial, that the prostitution of German letters and science began many years before the promulgation of the above pseudo-justification of the rape of Belgium and Northern France; that the document under discussion really had one of its inceptions in an equally mendacious promulgation of German medical science, the erroneously named theory of Ehrlich, and that this latter named Teutonic emanation, a pure figment of the imagination of a Hunnish genius, if not advanced to primarily serve the same nefarious purpose as was the former, was persistently employed for this purpose in its application to infection.

Ehrlich's hypothesis of receptors, first evolved in explanation of the absorption of nutritive material, a purely physiological function, and afterwards employed in explanation of the parenteral action of toxic material, was finally applied, with the announcement of the antitoxins of diphtheria and tetanus, to all infection and its specific immunities, and so applied in direct refutation of all rational work done previously.

This was a direct "slap" at the masterly work of Louis Pasteur, in that, notwithstanding this immortal French chemist had finally and conclusively proved infection to be dependent upon the vitality of the pathogenic microörganism—Pasteur's *vitalistic principle*—

infection was *assumed* by Ehrlich and his co-workers to be dependent upon the ability of the microbe to secrete or produce specific toxic substances—Ehrlich's toxin idea.

Pasteur's vitalistic principle was a real theory, for the reason that it was based upon a fact, and one of fundamental importance, *vitalism*; but Ehrlich's toxin idea was a mere hypothesis, because it was based upon the suppositious action of a purely theoretical substance, the *toxin*—and one which still is a purely theoretical substance even to this day. Ehrlich's idea has never attained, nor can it ever attain, the dignity of a theory, as is sometimes the case with hypotheses, for the reason that it substituted one of the several symptoms of infection, *toxicity*, for its one and only cause, the *vitality* of the microorganism, and, hence, negated beforehand any chance of its exact correlation with the process the mechanism of which it was intended to explain. A theory must have a basis in fact, or in exact and relevant reasoning; but Ehrlich's hypothesis had a basis in neither.

Previous to Pasteur's conclusive work, several workers in medicine and allied fields of endeavor, among these some Germans, had become convinced that the familiar processes of decay of organic matter were caused by the presence and growth of microscopical entities, but Liebig, the German chemist, arbitrarily took a firm and aggressive stand against these views. He alleged that the presence of these microorganisms was purely incidental and in no way causative, and persisted in these untenable views, despite much corroborative work to the contrary, such as, for instance, Lister's historical application of Pasteur's principle to local infections, in which antiseptis had its birth.

Although Koch's work with the several microorganisms which he discovered was actually confirmatory of Pasteur's principle of vitalism, his researches with the *tubercle bacillus*, said to be responsible for his advocating the tubercle-protein for the treatment of the tuberculous process, were evidently faked to make them do not too great violence to Liebig's untenable stand, as well as to make them conform to the toxin-antitoxin idea, for this work has been substantiated by not one other worker. And, that the substitution of a symptom for the cause of infection, toxin for vitalism, became a source of worry to the wily Hun, note the obvious effort of Teutonic science to reconcile the toxin idea with the vitalistic.

principle by his claims that the former is an extension of the latter, while, in reality, it is its direct antithesis.

Villemin, a Frenchman, was the first to recognize the different manifestations of the tuberculous process to be due to a single cause, and Feran, a Spaniard, was the first to have the foresight and temerity to carry Pasteur's attenuation of virus a step farther and to use a devitalized bacterial protein therapeutically; yet no credit is given these men, more advanced than their time, by the German, his history regarding tuberculosis commencing with the discovery of the *tubercle bacillus*, the "toxin" of tuberculosis, to quote the German, and the beginning of the modern treatment of the malady dating from the employment of this "toxin," in reality the extremely attenuated virus of tuberculosis, the tuberculo-protein under the copyrighted name of *tuberculin*, notwithstanding the slaughter of the innocents attending its employment when controlled by the Teutonic conception of its nature, and the added fact that something approaching its rational employment really dates from the work of an Englishman, Wright, some years later, interpreted from an altogether different basis.

Although, again, the poisonous principle of snake venom, a toxin, was first studied by Mitchell and Reichert at the University of Pennsylvania, and animals were first immunized with the toxin by Sewall at the University of Michigan, a decade before the work with other toxins, including that of diphtheria, was undertaken in Ehrlich's laboratory, no mention of these facts is noticeable in the medical literature of the Hun—his history leading up to the modern studies of the very few infections caused by toxin-producing bacteria and indeed, of all other infections, dating from the announcement of antitoxin by von Behring, an event antedating the announcement of the same products made from the Pasteur Institute by such a short period of time as to make these two independent researches contemporaneous.

True to his traditions, the Hun copyrighted and patented his antitoxin products and exacted his pound of flesh for every dose administered, while the Frenchman invited the medical world to Paris, threw open the doors of the Pasteur Institute, and offered every facility at his command towards instructing in the preparation and the employment of these empirical but efficacious remedies.

Still later, taking advantage of Lister's early adaptation of Pas-

teur's revelation, as to the fundamental importance of the vitality of the pathogenic microorganisms, to the local sterilization of infected tissue, and of the well-recognized value of arsenic in the treatment of lues and similar infections, its employment here, and especially in lues, almost equidating that of mercury, Ehrlich evolved his organic arsenical preparation, arsenobenzol, for the general sterilization of infected tissues, and in so doing he not only conferred a benefit upon humanity, with a string to it, but gave the yet unrealized death-blow to his toxin-antitoxin idea.

For his painstaking thoroughness in the chemical researches here involved, all credit is his due and should be given unstintedly. For the commercial exploitation of "salvarsan," however, and for the cunning chicanery he exhibited in explaining its effects, he deserved to be held in utter contempt, for he here played truer to Hunnish form, and in more respects, probably, than in any other one of his many crimes against civilization and science.

By what means any similar process of manufacture of arsenobenzol became illegal in other countries than Germany, only the efficient commercial exploiting branch of Hunnish officialdom and its agents and dupes in the countries affected could probably explain. By what manner of reasoning the generally accepted German conception of infection and immunity, fundamentally dependent upon the toxin-antitoxin idea, could be reconciled with the plainly acknowledged devitalizing effects of arsenobenzol upon the causative microbe of lues, the perverted genius of Paul Ehrlich, which was responsible for this incongruous method of orientation, could probably alone have explained, just as it probably could alone have explained why the names of equally meritorious proprietary preparations were anathema to some of our best American medical publications, and that of "salvarsan" highly acceptable.

While it is true that Ehrlich really did acknowledge the sterilizing effects of "salvarsan," it is equally true that he did so with reservation, for he attributed to it *antitoxic* effect as well. The acknowledgment was forced, and does not redound to the credit of German medicine, while the attributing of *antitoxic* effects to salvarsan" must be regarded as the wildest of assumptions, as an arrogant assertion made to "save the face" of Teutonic science by the man whose mere unsubstantiated word was expected to carry the most weight in bolstering up the toxin-antitoxin idea of infec-

tion and immunity, here done violence, but, unfortunately for the prestige of Teutonic medical science, by the same man who also later pledged his name and honor that the German Government was guiltless of wrong, the German war machine a suckling dove, and German science a body of intellectual and moral integrity, in the face of the self-conviction of all three to the direct contrary, himself included.

How much more of Ehrlich's work, and, by the same token, that of his co-workers, all of equally Hunnish proclivities can be taken seriously, and how many advancements resulting from this work can be regarded other than pure emanations of the Hunnish scientific propagandist?

The answer is: Every single bit of this work that has not already been substantiated by exhaustive studies of the physiological effects of the *active principles* of foreign proteins, their isolated secretions and products, and any advancement set forth in the bastard terminology of Hunnish propaganda, with its indiscriminate use of such words as *antigen* and *antibody*, and *toxin* and *antitoxin*, all of ambiguous meaning and capable of the exact expression of not one fundamental idea—any advancement, in effect, not set forth, of absolute necessity, in the language of physiology.

For a score of years and more, medical science and art have been attempting to lucidly explain physiological manifestations by employing a terminology that has nothing in common with physiological phenomena, either normal or pathological, and that, having a basis in pure empiricism, the toxin-antitoxin idea, is capable of the exact explanation of only one thing, the Teutonic conception of infection and immunity. And, as this conception has been proving, for reasons already touched upon, more and more at valiance with the *facts* discovered during the development of our experimental and clinical work, and as this terminology necessarily taints everything it touches with Teutonism, the few real advances that have resulted from work so interpreted have been obtained at such a cost in timē, labor, material and questionable merit as to make a like price for future advancement seem prohibitive, while the most momentous and far-reaching results obtained have without question been the development of an apparently servile attitude towards the Hunnish scientist and the promotion of his propaganda.

And make no mistake, as the Hun, being innately incapable of

honest confession and just retribution considers himself, according to his method of orientation, now in greater need of propaganda than ever before, he is going to use every means of a past master at this nefarious game to make medicine in the future, as it has been in the past, and as it is even to-day, a means to serve this end.

Let us no longer aid him!

Let us not only follow the example of our French confrères and sever all connection with him, even to the exclusion of his scientific publications from our literature, which are really only half measures, but let us really mete out retributive justice by using, in so far as possible, only the plain, untainted language of physiology in our own expositions of work, even at the price of some slight inconvenience.

Thus would two very desirable ends be served: our present deplorable pleonasm would be remedied, and we would not be doing posthumous honor to a proven Hun with our almost every utterance.

COMMUNICATIONS

NEW ORLEANS, June 6, 1919.

Editors, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

DEAR SIRs—The last issue of the *JOURNAL* contains what is evidently a circular letter (since practically the same communication has appeared in other medical journals) from the director of the Hygienic Laboratory, Dr. G. W. McCoy, in reference to the preparation and administration of arsphenamin.

Dr. McCoy insists that the drug should not be given in concentrations greater than 0.1 gm. to each 30 c. c. of fluid, and that there should be allowed a minimum of two minutes for the intravenous injection of each 0.1 gm. of the drug. This requires, as he points out, not less than 180 c. c. of fluid and twelve minutes of time for the administration of the maximum dose of .6 gms. of arsphenamin. "Any physician," he says, "who fails to observe these precautions should be considered as directly responsible for serious results that follow the improper use of the drug."

It is far from our purpose to engage in contentious discussion with Dr. McCoy. It is only fair to recognize, however, that in the event of unpleasant sequelæ following the giving of arsphenamin—a possibility which all who are familiar with this preparation will

concede, be the method of dissolving and administering never so perfect—so absolute a statement from one who occupies the high position of Dr. McCoy contains possibilities of grave embarrassment for those physicians whose methods differ in these details from the irreducible minimum laid down by the director of the Hygienic Laboratory.

It is our opinion, founded upon elaborate personal experience with arsphenamin, both in dilute and concentrated solutions, that the giving of this drug in concentrated solution is equally as safe, to say the least, as its administration in the dilutions insisted upon by Dr. McCoy.

Nor has our experience shown the serious results that Dr. McCoy claims to follow the comparatively rapid injection of concentrated solutions. The number of our collective injections of arsphenamin in concentrated solution does not consist of hundreds, but of several thousands of such injections.

It is our opinion that the unpleasant sequelæ that occasionally follow the injection of arsphenamin are due to idiosyncrasy to arsenic on the part of the patient; to too frequent repetition of large doses; to faulty preparation of the solution, independent of the quantity of water used; or to undue toxicity of the drug itself.

Yours, etc.

(Signed) Jos. HUME, M. D.
 (Signed) P. J. KAHLE, M. D.
 (Signed) H. W. E. WALTHER, M. D.
 (Signed) W. C. REED, M. D.
 (Signed) A. NELKEN, M. D.

TREASURY DEPARTMENT

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 BUREAU VENEREAL DISEASES
 NEW ORLEANS, LA.
 STATE BOARD OF HEALTH

May 19, 1919.

Editors, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

Enclosed is a reply to the editorial in the May issue of your JOURNAL entitled "Some Psychology of Syphilis." If you have the space in your next issue, I would be thankful for its publication.

Yours very truly,
 WILLIAM EDLER,
Scientific Assistant, U. S. Public Health Service.

With great interest has the writer read your editorial entitled "Some Psychology of Syphilis." The question of syphilophobia is a very timely one considering the enormous amount of propaganda going on throughout the nation against syphilis and gonorrhoea. The important thing to my mind is to attempt to analyze whether the syphilophobiac is an asset or a menace.

Several statements and references are made in your editorial to give weight to the arguments presented; e. g., "as Fournier put it, lying is a symptom of syphilis". Fournier's much quoted statement at this day and age is unfortunate in view of modern interpretations of syphilitic phenomena. His statement was based on the fact that many neurosyphilitics gave no history of lues; ergo: they must be liars. To the modern neurologist, with his laboratory confreres as interpretive associates the neurosyphilitic has been proved to be a truth-teller rather than a liar because he really did not know he had ever had syphilis. Nowadays the burden of a syphilitic diagnosis is put upon the clinician and not upon the patient. The modern clinician does not ask the patient whether or not he has had syphilis, but tells him (the patient) whether or not the malady is a part of the syndrome.

As a matter of fact, the experience of neurologists and psychiatrists is that most patients with luetic involvement of the nervous system are either individuals who do not know they ever had lues, or their syphilis was a "light case" so that they have entirely forgotten it. In other words, the writer feels that your argument disproves precisely what you are trying to prove; namely, that phobiacs are prone to develop nervous syphilis. Not only does the patient fail to connect up his disease contracted fifteen or twenty years previously, but, unfortunately, the number of gall-stone and kidney operations on men with tabetic crises shows that frequently the physician stumbles over the diagnosis.

The modern neurologist has a far more scientific attitude toward this problem. First place, the majority of syphilophobiacs are individuals who never have had syphilis at all; secondly, he believes that spirochætal strains and high development in the biologic scale are largely predisposing factors; and, lastly and above all, he feels that *early* vigorous treatment militates greatly against subsequent involvement of the nervous system.

All of the data supplied on the State and City Boards' of Health

circulars has one object and that is to make the infected individual aware of the fact that he is dangerous to himself as well as to the community. I think that if we as physicians could properly orientate ourselves and bring this problem HOME; e. g., assume that this infected individual is the future husband of our daughter and the possible father of our grandchildren, perhaps it would help to straighten out in our minds whether the whole problem merits the energy being expended on it.

Louisiana went well "over the top" with its full quota of venereal disease. It is more than a coincidence that Oregon ranked so low in per centage of venereal disease. Five years of propaganda there has shown its value. A practical programme with co-operation by the physicians of this city and state will too show results. The question is has the city and state its ear to the ground to catch the recent trend of venereal disease control going on in the nation?

WILLIAM EDLER,
Scientific Asst.
 U. S. P. H. S.

IN REPLY.

We have no desire to be controversial with our correspondent, and our sole intention in further commentary is to submit that, in presenting an interesting opinion regarding syphilis of the nervous system, he has entirely missed the point of our editorial on "Some Psychology" of syphilis. If our correspondent had quoted our editorial more fully there might have been less occasion for his dissertation on nervous syphilis, which we really did not discuss. What we said was: "The syphilophobic was always frank; the syphilitic *for some time* the contrary—as Fournier put it, lying is a symptom of syphilis." Our reference to Fournier allows no such deduction as our correspondent imputes, namely: "His statement was based upon the fact that many neurosyphilitics gave no history of lues; ergo: they must be liars". Fournier, in discussing the psychasthenia of patent, *early syphilis*, made the statement which we quoted. One of us sat at his lecture and heard it and, as he was not discussing and did not discuss the phases of late syphilis, the deduction of our correspondent is his own and not Fournier's. We believe that we have not invited the commentary of our correspondent from the angle of his expressed opinion, as we were clear in

stating that the syphilitic "*for some time*" is not frank. We believe that a clinical experience with active, manifest, early exanthematous syphilis for nearly thirty years will permit us to state in terms used as facts of personal observation that the victim of syphilis during the secondaries often loses his *morale* and is given to such moral laxity that he will often deny what he knows to be the truth. The philosophy of late syphilis, or the balanced opinion of any neurologist, cannot controvert this fact.

The conclusion that we were trying to prove that "phobias are prone to develop nervous syphilis" is not correct. We were solely interested in demonstrating that the circular issued by the local Board of Health was meretricious. That our correspondent should have particularized one paragraph of our editorial and that he should have overlooked the main purpose with which most of the editorial deals, only concerns us in so much as it tends to cloud the issue.

Let us add, finally, that the JOURNAL is willing and anxious to further the work of venereal disease control, and will do so with all vigor, but we shall be unwilling to follow a lead which discounts the objective by unreasonable methods. The very fact that, since our editorial was written, the authorities have modified their regulations to meet our objections is sufficient justification for our effort.

CHASSAIGNAC AND DYER,
Editors.

NEWS AND COMMENT

CLOSING EXERCISES OF TULANE SCHOOL OF MEDICINE.—On June 12 the College of Medicine of the Tulane University of Louisiana, closed its 1918-1919 session and marked the occasion with appropriate exercises, which took place in the New Orleans French Opera House. The following graduates received their degrees as Doctors of Medicine: Phillip McKinley Awtrey, Claude Mosley Baker, John Alfred Beals, Dorf Bean, Stanford Ernest Bethea, Gilbert M. Billings, Ray Wellborn Blackmar, Mrs. Margaret Pauline Harrison Bowden, Milo James Brady, William Riley Brooksher, Jr., James Everett Bussey, Jorge Conrado Castellanos (y Cardoso), Victor Cefalu, Berney Sumner Clay, Beverly Woodfin Cobbs, Willie Sterling Crawford, Tolbert Clinton

Crowell, Russell Byron Davis, Joseph Paul Deignan, James Arl Dillman, Robert Gibbs Douglas, Jules Emile Dupuy, Rancier Burt Ehlinger, Henry Baetrous Faris, Miss Nell Elizabeth Ford, Joe M. Funderburk, Brooks David Good, Richard Alexander Hale, Romeo Rupert Halfacre, Arthur Alexander Hobbs, Jr., Walter Robert Holladay, Paul Dickson Holloway, Brantley Mettauer Johnson, Charles Harry Kirkpatrick, Henry Lofton Kitts, Wilkēs Adams Knolle, Richard Shaffer Kramer, James Osborne Lowe, Shirley Carlton Lyons, John Jett McGuire, Hugh Love McLaurin, Hugh Carroll McLeod, Edwin Guy McMillan, Miss Aldea Maher, Benjamin Manhoff, John Richard Martin, Charles White Millender, Anees Mogabgab, Harry Eldridge Murry, Paul Talmage Neely, John Kimball Parish, Jr., James Searcy Parker, Colvin C. Perdue, Philip Samuel Perkins, José Polanco (y Gonzalez), Harry Wooding Pritchett, Thomas Ludford Rennie, Florence Stephen Richard, William Goffrey Shultz, Euripides Silva, Jr., Benjamin Franklin Smith, Edwin B. Spilman, Archie Taylor, Albert Richard Thomas, Otis Richard Thompson, Robert Boyd Wallace, Thomas Mervelle Watson, Arthur William West, Earl Thomas White, William Washington Wilkerson, John Calvin Wilson, Irving Joseph Wolff, Bertram Frederick Woolsey.

In the School of Pharmacy, the following received their diplomas: Numa Pierre Breaux, Rudolfo del Castillo (y Ruiz), Henry Leon Dreyfus, Donald K. Mayer, Fernando Pérez (y Peña), Miss Consuelo Rodriguez Rey, Francisco Demetrio Santisteban (y Villegas).

Dr. Jacob Casson Gieger was awarded the Degree of Doctor of Public Health.

NEW ORLEANS POLYCLINIC.—The thirty-second annual session of the New Orleans Polyclinic closed June 7. Although confronted with many adversities, the enrollment was the largest in the history of the institution, there being a total of 283 matriculants, representing thirty States, Alaska, Mexico and China. The thirty-third session will open September 22, 1919.

ELECTRO-THERAPISTS MEET.—At the annual meeting of the Western Electro-Therapeutical Association, held in Kansas City the second week in May, the following officers were elected: President, Dr. Burton B. Grover, Colorado Springs; vice-presidents, Drs. Walter P. Grimes, Kansas City, and Theo. F. Clark, Eldorado, Kan.; secretary, Dr. Chas. Wood Fassett, Kansas City, Mo.; treas-

urer, Dr. Chas. Keown, Independence, Mo., and registrar, Dr. Enos A. Nelson, Phillipsburg, Kan.

PHARMACOPEIAL CONVENTION.—Dr. Harvey W. Wiley, Washington, D. C., president of the United States Pharmacopeial Convention, announces the tenth decennial convention, which will meet in Washington, D. C., on the second Tuesday of May, 1920, at 10 a. m., at a hall to be designated hereafter. He asks that all competent and designated bodies and authorities name and issue credentials to the affixed number of delegates to the convention, forwarding the credentials to Dr. Noble P. Barnes, the Arlington Hotel, Washington, D. C., assistant secretary of the convention.

HYGIENE MONTHLY DISCONTINUED.—With the April, 1919, number, the *Social Hygiene Monthly* came to an end. Information on the progress of the campaign will be continued, especially in the publications of the American Social Hygiene Association and through *Public Health Reports*, the official organ of the United States Public Health Service.

A NEW MEDICAL PUBLICATION.—The first issue of *Modern Medicine*, a publication to be devoted to the "application of medicine and allied sciences to industrial efficiency and national health," has just appeared and includes the *Interstate Medical Journal*. It is under the editorship of Drs. Alexander Lambert and S. S. Goldwater, and under the managing editorship of Mr. John A. Lapp. The magazine appears to be a clearing-house for progress in social medicine.

MORTALITY FOR NEW ORLEANS LOW.—According to the monthly report of Dr. W. H. Robin, Superintendent of Public Health, a new low record death rate for New Orleans was established in April, displacing September, 1916, the lowest death rate on record. The record for April was .85 under the former low record. Dr. Robin expressed the belief that the summer months will show a still further decline.

THE MISSISSIPPI STATE MEDICAL ASSOCIATION MEETING.—This association held its annual meeting in Hattiesburg, May 12-14, and elected the following officers: President, Dr. F. J. Underwood, Aberdeen; secretary, I. M. Dye, Clarksdale; treasurer, Dr. J. M. Buchanan, Meridian.

SUSIE GORDON RICHARDSON CLINIC OPENED.—The Susie Gordon Richardson Clinic of the Child Welfare Association of this city was opened on May 21 at 2054 St. Andrew street. Dr. M. Ruth McGuire and Mrs. Jane McCabe, both of the United States Children's Bureau, opened the clinic with a practical demonstration of the examination of babies before a class of Child Welfare nurses and workers. Dr. McGuire and Mrs. McCabe have been holding health conferences in the canning districts on the Gulf coast.

RAILWAY SURGEONS ELECT OFFICERS.—The Association of American Railway Chief Surgeons, which met in New York City, May 5 and 6, elected the following officers for the ensuing year: President, Dr. Clarence W. Hopkins, of Chicago; vice-president, Dr. Duncan Eve, Nashville, Tenn.; secretary-treasurer, Dr. Louis J. Mitchell, Chicago.

MEETING OF SPEECH DISORDER EXPERTS.—The National Society for the Study and Prevention of Speech Disorder will hold its summer meeting in Milwaukee, July 4, as one of the affiliated societies of the National Education Association. An advance program may be obtained by writing the secretary, Miss Marguerite Franklin, 110 Bay State Road, Boston.

QUARTERLY MEDICAL CLINICS.—A new publication made its appearance early in the year, under the name of *Quarterly Medical Clinics*. It has been established for the purpose of providing a medium of circulation for the work done at Augustana Hospital, Chicago, by Dr. Frank Smithies, in response to the request of students and physicians for the preservation of his clinics and lectures in a "more substantial form than loose mimeographed sheets." It is published by the Medicine and Surgery Publishing Company, St. Louis.

INQUIRY ON CHRISTIAN SCIENCE HEALING.—After having been under the care of a Christian Science healer for a week, the eight-year-old daughter of Andrew Walker, of Newark, N. J., died. The county physician testified at the hearing that the child died as a result of diphtheria, which could have been readily detected from the symptoms originally exhibited by the child. The law in New Jersey is that "parents of a child or any person upon whom the duty is imposed to care for a weaker person, owe it to that person to care for and protect him, to provide proper medical attendance,

and if, as a result of gross neglect, evincing a reckless disregard of human life, the child dies, the parent is guilty of manslaughter."

VENEREAL MANUAL FREE TO PHYSICIANS.—The United States Public Health Service announces that all physicians agreeing to cooperate with the service and their State Board of Health in the venereal disease program which has just been agreed on, will be furnished, either by the Public Health Service or the State Board of Health, with a copy of the "Manual for the Treatment of Venereal Diseases," published by the American Medical Association, first issued for use by medical officers of the army, and which has now been revised for civilian use, with a chapter on gonorrhoea in women.

EYE AND EAR MEN TO MEET.—The Pacific Coast Oto-Ophthalmological Society will hold its annual meeting at St. Francis Hotel, San Francisco, August 4 to 6. The secretary of the association is Dr. Aaron S. Green, Shreve Building, San Francisco.

AMPUTATES SOLDIER'S LEG WITH RAZOR.—Miss Marie P. Kouroyen, an American Red Cross nurse, performed a life-or-death operation on a soldier's leg in Drama, Macedonia, with a razor, a spool of cotton thread and a small quantity of ether and chloroform. Despite the prophecy of the local doctor that the soldier would not live through the night, Miss Kouroyen some time later received a visit from her patient walking on an artificial limb which had been provided for him.

AT THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE, held in Atlantic City, N. J., June 16 and 17, 1919, the following officers were elected to serve for the coming year: President, Dr. Henry J. Nichols, Washington, D. C.; vice-presidents, Dr. John M. Swan, Rochester, N. Y., and Dr. Karl F. Meyer, San Francisco, Cal.; secretary, Dr. Sidney K. Simon, New Orleans, La.; assistant secretary, Dr. J. Allen Smith, Philadelphia, Pa.; treasurer, Dr. Sidney K. Simon, New Orleans, La. Councillors: Dr. J. H. White, Washington, D. C.; Dr. V. C. Heiser, New York; Dr. C. L. Furbush, Philadelphia, Pa. New Orleans was selected as the next meeting place.

RED CROSS LEAGUE SOCIETIES.—National Red Cross headquarters has announced the formation, in Paris, of the League of Red Cross Societies, the purpose of which is to unify the Red Cross organiza-

tions of the world in a systematic effort to anticipate, diminish and relieve misery produced by disease and disaster.

REMOVALS.—Dr. Maurice C. Hall, from Detroit, Mich., to Zoological Division, B. A. I., Washington, D. C.

Dr. J. W. Plauché, from Ama to Plauchéville, La.

Dr. Roswell McClathery, from Oil City, La., to First National Bank Building, Colorado Springs, Colo.

PERSONALS.—Dr. John L. Marchand, formerly of the University of Pennsylvania, has removed to New Orleans and is now connected with the Diagnostic Clinic, 3601 Prytania street.

Major Walter J. Otis, formerly of McLean Hospital, Boston, has removed to New Orleans and is now connected with the Diagnostic Clinic, 3601 Prytania street.

Dr. Tom A. Williams has returned from eighteen months in France as neurological adviser to the Red Cross. His address is 1621 Connecticut avenue, Washington, D. C.

Admiral W. C. Braisted, Surgeon General of the Navy, was elected president of the A. M. A. at the recent meeting at Atlantic City.

Dr. Victor C. Vaughan, dean of the University of Michigan Medical School, was elected president of the Medical Veterans of the World War, with Rear Admiral E. R. Stitt, director of the United States Naval Medical School, as vice-president.

Dr. Isadore Dyer was elected to the Council on Medical Education of the A. M. A. for the five-year term.

Among the Louisiana men who have returned since our last list, from service in this country or abroad, are: Drs. John Smyth, Joseph Danna, G. B. Crozat, J. C. Menendez, G. C. Boudousquié, R. R. Ward, J. M. Hountha, W. B. Terhune, V. H. Fuchs, I. M. Gage, L. A. Hebert, R. P. McGowan, E. Moss, M. J. Couret, E. P. Ficklen, L. A. Fortier, P. G. Lacroix, J. H. Page, A. W. Rhyne, W. F. Scott, of New Orleans; Drs. J. McKowen, Baton Rouge; D. O. Sherman, Clarks; J. A. Coleman, Jena; D. I. Hirsch, Monroe; A. T. Palmer, Oakdale; P. K. Rand, Alexandria; W. L. Atkins, Athens; B. F. King, Clarks; R. C. Truitt, Jackson; A. C. Whittington, Bossier; A. G. McHenry, Monroe; P. H. Fleming, St. Martinville; W. L. Stewart, Welsh; H. V. Jones, Zona.

A WELCOME HOME STAG RECEPTION will be tendered to its members returned from service by the Orleans Parish Medical Society at an early date, to be announced.

DIED.—On June 7, 1919, Dr. Gally Wogan, of New Orleans.

On May 16, 1919, Dr. W. R. Terry, of Long Beach, Miss.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1919.

The Surgical Clinics of Chicago. April, 1919. Vol. 3, No. 2.

The Medical Clinics of North America. January, 1919.

THE MACMILLAN COMPANY, New York, 1919.

The Blind. Their Condition and the Work Being Done for Them in the United States.

THE YEAR BOOK PUBLISHERS, Chicago, 1919.

The Practical Medicine Series. Under the general editorial charge of Chas. L. Mix, A. M., M. D. Vol. 1: **General Medicine**, edited by Frank Billings, M. S., M. D., assisted by Burrell O. Raulston, A. B., M. D., and Bernard Fantus, M. S., M. D.

MASSON ET CIE, Paris, France, 1919.

Recherches Recentes Sur Les Icteres, par M. Brule.

Le Francais.

PAUL B. HOEBER, New York, 1919.

The Soldier's Heart and the Effort Syndrome, by Thomas Lewis, M. D., F. R. C. P., F. R. S., D. Sc.

GOVERNMENT PRINTING OFFICE, Washington, D. C.

Public Health Reports. Vol. 34, Nos. 17, 18, 19 and 20.

United States Naval Medical Bulletin. April, 1919.

MISCELLANEOUS:

The Control of Hookworm Disease by the Intensive Method, by H. H. Howard, M. D. (The Rockefeller Foundation International Health Board, New York City.)

A Plan for a More Effective Federal and State Health Administration, By Frederick L. Hoffman, LL. D.

Transactions of the American Surgical Association. Vol. 36. Edited by John F. Binnie, M. D. (William J. Dornan, Philadelphia, 1919.)

The Institution Quarterly. December 31, 1918, and March 31, 1919. (Printed by authority of the State of Illinois.)

REPRINTS.

Industries and the State Under Socialism, by Rome G. Brown.

Racial Factors of Delinquency, by Tom A. Williams, M. B., C. M.

Suicide and Civilization, by Tom A. Williams, M. B., C. M.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for May, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	2		2
Intermittent Fever (Malarial Cachexia)		1	1
Smallpox		1	1
Measles			
Scarlet Fever			
Whooping Cough	2		2
Diphtheria and Croup	1		1
Influenza	4	2	6
Cholera Nostras			
Pyemia and Septicemia		1	1
Tuberculosis	27	33	60
Cancer	37	7	44
Rheumatism and Gout	4	4	8
Diabetes	1	1	2
Alcoholism	1		1
Encephalitis and Meningitis	4	1	5
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	15	8	23
Paralysis	3		3
Convulsions of Infancy			
Other Diseases of Infancy	6	7	13
Tetanus			
Other Nervous Diseases	4	1	5
Heart Diseases	58	38	96
Bronchitis	1	4	5
Pneumonia and Broncho-Pneumonia	12	26	38
Other Respiratory Diseases	2		2
Ulcer of Stomach		1	1
Other Diseases of the Stomach	1	3	4
Diarrhea, Dysentery and Enteritis	15	15	30
Hernia, Intestinal Obstruction	4	4	8
Cirrhosis of Liver	5	3	8
Other Diseases of the Liver	3	1	4
Simple Peritonitis			
Appendicitis	1	2	3
Bright's Disease	24	9	33
Other Genito-Urinary Diseases	8	16	24
Puerperal Diseases	3	1	4
Senile Debility	4	1	5
Suicide	4	2	6
Injuries	26	18	44
All Other Causes	26	19	45
TOTAL	308	230	538

Still-born Children—White, 17; colored, 15; total, 32.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1,000 per Annum for month—White, 13.06; colored, 26.04; total, 16.60. Non-residents excluded, 15.25.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 29.89
 Mean temperature. 74
 Total precipitation. 7.02 inches
 Prevailing direction of wind, south.



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS:

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

COLLABORATORS:

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- S. K. SIMON, M. D., Secty. American Soc. of Tropical Medicine..... } *Ex-Officio*
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AUGUST, 1919

No. 2

EDITORIAL

BUTTONS.

When we were younger, rosebuds, gardenias, centaureas, small nosegays, and even "bachelor's buttons" were not uncommonly seen adorning the little eyelet or buttonhole in the left lapel of a gentleman's coat. Nowadays this is rare, except in the case of some old-fashioned fellow, who has forgotten the passing of the years.

Instead there is a multitude of buttons in evidence, and of such variety as to make it impossible to know the meaning of most of them.

The American starts young in his hunger for decorations—de-

prived, as he has been, of the various orders which, still abroad, have survived a decadent royalty.

The school-boy desires some gilded club-badge, later substituted by a fraternity emblem at college, and later increases his tokens by membership or degree insignia as he adds to his memberships in secret and benevolent organizations.

Moreover, guilds and societies of trades and professions multiply the buttons or badges as time goes on, until it would appear that special portfolios should be popular for the mere carrying of the lot.

Now comes the aftermath of the war, with the ardor of recent comradeship and the desire to perpetuate all sorts of associations. The company, army, navy, group, division or what, serves as the excuse for a new button.

The medical man who served in the war, at home or abroad, has not escaped. Already he is solicited to join the American Legion, the Medical Veterans of the World-War, the Society of Military Officers, and probably others are on the way.

The sartorial experts must soon take cognizance of the American habit and provide a proper place for display in the future male's garments in order that a proper array may be made of the accumulated insignia; otherwise it is hardly worth while to join such bodies, unless the buttons and badges can be worn so as to attract the notice of others who may have also forgotten them.

There can be no objection to reasonable organization of groups of men when there is definite purpose in such organization, but, when a multiplication of organizations occurs, where like purposes obtain in each, there should be some crystallization for better effort and, above all, there should be some reform in the button habit.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

INTRA-PERITONEAL RUPTURE OF THE BLADDER DURING PUERPERIUM.*

By W. KOHLMANN, M. D., New Orleans.

Rupture of the bladder is considered a very infrequent accident. Ziegner, in a monograph, mentions that in one of the hospitals in Berlin three cases came under observation out of 11,000 patients; in Bartholomew Hospital in London, two out of 17,000 patients, and in the Clinic in Halle, six out of 9,500 patients. Large statistics show, however, that rupture of the bladder is more frequent than was generally believed, and is found more often than ruptures of the liver, kidneys and spleen.

Rupture of the bladder may involve one or all three coats of the bladder. It may be *intrapertitoneal*, involving the peritoneal covering; *extraperitoneal*, involving the portion of the bladder *not* covered by peritoneum; or *subperitoneal*, when the mucous and muscular coats are ruptured, leaving the peritoneal covering intact, the urine diffusing under the peritoneal covering. The last variety is very uncommon.

This affection is found more often in men than in women, 90 per cent of the cases reported having occurred in adult males. Few cases only are reported in women, and these were mostly caused by complication with retroflexion of the pregnant uterus. In one case reported by Porter to the Obstetrical Society of London rupture of the bladder occurred during birth. The patient had not urinated for a long time, and suddenly felt something had given way in the abdomen. Soon distention set in and pulse got very fast. Forceps had to be used to deliver the child. Delivery was followed by laparotomy. Tear of the bladder one and one-half inches long was found and sutured. Rupture was considered due to extreme distention of the bladder.

The two cases, the details of which I am going to report, occurred

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

in women who had recently been delivered. In one case, the patient went through an absolutely normal delivery, while the other had to be subjected to a Cesarean operation.

Case 1. Mrs. T. J. F., age 28 years, admitted to Touro Infirmary September 8, 1918; discharged September 30, 1918. Father died of paralysis, aged 63; mother, aged 64, living and well; three sisters and four brothers living and well. One brother killed accidentally. Patient has been married four years. One child, three years of age; no miscarriages. Regular menstruation every twenty-eight days, duration four days; no pain. Patient does not remember any previous illnesses. In the delivery of the first child, three years ago, forceps were used. Second delivery was normal. Patient well nourished and developed.

Was admitted to Touro at 10:30 a. m., Sunday, September 8, 1918. Membranes had ruptured at 10 p. m. the night previous, and the pains began two hours afterward. At 11:30 a. m. she gave birth to a 7-pound, 3-ounce female child; normal delivery. Pituitrin, 1 c. c., and ergot, 1 dram, every four hours for twenty-four hours was given; rilox, 1 ounce, was given on the morning of the 9th.

The patient slept well the night of the 8th, the first night after delivery; did not complain on the 9th, and had a comfortable night. During this time there is a record, in the summary of the second day after delivery, of the patient having voided, it being noted on the first day that she had not voided either during the day or during that first night. Urine recorded as follows: September 8, day 0, night 0; September 9, day 1, night 1 (at 2 a. m.).

September 10 and 11 chart records urine passed, but no records of the amount or the time. On the 12th there is no notation as to urinary function.

The chart records the first complaint of pain the afternoon of the 10th; pain chiefly in the back. Patient complained of pain in early part of night, but slept well after midnight until 5 a. m.

On the 11th the patient complained still of pain in back and abdomen, and slept well that night.

On the 12th the patient complained of severe pain in abdomen, was given a purgative enema with good results, but no relief as to pain.

During examination of the abdomen, which was rather distended and painful by touch, patient felt something giving away, and suffered excruciating pain, accompanied by shock.

Patient continued suffering a great deal of pain during the afternoon, and getting worse generally, pulse increasing in rapidity—140 per minute.

At examination by myself at 6:30 p. m. patient presented the typical picture of an acute abdomen—greatly distended abdomen, general pain over abdomen. Temperature normal; pulse 140; respiration 38. Vaginal examination was negative.

Considering the previous history, probable diagnosis was rupture of ovarian cyst, and immediate operation was decided upon.

Operation, 7:45 p. m. Median incision below umbilicus. Evacuation of several gallons of light brownish liquid, which was odorless. Ovaries were normal. Large opening in posterior wall of bladder, three to four inches in length, was found; and closed by continued through-and-through suture, which was covered by interrupted Lembert suture. Abdomen was

drained by rubber dam and iodoform gauze (Mikulicz). Suture of abdominal wound in usual way. Pezzer catheter was introduced in bladder and removed at the end of the seventh day.

The patient made an easy recovery and left the hospital September 30, 1918.

Case No. 2. (Case of Dr. J. W. Newman, which he has kindly permitted me to use in my report.) Mrs. W. G., white, aged 38 years, admitted to Charity Hospital July 27, 1918. Measurements slightly below normal; history of convulsions given to interne on ambulance. No other history available. Patient deaf and dumb. Urine examination showed 26 per cent albumin.

On admission, morphia, one-quarter grain, was given in amphitheater. One hour thereafter another convulsion. Taking pelvic measurements into consideration, Cesarean section was performed, and a living child delivered. During first three to four days there was no nausea or distention. Pulse and respiration good.

July 28.—Patient complained of severe pain in abdomen. Slight distention. Pain and distention increased. Temperature 103°.

July 29.—Good night. Severe pain in morning. Urine voided with stool.

July 30.—Great deal of pain and distention.

July 31.—Same condition.

August 1.—Distention. Dressing changed. Profuse serous vaginal discharge of very offensive odor. Distention somewhat relieved by enema and pituitrin.

August 2.—Distention somewhat relieved.

August 3.—Free drainage of pus from abdominal wound. Incision was opened and drainage tube was introduced into abdominal cavity, followed by discharge of several quarts of straw-colored liquid without characteristic odor.

Patient became gradually weaker, and died the night of August 6.

Autopsy: Introduction of hand into abdomen allowed escape of straw-colored, weakly ammonia-scented fluid (about one gallon). Extensive adhesions of omentum to anterior surface of uterus and posterior surface of bladder; careful removal of omentum revealed rupture of bladder about an inch and a half in length on posterior surface.

Atony of the bladder, ulceration of the vesical walls and cystitis are predisposing causes of this occurrence. Several cases of rupture are reported where the bladder wall was found hypertrophied. In about half of the reported cases the bladder wall was found normal. A very important predisposing cause is drunkenness, especially if complicated with some form of external violence applied over the region of the bladder. Cabot draws special attention to the importance of intoxication. In this state there is a diminished reflex activity, and a man will neglect to empty the bladder, which leads to overdistention of the organ.

Traumatism, however slight, is generally the exciting cause. The

trauma may be so slight that in many cases a spontaneous rupture could be considered possible. Straining, not necessarily violent, during defecation, micturition and parturition has been known to produce rupture. Rupture has occurred in overdistention from injection of fluid preparatory to suprapubic operation and during anesthesia, when the bladder was already distended, no doubt due to increased intra-abdominal pressure. Rupture by contrecoup has occurred by the patient falling from a height and striking on feet or buttocks, even with a comparatively empty bladder.

The most frequent location of the rupture is the upper and posterior portion of the bladder, and this may be accounted for by the fact that the distended bladder lies in contact with the promontory of the sacrum. Force applied in front presses the distended organ against this bony point. Furthermore, the bladder wall is thinnest on this location, and only covered by peritoneum and the intestines. Most of the ruptures anteriorly are complicated with fracture of the pelvic bones.

The tear is usually linear, with ragged and everted edges. Even if there is usually only one wound in the bladder there are cases reported with several rents found. In many of the reported cases, as in the cases under our observation, the bleeding from the bladder wall was practically *nil*, showing that the bladder wall on the upper and posterior portion is thin and poorly nourished, predisposing this part of the organ to give way.

If the rupture is intraperitoneal and urine flows in the free abdominal cavity, then the fate of the patient depends, first of all, on whether the urine is sterile. In case cystitis is present, or careless catheterization infects the abdomen, prognosis is bad. Therefore it is justifiable, in case of suspicion of bladder rupture, to catheterize only once, and only when everything is ready for immediate laparotomy. The danger of infection is more important than the danger of urine intoxication. But, after all, the intoxication is not without importance, though in former years uremia, due to absorption after rupture, was exaggerated. At the present time such cases are not frequently observed, as the majority of them come under observation much earlier.

Oehlecker (Eppendorf Hospital, Hamburg) reports two cases, where operation was done eight days after rupture, and only in such delayed cases can we see the effects and importance of intoxi-

cation, when the rupture has taken place many days previous and the infection of the abdomen does not figure in the condition of the patient. He found a large quantity of fluid, the intestines *not* distended, the peritoneum congested, but absence of exudates which are usually found in peritonitis.

But as the abdomen, filled with urine, is greatly susceptible to the development of bacteria, an early diagnosis is absolutely essential. In the majority of cases the diagnosis ought to be possible.

After an injury (frequent sensation of something given way) the patient shows symptoms of shock of varying intensity and complains of sudden or severe pain in hypogastrium, frequent and painful micturition, inability to void, or possibly a few drops only, mixed with blood. (Blood in urine is not of diagnostic value, as it is also present in contusion of bladder and injury to kidneys.) Soon symptoms of peritoneal irritation develop, such as severe pain, distention of abdomen, rapid and feeble pulse. Nausea, vomiting and tenderness are usually not marked. If diagnosis should not be possible, the use of a catheter may be indicated. The catheter empties usually a small quantity of bloody urine. An important symptom is the evacuation of a large quantity of urine, which is even more important than anuria. This amount is obtained direct from the abdominal cavity (the catheter having passed through the rent of the bladder into the abdominal cavity). The normal bladder, according to Rauber, contains 735 c. c. in the male and 680 c. c. in the female. Presence of free liquid in the abdomen can be very early observed, and was recognized in our first case.

In cases of more delayed observation, symptoms of general peritoneal irritation develop, presenting the symptoms of an acute surgical abdomen, which make the exploratory laparotomy absolutely necessary. If rupture of the bladder is found, it is essential to secure either the drainage of the urine or to suture the opening in the bladder. If the suture of the bladder wall, and especially the Lembert suture, is successful, and if there is only clear serous liquid in the cavity, the abdomen may be closed without drainage.

To use gauze as drainage in a suture of the serous covering is not without danger, as such a drain may be dangerous to the suture, instead of making it more secure. The gauze gets very densely adherent to the serous membrane, and it is possible to tear the

serous wound in removing the gauze drain. It is preferable to use a rubber dam in case drainage should be indicated.

The earlier the cases are reported the better are the chances of recovery. The mortality increases in proportion to the time which passes between the injury and the surgical interference. Of sixteen patients reported by Wiedeman, six were operated in the first twenty-four hours; only one died—a mortality of 16 per cent. Zuckerkandel reports that of thirteen cases operated in the first twelve hours, eight recovered and of twenty-one patients operated later only six recovered.

Improvement in surgical asepsis and technic makes the suggestion possible that at the present time every patient suffering from this accident ought to recover, if there is no cystitis existing and if the injury is recognized early enough to prevent secondary infection from setting in.

DISCUSSION OF DR. KOHLMANN'S PAPER.

Dr. A. Nelken: The subject of rupture of the bladder is one of interest, and yet it is of comparatively infrequent occurrence. In my experience I have only seen one case, a patient that Dr. Gessner will probably recall, a case of advanced tuberculosis of the bladder in which we gave a general anesthetic because of the impossibility of doing anything without an anesthetic. The patient vomited considerably during the examination, and in spite of the anesthetic we were unable to make a satisfactory cystoscopic examination. The rupture was not recognized at the time it occurred. I believe this patient died.

Dr. Kohlmann touched on one point that I think ought to be emphasized in these cases of retention of urine, and that is that a history of voiding urine is absolutely unreliable. The patient who has retention of urine will usually come complaining of inability to hold his urine, and the nurse, if careless, is very much inclined to confuse the record and give us a false impression, and I think that is exactly what occurred in Dr. Kohlmann's case.

Rupture of the bladder, except from traumatism, is much more likely to occur in cases of acute distention of the bladder than in chronic distention. The bladder subjected to chronic distention is usually hypertrophied. In old cases of prostatic obstruction the thickness of the bladder wall is remarkable. These cases of chronic obstruction, that are due to stricture, to enlarged prostate, to inability to relax the sphincter, usually are accompanied by hypertrophy, but rupture there, except from violent traumatism, is extremely rare. It is remarkable the amount of fluid the bladder will contain under these circumstances. I have myself drawn from such a bladder seventy ounces of urine. When we consider that the normal capacity of the bladder is about ten or twelve ounces, you can appreciate the degree of distention that occurs in some of these cases. I have had a little fellow of twelve years come to my office—this was about a week ago. He is twelve years old and under-

size, and the first thing that alarmed his parents was the fact that his abdomen was so large. He voided fourteen ounces, and with a catheter I obtained twenty-six ounces—forty ounces in all—and this was giving him absolutely no discomfort. Rupture of the bladder is much more likely to occur with acute distention. The bladder wall is thinned out, and very frequently the slightest external violence may produce rupture, such as occurred in the first case Dr. Kohlmann referred to.

Dr. E. M. Ellis, Crowley: The late lamented, but illustrious, John matic rupture in the male. He had an injury, which was apparently, by external examination, along the roof of the bladder. A catheter was introduced and a little blood was noted. Injury was suspected, so the catheter was retained and the fluid flowed so freely that we opened the abdomen and a large rent was noticed, so we closed it up, as Dr. Kohlmann mentions, with drainage.

The point he mentions about noticing the patient does pass urine should be very cautiously noted and records made, and, if not, the patient should be carefully examined to see if there is a tumor. I remember a negro woman who said she could not hold her urine at all. She was found to have quite a tumor, and was immediately relieved by the removal of the tumor. Another woman had not passed urine for thirty hours, and I believe she would have had a rupture of the bladder if the catheter had not been passed at that time.

Dr. W. Kohlmann (closing): It is not alone the rupture of the bladder we have to fear, but if the bladder is overdistended it no doubt sometimes causes infection of urine. I believe that a great many cases of cystitis that develop after women are delivered are due to the fact that they have had infection of urine. But my impression is that the bladder is the most vulnerable organ. In the operations in the vaginal region we often find the bladder does not empty well. It is not right to blame the nurse. I think we have to blame ourselves and the interns who do the work for us in the hospitals. We can easily find out if the patient does not empty the bladder. Following operation I think this a frequent occurrence, and it is not right to blame others for an injury we allow to occur.

THE VALUE OF THE X-RAY DIAGNOSIS OF BONE SYPHILIS.*

By AMÉDÉE GRANGER, M. D., New Orleans.

Two cases examined recently demonstrated so forcibly the importance of the X-ray diagnosis of bone syphilis that I decided to select this important subject for my short contribution to your program. I will state briefly the practical lessons I have learned from the study of these and other equally interesting cases of bone and joint syphilis which I have examined with the X-rays.

As you well know, and as will be shown by the brief histories of

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

the five cases selected for this report, bone and joint syphilis can exist in patients giving a negative personal and family history of syphilis, and not as infrequently as most of us would suppose in patients giving a negative Wassermann, and even occasionally in patients who are not benefited by the usual doses of mercury and iodides, but who respond to these drugs when the dosage is pushed to the point of saturation, with the production of decided physiological effects.

Clinically, cases of bone syphilis resemble Paget's disease or chronic osteomyelitis, or, when the gumma formation in the soft parts is extensive, osteo-sarcoma. The latter is, of course, the more serious clinical error, and by no means as infrequently made as you would suppose.

Clinically, cases of joint syphilis resemble chronic arthritis, or chronic rheumatoid arthritis, or tubercular arthritis. The latter is the most serious, and not at all a very uncommon mistake in diagnosis.

The following cases were examined by me, either in my hospital clinic or in my private office. They gave histories and presented clinical pictures which justified diagnoses other than syphilis, and in every instance except one the X-ray examination was made to ascertain the extent of the bone or joint involvement and destruction produced by the disease diagnosed, so as to enable a correct prognosis to be made. The syphilitic nature of the affection was not suspected, and it was diagnosed exclusively from the careful study and interpretation of the skiagraphs made, and in spite of all evidence to the contrary, such as negative Wassermann and failure of the usual dosage of mercury and iodides to ameliorate or improve the condition.

I wish to disavow even the slightest intention to find fault with the clinical diagnosis made in these cases, as I am convinced that none other could have been made, and the gentlemen who made them are all eminent members of our profession. But I hope to convince you of the possibilities of errors in diagnosis, even after the most careful search into the histories and the most painstaking physical examination of this class of cases, and also that you possess in a correctly made and interpreted X-ray negative the quickest and most reliable means for the accurate diagnosis of chronic and obscure conditions of bones and joints.

Case I. Syphilis of the Inferior Maxilla. White male, age 55. Examination showed a very hard swelling of the inferior maxilla, with a small sinus discharging bloody fluid. He complained of a more or less constant dull ache, with occasional lancinating pains in the affected jaw. A diagnosis of osteo-sarcoma was made and resection of the inferior maxilla was advised. This was in 1906. At that time the use of the X-rays at our Charity Hospital in New Orleans was limited almost exclusively to the study of fractures, dislocations and foreign bodies. Cases of bone and joint affections were seldom referred to the X-ray department, and there were not over two or three skiagraphs of osteo-sarcoma in the negative file of the department, which had but a short time before this been installed. On hearing of this case I requested the privilege of making a skiagraph of the patient, with the object of adding one more case of osteo-sarcoma to the young collection for future study and comparison. To my surprise, the skiagraph made showed positively that the condition was not sarcoma, but syphilis of the inferior maxilla, with a large gumma of the surrounding soft parts. At first the correctness of my interpretation of the plate was doubted, because the patient gave a negative history of syphilis, and the clinical picture was quite typical. However, it was decided to defer the operation, and, as this was before the discovery of the Wassermann reaction and the salvarsan treatment, to put the patient on large doses of mercury and iodides for two weeks. He improved almost immediately, the mass becoming softer, then smaller, and finally disappearing altogether.

Case II. Syphilis of the Upper End of the Femur. White male, age 35. For several months had been having severe pains in the hip. The movements of the affected hip were so painful that he was confined to his bed most of the time, and could only get about on crutches and with considerable difficulty and discomfort. Even passive movements were very painful. Medication had given no relief and the loss of weight was very marked. Tuberculosis of the hip was diagnosed and the patient was referred to the X-ray department for examination and report on the extent of involvement and destruction of the femur and the acetabulum by the tubercular process. After a careful study of the skiagraphs the diagnosis of syphilis of the femur was made and a Wassermann suggested. This was made, with negative findings. Later a Wassermann was made of the spinal fluid, with negative results. In spite of the negative Wassermann I was still so certain that the bone condition was syphilitic, and not tubercular or some other disease, that I advised mercury and iodides. Neither was my opinion changed when, after two weeks' administration of the protoiodide, the intern reported no change in the condition of the patient, and I advised him to give mercury by inunction and increasingly large doses of iodides to the point of saturation. Two days after the patient showed the marked physiological effects of these drugs the pains began to leave him, and within another ten days he was entirely free from them and could make use of the affected hip.

Case III. Syphilis of the Skull. Colored male, age 23. On palpation a very hard mass the size of a large orange could be felt on top and back of the head. This mass was first noticed about eight months before the patient's admission to the hospital. Although not painful to the touch, he complained of a more or less constant pain in it. At times this pain became very severe and radiated through the whole head. A clinical

diagnosis of osteo-sarcoma was made and an X-ray examination requested. The X-ray diagnosis was syphilis of the skull, with a large gumma of the scalp. A Wassermann was made, and the reaction was positive. Cure followed appropriate medication.

Case IV. Syphilis of Ulna. White female, age 30. For eighteen months pain and loss of function in the elbow joint, and during the latter six months a small discharging sinus, which had persisted after an abscess had been opened and drained. The patient was living in Denver, Colo., where the condition was diagnosed as a tubercular arthritis, and she received various treatments, including applications of the high frequency currents and the X-rays, without any benefit. The physician whom she consulted on her arrival in New Orleans immediately referred her to me for an X-ray examination to determine the extent of bone and joint involvement and destruction by the tubercular process, in order to enable him to advise appropriate treatment and to make a prognosis. The skiagraphs showed clearly and unmistakably syphilis of the upper end of the ulna, and no joint involvement or destruction. The patient got well rapidly on appropriate medication.

Case V. Syphilitic Arthritis of the Third Cervical Articulation. White male, age 35. Complained of pain and stiffness in neck and head for eighteen months, greatly increasing in intensity during the last four months. Treatment, including massage and electricity and several months of osteopathy, gave only partial relief of a very temporary character. A diagnosis of chronic rheumatoid arthritis of the cervical spine was finally made and he was referred for X-ray confirmation. The skiagraphs, instead, showed a typical syphilitic arthritis of the third cervical articulation. Two Wassermann examinations were negative, but the patient improved rapidly and was cured by appropriate intensive medication.

DISCUSSION OF DR. GRANGER'S PAPER.

Dr. S. C. Barrow, Shreveport: A paper such as Dr. Granger has given us can really only be appreciated by a man doing X-ray work. I want to congratulate Dr. Granger not only on having made these clear and ultimately proven accurate diagnoses, but also on his usual characteristic painstaking care and attention to the details of his work, an attribute which we formerly were prone to credit to the Germans, but which we now know is particularly characteristic of our confrères, the French.

Dr. Granger is Louisiana's pioneer in X-ray work and I respect his opinions always on anything pertaining to X-ray, and when he draws these conclusions I am sure they are right, and in line with what I have known of him for a long time.

In this bone work, the original work in X-ray, we should try to hold in mind the thought always that the X-ray plate is an illustration of relative tissue density, and when we hold in mind that syphilis usually gives a sclerosis or increased density, that tuberculosis usually gives a decreased density, and that the malignancies have their characteristics running between these two, with care and attention given to the study of the plate, as Dr. Granger does, we can surely find the X-ray of the greatest help in clearing up these diagnostic conditions.

Dr. C. L. Chassaignac, New Orleans: I had not intended to take the floor, as my experience in X-ray work is entirely secondary and furnished by the man who does the actual work, so I will simply say, in confirma-

tion of what has been said, that the X-ray plates have enabled us to make great progress in making early diagnosis of these conditions, and we have improved to this extent, that, while formerly, even with the aid of the Wassermann reaction, we were somewhat in doubt as to the type of a tumor or a bone involvement, nowadays the X-ray plate assists to a great extent, and we do not have to wait for the so-called therapeutic tests as before. That is, in cases of this kind, we formerly gave the patient the benefit of the doubt and tried specific treatment before consenting to an operation being performed, especially if such proved serious. At times it is not an easy question to determine this in supposed bone syphilis. To-day, when we have proved that so many different causes can bring about the same results, we are very glad indeed to be able to fall back on such a distinct aid to early diagnosis.

I will state a case that came under my observation not long ago, simply to illustrate the difficulties under which we labor, notwithstanding the improvements that we have made in our knowledge regarding the cause of these troubles. This was a man of about middle age who presented himself with chronic arthritis, so-called, of both knee joints. The question, of course, was to determine the cause of the arthritis. This man was found to have had syphilis—there was still evidence of the disease, as shown by the Wassermann test. He was found to be still suffering from a prostatic infection which we knew could also lead to arthritis, and, in addition to that, had what we used to believe was the main cause of this condition—a so-called excess of uric acid. On further investigation we found he had a decided infection, as confirmed by his dentist, of the roots of at least two teeth, so there were four possible causes for the arthritis. We treated him from these four different standpoints and he got well.

The point I want to bring out is that frequently the X-ray plate will help to decide the true condition, and in that way assist us very much in our proper understanding of the case.

Dr. G. H. Cassity, Shreveport: Dr. Barrow made the statement that only the doctor doing X-ray work could appreciate some of the things in this paper. From the standpoint of a clinician I maintain that statement is not correct. I believe the clinicians are coming to appreciate the X-ray as one of the greatest helps for them at the present time. Speaking for myself, I have come to the point that I feel if Dr. Barrow were to leave town I could not practice medicine. Not only do we use it in general surgical work, but when a patient comes to me with rheumatism and I cannot definitely locate the foci of infection I send him to Dr. Barrow and have the teeth photographed, and if you get in the habit of doing that you will be surprised how many foci you will locate in the roots of teeth that the patient does not suspect. I hold a small renal calculus in my fingers that was removed from a kidney not long ago. It is very small and was imbedded in the lower pole of the kidney. If I had not had a picture of it I never would have been able to remove it. I hunted for it for an hour, as it was. So I wish to assure the X-ray men that the clinicians appreciate their work and feel they have certainly come to stay.

Dr. Amédée Granger (Closing): I want to thank the gentlemen for their discussion and to reiterate one point—that is that the therapeutic tests, so-called, are only of value after you have saturated your patient with mercury and the iodides.

EMPYEMA.*

By B. C. GARRETT, M. D., Shreveport, La.

The subject of empyema is one that has attracted a great deal of attention within the past eighteen months, on account of its great prevalence—the many ways in which it was treated and the kind of organism which produced the particular empyema that we have to deal with. The condition has been treated by many different methods, and I think it will continue to be until we settle definitely on the best and safest method of handling them. To one that has spent some time in the army and has seen the many ways the cases were handled it certainly looks as if the Empyema Commission sent out from Washington by the Surgeon General in August, 1918, has struck upon the keynote in handling these cases. And it is to their report and to Major Max Ballin's article in the *Jour. of the A. M. A.* that we wish to acknowledge some of the ideas that appear in this paper.

We wish to classify empyema here into three groups: (1) Those following influenza pneumonia; (2) those following streptococcic hemolytic pneumonia; (3) those following lobar pneumonia.

Empyema following influenza pneumonia occurs, as a rule, late, about three to five weeks; the exudate that occurs before this time will most probably be absorbed as the pneumonia clears up. The fluid is of a purulent nature, very thick, and hard to aspirate. In the empyema following streptococcic hemolytic pneumonia the fluid occurs early, very thin, greenish in color and evidently very toxic, because those patients are always desperately ill from the beginning. The empyema following lobar pneumonia shows a definite level by X-ray, occurs about the fourth week, whereas empyema following influenza pneumonia has no definite level, but shows more or less the involvement of the whole lung. Autopsy bears this out. We sometimes have double empyema in influenza pneumonia, but we seldom ever have it in lobar pneumonia. We have numerous complications in influenza empyema, such as cholecystitis, peritonitis, metastatic abscesses, meningitis, and mastoiditis, but seldom, if ever, have these in empyema following lobar pneumonia.

The diagnosis of empyema is made by (1) history of the case; (2) watching the temperature, which will usually be up and down; (3) by physical findings; (4) by X-ray (I think I am correct when

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919

I state that some of these cases develop fluid in the chest cavity very rapidly, as shown by X-rays; (5) by aspirating needle. We rely a great deal on the X-ray and aspirating needle in these cases, as the physical signs are sometimes misleading when the pocket of pus is encysted within lung tissue.

The treatment of these conditions, as we see it, is along the lines as laid down by the commission spoken of above: (1) Not to operate as long as pneumonia is present; (2) to aspirate if quantity of serous exudation is such as to interfere mechanically with respiration; (3) operate only after pneumonia has subsided and when fluid has become purulent, by intercostal drainage, or, better, by rib resection. These rules reduced the death rate at Camp Lee from 50 to 4 per cent. We heartily agree on this late operation, and it has proven most satisfactory, both while in the army and with the cases that we have had since my return. Early operations are more dangerous, because pneumonia is present; shock greater, pus more liable to become pocketed after operation, and, as pointed out by some one, that the blood stream is more liable to become infected.

Continuous drainage by puncture is in favor of the early operation of these cases, but, as they seem to carry a great deal of this fluid for a long time with impunity, rib resection under local anesthesia, except in cases of children, when a whiff of chloroform carefully administered is preferable. The resection should be done as nearly over the pus cavity as possible, where drainage will be best when the patient is either lying or in the sitting position. After the cavity has been evacuated one or two good-sized rubber tubes are placed in the cavity, medium depth, and fastened with a safety pin. The cavity is then irrigated every three or four hours with Carrel-Dakin solution. This can be done with a Carrel-Dakin tube or ordinary catheter. Temperature will drop within twelve to twenty-four hours and the patient tells you that he is very hungry. Contra-indications to Carrel-Dakin solution (1), I think, would be abscess that ruptured into bronchi, causing coughing; (2) too strong or too weak solution. Dichloramin-T solution has also been used in these cases, but with not as apparently good results as Carrel-Dakin solution. Dichloramin-T is a thicker fluid, therefore does not dissolve fibrous tags, and therefore does not produce as good a drainage as Carrel-Dakin solution. I have used

Carrel-Dakin solution in many cases, both in and out of the army, and never had trouble in but one case, and that case was a child five years old that was spitting up pus before I operated on him, and he would not stand much of the solution at a time before he would begin to cough.

Just when to let these wounds close up requires a great deal of judgment. Some use the organism smear count as an indicator; others say let the opening close when the lungs expand and fill cavity. I think no secondary operation, such as Schede, etc., should be attempted until the antiseptic solution has been given a thorough trial and tested out. Beck recommends his paste, 10 per cent, to be used in some of these cases where there remains a sinus. Dr. Willis has used it in a limited number of cases and has had good results. Technic is to inject the cavity full of paste, let alone for three or four days, then withdraw as much paste as possible and then reinject.

An article by Monzingo advocates, as many others do, a close method of treatment, and claims the following: (1) A simple early operation, without danger of shock or collapse of the lung; (2) intermittent removal of secretion and antiseptic treatment given through a small rubber syringe; (3) rapid partial sterilization with neutral solution of Carrel-Dakin solution, followed by 2 per cent formaldehyd in glycerin; (4) maintenance of negative pressure in the empyema cavity, tending to an early obliteration of the cavity; (5) one dressing will last several days, no skin irritation; (6) emphasis on simple physical principles rather than major operation. Where pus is present on both sides it is a better way to handle cases of empyema than by the open method.

In conclusion, we would like to say again: (1) That we believe that it is best not to operate on these cases as long as pneumonia is present; (2) to aspirate, if quantity of serous exudation is such as to interfere mechanically with respiration; and (3) operate only after pneumonia has subsided and fluid has become purulent, by intercostal drainage, or, better, by rib resection. We believe that if these rules are carried out that the death rate from empyema will be much lower.

DISCUSSION OF DR. GARRETT'S PAPER.

Dr. E. M. Ellis, Crowley: The late lamented, but illustrious John B. Murphy stated that the smallest boy could make an opening into the

thoracic cavity, but that it took a full-grown man to close it up. I have had quite a little experience in this work, and after resecting ribs and dressing wound and doing operation after operation and then have my patients slip away to some other fellows and get the wound closed up I got very much discouraged with the open method of treating adults for empyema. Of course, in a certain percentage of cases I must admit they do well, but there is another percentage that do not do well. It was only a few days ago that one of the returned soldiers came to me with a running wound in his side where he had a rib resected at the base hospital some six or eight months ago. He still has a discharge, and will have to have another operation. I believe if you take the majority of these cases in adults and treat them after Murphy's plan, aspirate them from time to time and give them an injection of formalin solution, you will sterilize the empyema cavity and avoid operation and get better results. I have preferred this almost exclusively in treating that character of cases. I believe in children the operation should be one of resection and drainage. They usually get well very readily—much more so than the adult.

Dr. H. J. Parsons, Shreveport: I consider one of the most important things in empyema is early diagnosis by the physician who sees the case. We have frequently seen cases of pneumonia which failed to clear up as they should on the eighth or tenth day, or that persisted, for some unexplainable reason, for a while. Later on I began to pay more attention to the physical signs and symptoms, and then I began to find out that early, before the fever had cleared up, some of these cases had developed an empyema, and there was a cause for the fever persisting. Some cases, where we have a false crisis in pneumonia, where the temperature goes down to normal, stays twelve to twenty-four hours and comes back, these cases do not always mean a further extension of the pneumonia: they frequently mean the beginning of the formation of an empyema. I think it is very important that these cases be diagnosed early, because I am satisfied that a great deal of the trouble we have in closing these large cavities after pus formation is due to the fact that the lung does not expand after the cavity had been opened. The longer the lung is compressed the longer time is required for it to expand afterwards. The more pus we have there the more the lung is compressed. So, I believe the doctor who sees the case early should recognize it early and have the case operated as soon as possible.

I have seen cases of empyema due to other causes than influenza or pneumonia. I remember one typical case that followed a case of appendicitis in a child, who had a ruptured appendix, with the whole abdomen full of pus. A week afterwards there was a typical empyema, so we will have to be on the lookout for other septic conditions.

In regard to closing up a case of long standing, a good many years ago, after Dr. Beck published his researches along that line, I began to use bismuth paste, and following his early instructions I used 33½ per cent strength. I think the second case I tried it on developed a beautiful case of bismuth poisoning. Unfortunately, I did not see the child after the bismuth injection was made—they moved away, and I did not see the case in time to attempt a withdrawal of the bismuth. The child recovered, but since then I have used 10 per cent bismuth and I have never seen any further trouble. I am satisfied it is an aid in the closure of long-standing cases of empyema.

In regard to the Carrél-Dakin solution in irrigation, there must have been something wrong with our technic, because it certainly did not agree with the cases we tried it on following influenza. I followed the method instituted by Dr. Willis, and the solution was properly made, I am sure, but still, after the irrigation, the patient complained very much of pain and each irrigation was followed by a temperature of 102° to 103°, which temperature persisted as long as we irrigated. As soon as we quit, the temperature fell and the patient recovered.

(In closing, Dr. Garrett illustrated on the blackboard the two methods used in the army.)

VENEREAL CONTROL.*

By CAPTAIN HAROLD M. WILSON, Signal Corps, U. S. A.,

Assistant Director, Fifth District, War Department, Commission on Training
Camp Activities.

The problem of venereal control is a civilian problem. The fighting man is always infected in civilian environments, and the problem in the army and in our camps has been to deal with cases which are the results of civilian environment. There is, therefore, before you a task for professional men, for hard-headed business men and for capable women. This paper does not purport to be a scientific essay, but I believe that it has a proper appeal to the scientific mind, in that it urges a campaign against an all-pervading evil which calls for the best efforts of every enlightened mind to check and defeat it.

As a military man I do not presume to insist that my branch of the service, the Signal Corps, has rendered more important service than the artillery, the infantry or any of the other various departments of the staff and line in the war against Germany, but this is certain: the omission of instruction, installation and maintenance of technical liaison would have proven a serious loss in our fighting efficiency—perhaps an irreparable loss. The carrying on of a campaign to the successful conclusion requires the coördination of all branches of the service, each playing an equally important and necessary part in the strategic and tactical whole. In like manner, in the campaign against venereal diseases it is necessary to utilize to the full all available essential means of offense, defense, reconnaissance, communication, supply, intelligence, etc., and I venture to say that there can be no class of our civilian population which can render more valuable service in this fight than the medical profession.

*Read before the Orleans Parish Medical Society, May 26, 1919. [Received for publication June 4, 1919.—Eds.]

You may be interested in listening to an extract from one of the pamphlets issued by the American Social Hygiene Association as a part of its propaganda of enlightenment, entitled "Fighting Venereal Diseases a Public Trust," by William H. Zinsser. He says, in part:

"Venereal diseases are a civilian problem. Communities send their men out into the world educated as far as possible upon every problem except one. The subject of sex has been neglected in the home, in the school, and in the pulpit. The whisperings of the street loafer and the suggestive stories of so-called 'wiser' youths are the first impressions that the average person receives of life and sex relationship.

"And what are one's general impressions on this neglected subject, so shrouded in secrecy and false modesty, so mysterious as morbidly to attract—that prostitution is condoned; that attempts to cope with it are useless; that venereal diseases are not serious—in fact, the early youth often brags about them; that continence and health are incompatible; that what is expected of a woman is impossible for a man, and that the old story of wild oats, that must be sown before real manhood is attained, is indisputably true!"

Can we, therefore, blame the Army and Navy for putting their greatest cause of inefficiency squarely up to us civilians? In our military branches men are for the first time educated on subjects which should have been touched upon years ago. Thousands have entered the Army and Navy infected with syphilis and gonorrhoea. These are receiving modern, intelligent medical treatment for the first time, because civilian communities have had no facilities in hospitals or dispensaries provided for them. These men have been allowed in civilian communities to spread their terrible ailments unchecked; the Army and Navy have done what the home towns of the enlisted men should have done. The men will be sent back cured when the war is over. Will the good work be undone, or will the evil of false pride and stupidity be torn aside now, when the opportunity of generations is before us?

The government soon realized the possibility of doing a great piece of constructive war work. Both the Army and the Navy adopted an extensive and comprehensive program to combat venereal diseases, based upon results studied in this country and abroad. The Federal law was strengthened by the addition of sections prohibiting the sale of alcohol to soldiers and by repression of prostitution. Local authorities in communities near Army and Navy camps were asked, and even compelled, to pass similar ordinances. State health departments succeeded in passing health laws on venereal

diseases which, in peace times, might have been put through only after years of missionary work—if at all. People began to realize, because of the extensive network being built up by the government, that this entire problem must be more serious than they had ever imagined, and that it was so deeply rooted that no half-hearted measures would suffice.

Before the war a comparative few had struggled manfully to combat prostitution and venereal disease, both camouflaged under the name of the "social evil," for fear of giving offense to the false modesty that existed on these subjects. The war, however, changed all this, as it has many things. Whatever else it will accomplish, it already has been the force that has driven these subjects from darkness into light, compelling attention and focusing public opinion squarely upon a situation that had always been held much too lightly and apathetically.

To-day people working on this subject are no longer "ahead of their time." They are no longer reformers and visionaries. They are suddenly considered courageous exponents of a too long-neglected problem. How much less courage it takes to-day to arouse interest and open discussion on this long-forbidden topic! The audience has increased until it numbers millions. Every family has a representative among our fighting forces. There is an intimate human point of contact now. It is no longer a question of reforming mankind, an altruistic principle. It is a question of saving a father, a husband, a son or some other dear relative from diseases and wounds far more dangerous, inheritable, transmittable and dishonorable than the scars of battle.

Knowing that its audience on this subject was keyed to a high pitch and only too anxious to be guided, the government decided to interest itself in this side of the civilian problem, to make suggestions whereby conditions could be improved and to recommend that the Army and Navy program be applied to civil life. The same principles hold true in the community. The same men are coming back from the war, and the people in their hometowns should see that the returning fighters are as scrupulously taken care of as when they were in the service of the government.

By August, 1917, the Surgeon General's office had perfected its plan for combating venereal diseases and immorality in the Army. Medical and educational methods were closely coupled with one an-

other. Lieutenant-Colonel William F. Snow, who had this particular program in charge, realized, from his intimate knowledge of the subject, that the time was ripe to plan national educational and constructive propaganda on this problem. Fathers and mothers wanted to know what the Army and Navy were doing for their own particular boy. The Army and Navy were just as anxious that the parents know in detail the steps the government had taken to safeguard their children. There was a double purpose in this. Civilians were being educated on the best methods known to combat a scourge that the draft had shown was very much more prevalent among them than in the Army.

A committee to obtain assistance from citizens, particularly from those residing within an accessible radius of training centers, was organized under the Medical Section of the Council of National Defense. This committee was called the Committee for Civilian Cooperation in Combating Venereal Disease, and during the last half of 1917 it dispatched thousands of letters to leading citizens in more than nine hundred communities situated within easy reach of the military or naval camps. Literature describing the government's program and suggesting ways for local action was widely distributed. Fathers and mothers were asked to become co-workers in the government's plan and to help keep their communities as clean as they would want that one to be near which their own particular boy was camped. Little by little newspapers helped take up the drive. The medical and sanitary officers in the various localities coöperated with the citizens (with or without their officials, depending on the attitude of the latter) to see that the soldier and the sailor were amply protected from vice. The government instilled the feeling that nothing is too good for the man who is going out to fight for those who cannot, and that the worst form of slander was the impression which seemed to prevail that every time an enlisted man was seen in uniform in the street he was out deliberately to mock existing regulations and to look for trouble. *The soldier or sailor will take a community as he finds it.* If the bad people outnumber the good in any community, as far as their attention to the man in uniform is concerned, there is very little chance for the soldier to escape. The great majority of men follow the path of least resistance.

The results obtained by this committee were so far-reaching that the government decided to establish a committee to educate women

and girls on this subject. It felt that the women were the builders of the home. They were sympathetic; they could touch upon this subject with boys and girls with possibly much greater success than the men. They could further help to solve the serious problem of warning the young girl whose patriotic ardor had almost made her hysterical in her relations with fighting men.

In order to concentrate all these movements under a single head, the Committee for Civilian Coöperation in Combating Venereal Diseases was transferred to the War Department Commission on Training Camp Activities. A new division, the Social Hygiene Division, was created. Educational work that had been done since the inception of the war among the soldiers and sailors was brought into this same division, closely linking up the work into three sections—a section of the Army and Navy work, a section on men's work, and a section on woman's work—with one leader, with one plan and with one purpose.

These three sections should be able to further a cause that strikes at the heart of things and to accomplish a work not only helpful to the country at this time through protecting its men in uniform, but to lay the foundation of a work that will increase through the ages and that will wipe out in this country a blight which a few years ago it seemed almost impossible to combat.

The system of arousing community interest employed from the outset was as simple and direct as it was effective. A list of the prominent doctors and lawyers and the most influential business men in a given city or town was carefully worked out. A letter detailing conditions and accentuating the urgent need for coöperation on the reader's part towards securing prompt, drastic measures repressing prostitution invariably secured the desired action. City officials suddenly realized that the best elements of the public were demanding a clean community. A later letter to the proper city official, usually the mayor, supplies the spark—swift, concerted action results. Official lethargy is replaced by official zeal. The War Department has spoken—the average community, large or small, replies.

By forcing the work along these lines, by coöperating closely with the Law Enforcement Division and its men in the field, the section on men's work has, in the short space of its official existence, reached over nine hundred communities, large and small. The list is rapidly increasing. Thousands of civilians have been written to; hundreds

of thousands of booklets and pamphlets have been distributed. The work is being extended as rapidly as conditions will permit.

Of greater importance than the closing of houses of prostitution and the strenuous combating of vice agencies is the question of public education. Public health clinics for the free diagnosis and treatment of venereal cases are becoming more numerous. They will form the very foundation of the great constructive phase of the work to be carried on as a definite public program for all time.

Publicity, propaganda—call it what you will—we must have it to-day; selling soap or social hygiene, it matters little. The public is sold easiest when it sells itself. Turn the batteries of intelligent information loose; put down a barrage of knowledge between the public and the agencies of vice and disease, and it will put to rout ignorance, hypocrisy, secrecy. The subject must be discussed. It is true that shame and venereal disease go hand in hand. But a greater shame is that an intelligent people have carefully avoided the slightest reference (except in the most guarded fashion) to the question.

Prostitution is an active menace to health, morality, prosperity, good government and self-respect. Prostitution and its inevitable companion, venereal disease, hangs over the head of every household like the sword of Damocles. Syphilis and gonorrhoea are no respectors of persons, class or position. In a household where there are those who may be saved from actual contact of infection there is the threat, and more often its fulfilment, of shame, sorrow or degradation, through the misfortune of some loved one. What family is there that has not suffered in some form because of this, one of the greatest curses of humanity?

Prostitution, its prevention and restriction, have been studied for centuries, but never heretofore has there been made an actual fight against it from a purely scientific and practical standpoint. It has never heretofore been made a public health problem, and attacked officially through the recognized agencies and officers whose duty it is to preserve and conserve public health. Far be it from me to belittle the splendid efforts which have been made to solve this problem from a purely moral standpoint, nor should the moral aspect of this question be set aside, for it goes hand in hand with the educational campaign, the scientific campaign and the civic campaign which we are striving to bring to a successful standard. I am not

altruistic or visionary, and do not expect that any effort will result in complete extirpation of illicit sexual relations. Careful scientific study and experience, particularly the experience of this war, have shown that the old-fashioned methods of toleration, legal restriction and the like, are vicious, fallacious, non-economic, unsanitary, conducive to corrupt political partnerships and contrary to a sane right-minded public policy. There can be no better proof of this than to look behind the scenes and see who are the principal and most active proponents of license and legal toleration; to see who are they that lurk behind the purblind "respectables," those innocent and usually ignorant citizens who urge "sanitary segregation," "safety first," "you can't change human nature," "it is necessary for youth to have its fling," *ad nauseam*. If you look carefully into this camouflage of vice you will find disclosed those who are fighting for the conditions which have hitherto existed, the which conditions are responsible for the fact that the Army has lost during the war, more days of service on account of venereal diseases than from any other cause. Those who really and truly desire the return or maintenance of old conditions are the whores, the pimps, the unprincipled landlords, corrupt politicians who pander to the underworld for support, grafters, strong-arm men, "dips," "hop-heads," "red light cadets," crooked lawyers, crooked doctors, crooked druggists, dive-keepers, proprietors of cabarets, of assignation, bell-hops, taxi-drivers, proprietors of questionable hotels, race-track touts, gamblers and pious hypocrites. Is this not an imposing array? Then you may add to this vanguard those who are supine and indifferent, those who say, "Let George do it," that class who wanted this country to stay out of the war; those who wanted the districts maintained and prostitution to flourish in order that our Army might be crippled and the Hun have one more weapon in its fight against decency and civilization; the profiteer—and don't forget the pure shrinking violets to whom blissful or any other kind of ignorance spells innocence and purity. Also there is another unfortunate class who are led and swayed by the big underworld politicians—that curious, infamous anomaly of politics who sometimes can, for some mysterious reason which does credit to his sagacity, at least consort on terms of equality and familiarity with those who, under normal conditions, would kick him out of their homes, clubs and places of business. I refer to that type so frequently seen in American politics practicing the most vicious kind of politics. He bids for popu-

larity among the poor and ignorant by giving ostentatiously a certain percentage of his graft to the poor, is publicly charitable, gives picnics, boat-rides, balls, has associations named for him, is a "good fellow," always ready to help some one out of trouble, while his underlings drag down the sons and daughters of his followers to shame and degradation so that he, his pimps, thugs and "cadets" may gorge and grow fat on the spoils wrung from traffic in bodies and souls. These are the ones who are fighting true progress. There are some who are really "conscientious objectors"; there are others who are slackers, pacifists, traitors, spies, and, most respectable of all, open enemies.

What is the answer? Can there be any right-minded citizen who cares to ally himself, directly or indirectly, with any of these classes? Is there any professional, scientific man who is not willing to fight this evil with all his might and with all the power and prestige of his position and his science? It is indeed unfortunate that facts and figures tend to show that there is somewhere a reluctance on the part of some to align themselves with those who are fighting on the side of science and good government.

Permit me to quote you a few figures which may throw a light on the attitude of some of the doctors of the State of Louisiana. Being a member of the legal fraternity, I, of course, assume that you are familiar with the law, and it is axiomatic that ignorance of the law is not a legal excuse for non-compliance therewith. During the month of April, 1919, there were reported in the State of Louisiana, in conformance with the provisions of Act No. 61 of 1918, 127 cases of syphilis, 303 cases of gonorrhoea and 18 cases of chancroid, a grand total of 448 cases reported. Of these, 294 were black and 154 white. If these figures truly represent the number of venereal infections in Louisiana during the month of April past, then I am prepared to admit that there were only two houses of prostitution running openly in the City of New Orleans during the month of March, 1919. I will go even further and admit that there were only two houses in the whole State of Louisiana.

Let us now compare these figures with others. The first million of the draft shows the State of Louisiana as standing No. 36 in the list of forty-eight States, with a venereal rate of thirty-three men out of every one thousand. In the second million draft, the rate jumped from thirty-three per thousand to 112. In the second million draft only four States had a worse record than Louisiana,

namely, Georgia, Florida, South Carolina and Mississippi. Alabama, Arkansas, Oklahoma and Texas complete the venereal black belt, each being over 10 per cent infected. In the second million, the City of New Orleans stands No. 48 in the list of fifty-seven cities of from 100,000 to 500,000 population, with a rate of 92.29 per thousand. More than 9 per cent infected. The letter from Washington which accompanied these figures says, among other things: "It is doubted whether the City of New Orleans and Louisiana will be proud of their record in 'going over the top' in this unenviable manner." These figures tell their own tale, and I venture to say they are not susceptible of the explanation, "Report not well founded." Ordinarily statistics are dull and uninteresting, but I believe that these which I have just quoted must appeal to the civilian population. All venereal disease in the Army is caused by conditions in civil life. As heretofore stated, the Army lost more days of service through venereal disease than through any other cause. From September, 1917, to September, 1918, there were 170,000 cases, which approximated a loss of two and a half million days of soldier usefulness. Just figure these costs: medical treatment, hospital equipment, time, then remember that for every one case contracted after draft or enlistment there were five contracted before enlistment; this clearly shows that most of these diseases came, not from cities near army camps, but from home towns and towns passed through on the way to camp.

Venereal diseases in the Army were 102 to the 1,000, while all other communicable diseases were about 29 to the 1,000. This great prevalence of venereal diseases was due largely to conditions in civil life. Army medical men have proved that venereal disease is largely preventable by education, healthy recreation, repression of prostitution, isolation and treatment. They have cut down venereal rates in camps. All these methods are applicable to civil communities, and civil communities can no longer evade the issue. These are the facts, and the government asks each member of the medical profession what he is going to do. The war is over and the protection of the returning soldier and sailor is your problem. Is your State accepting its reconstruction task? What part will you play in this task?

May I suggest, first and most important, a strict compliance with the law? The physicians of this State are licensed by the State, and by virtue of this license are permitted to do some things and

required to do others. One of these requirements is that you will report all venereal diseases to the State Board of Health. That law is well defined, and its compliance is essential and necessary, that intelligent effort may be made to check the spread of venereal diseases. If there be doubts of the constitutionality of this law, these doubts may only properly be resolved in the courts. If there be a question of professional ethics or personal liberty, these questions, if not based upon substantial legal grounds of objection, must give precedence to public health and welfare. If compliance with the law involves what seems to be too much extra work, sacrifice of time, it is unfortunate, but the law is mandatory. There is a legal method by which it can be so amended as to result in a minimum amount of extra labor and still lose none of its essential value. Let me further assure you that these reports are entirely confidential, and do not require the reporting of your patient by name unless the patient proves recalcitrant and refuses to continue proper treatment until discharged as cured. The figures given above for the month of April indicate the law is not being complied with in this State, unless, perchance, the sudden decrease of venereal disease during the month of April was caused by the fact that many of the prostitutes, for some inexplicable reason, worked only during the non-infectious hours of the day, namely, from 10 a. m. to 3 p. m. ! If there is one good reason for the violation of this law I have yet to hear it.

The physician who does not obey this law in the spirit and the letter must needs class himself with the shyster lawyer, except that his offense against his profession and society is greater, for he insults motherhood and denies the right to those still unborn to a clean and honorable birth.

Compliance with the law is not all that physicians may do in this fight. Hospitals should be persuaded to admit venereal cases, so that the number of carriers may be minimized. Clinics are a valuable aid in this work, and physicians can be of tremendous service in advocating legislation for the establishment of such, and their services should be given freely in this work. The medical profession should continue with unabated vigor their efforts to put out of business quacks, advertising doctors and druggists who sell venereal disease nostrums without prescription.

Each member of the medical profession should understand the seriousness of statements frequently made that the majority of

physicians refuse to treat venereal diseases, and that many who do treat them are careless in their methods of treatment. As a result of the refusal of a large part of the profession to give the problem study and attention, venereal disease has become a head-liner for quackery and self-treatment. Your profession, gentlemen, can also educate people with regard to venereal disease and sexology. Get in touch with the State and City Boards of Health and cooperate with them in their educational campaign. Let the medical profession put its shoulder to all movements to bring proper treatment and industrial education to the prostitutes who can be rehabilitated, and for the care and permanent segregation of the feebleminded. Let the voice of your knowledge and experience be raised against the resumption of the folly of segregation and in the urge for the suppression of commercialized prostitution of all kinds.

Venereal disease is a scourge which menaces the industrial efficiency of a nation; it menaces motherhood and all that we hold dear. There can be no peace with prostitution, no truce with the red light district, no armistice with venereal disease. It is a fight to the finish, and the only finish which will satisfy humanity is an unconditional surrender.

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

MEETING, ATLANTIC CITY, JUNE 16, 17, 1919.

SOME PHASES OF TROPICAL MEDICINE IN THE RECENT WORLD CONFLICT.*

By C. C. BASS, M. D., New Orleans, La.

It will be many months, and perhaps many years, before all of the medical history of the recent world-war is recorded. Most, if not all, of the governments involved are compiling the data, but the task is so enormous that it cannot be completed soon. In fact, if completed, it would not be available until peace is finally signed.

*Presidential Address. Read at the Fifteenth Annual Meeting of the American Society of Tropical Medicine, held at Atlantic City, June 16 and 17, 1919.

It is not possible at this time to get a great deal of data that bears directly upon tropical diseases in the war. It will perhaps not be out of place, however, for us to begin to discuss some of the things that we do know, as a kind of preliminary to more extensive consideration whenever we have more facts and data.

Though the great battles were fought on fields not tropical nor favorable for tropical diseases, some of them were fought, and especially a good part of the campaigning was carried on, in countries where various tropical diseases prevail. Not only is that so, but as one nation after another came into the conflict there were finally gathered together in camps, on battle-fields and in other places great hordes of men, some of whom were drawn from the most tropical countries of the earth.

Regardless of the precautions taken against it, the haste incident to the great emergency and other imperfections that would not have been operative under more favorable conditions brought in many persons infected with the parasites of different tropical diseases. Though the sick could be eliminated, the carrier frequently could not. The carrier problem in many of the tropical diseases is more important than in other diseases. We have the malaria carrier, the hookworm carrier, the ameba carrier and many others. Many of them cannot be found out by the most careful examination that would be practical under the conditions of military necessity. Therefore those armies drawn from tropical countries must have brought with them many of the diseases most prevalent in the tropics.

As the war went on and extended it became necessary to send expedition after expedition from non-tropical countries into countries which were veritable hot-beds of tropical diseases. In many instances these forces consisted largely of men who had lived all of their lives in temperate climates and who possessed no acquired immunity or resistance against tropical diseases. Forces from England and France were sent into Macedonia, one of the greatest hot-beds of malaria on the face of the earth, and into Salonika and Gallipoli.

The story of the Dardenelles has not been told. The mouths are for the present closed of many of those who witnessed the havoc wrought by dysentery and wound infection among the gallant Englishmen and Anzacs, who were sacrificed to want of forethought and lack of administrative capacity to deal with the new conditions,

which required the administrator to get out of his rut. I refer especially to insufficient medical units, their poor equipment and, above all, their lack of authority.

It is not for me to criticize or to condemn. In such gigantic undertakings it is to be expected that mistakes will be made. It is remarkable, however, that some of the mistakes that were made would have been made even under the most pressing circumstances. Until and unless a truthful, detailed history is available of the causes of some of the deplorable conditions and great havoc wrought by tropical diseases, especially malaria and dysentery, we shall not be in position to know all of those who and what were at fault. The medical officers of the British forces, in which some of the most shameful and inexcusable prevalence of tropical diseases occurred, invalidating and killing hundreds and thousands of gallant soldiers at the time they were most needed, are outspoken in their claim that it was due largely to lack of authority given the medical corps. Col. Andrew Balfour¹ said, at a recent address at a meeting of the Society of Tropical Medicine:

“In common with you, I have the honor to belong temporarily to the Royal Army Medical Corps, and I have seen again and again how the efforts of that corps are frustrated by conditions dependent upon other departments. Too often it gets the blame when it is not blameworthy.”

All through the early stages of the campaign in Mesopotamia malaria and dysentery were poorly guarded against. Men fell victims by thousands to malaria, dysentery and wound infection, while the Indian Medical Service officers and civilian practitioners with the army had to stand by, powerless to apply the preventive measures which they knew would have saved lives and lessened invalidism.

I am not in position to criticize either individuals or methods which led to the deplorable conditions with regard to tropical diseases in the Mediterranean area. It remains a fact, nevertheless, that these diseases were allowed to practically incapacitate and defeat these armies. Remember that malaria is one of the tropical diseases about which we know most and one which numerous demonstrations in different parts of the world have shown to be absolutely within our control. The epidemic of malaria that affected the armies operating in Macedonia forms, if not the most important, at least one of the most important epidemics in history. Not since the armies of Xerxes were decimated by malaria in that same region

has there been a situation comparable to these modern forces in these valleys and marshes.

There was apparent failure of prophylactic doses of quinin, according to the reports that have been available to me. Such details, however, as are needed to be convincing are not at hand. I am sure that many of you feel as I do—a little skeptical and uncertain in the absence of more definite information as to just what was done. The fact remains, however, that a very large percentage of all the men in these forces was infected. Different estimates vary greatly. Garin² claims that plasmodia can be found in the blood of 60 to 80 per cent of the troops returning from Macedonia. Abrami³ states that from 85 to 95 per cent of the French Macedonian army were attacked by malaria, in spite of early quininization. Threadgold⁴ found parasites in over 30 per cent of various units of a certain division in Macedonia. It is most remarkable that, according to his statement, taking daily doses of from five to thirty grains of quinin did not seem to affect the presence of parasites. He specifies a group of twelve men, all taking thirty to ten grains of quinin daily, all with vivax schizonts and gametes in their blood. This is most remarkable, in the light of the rapid disappearance of vivax parasites while patients are taking even moderate doses of quinin, as most of us have observed.

We are told that quinin prophylaxis failed to prevent the infection of the forces that went into the malaria-infested countries. Generally the statements are rather indefinite as to the amount of quinin taken, and many other details are lacking. We are not in position, therefore, to judge to what extent quinin was actually tried and proven to be a failure. This is one of the most important things, if true. If quinin does not protect against malaria, the fact should certainly be known and established. If it does protect, and can protect against malaria, then it is extremely unfortunate to have reports based upon supposedly insufficient information, but actually incomplete information, that quinin has been tried on an extensive scale and proven to be inefficient. In view of the experience of many others, in which quinin has been demonstrated apparently to furnish ample protection against malaria, it is especially important that we should not accept without reservation the reports of its inefficiency when tried in Macedonia and other malaria-infested countries during the war. We should hold an open mind, at least.

Another thing that might be mentioned just at this time, in connection with the apparent inefficiency of quinin to protect against malaria, which the experiences in the war, in certain quarters at least, seem to indicate, is the apparent inefficiency of quinin in the treatment of malaria. Large numbers of soldiers returning from Macedonia, infected with malaria, served as subjects upon whom different methods of treatment have been experimented with, in the Liverpool School of Tropical Medicine. A commission consisting of Lieut.-Col. J. W. W. Stephens, W. Yorke, B. Blacklock, J. W. S. Macfie, C. Foster Cooper and H. F. Carter, have published a long series of papers in the *Annals of Tropical Medicine and Parasitology*, giving the details of these experiments. The first of these papers appeared in Volume 11, No. 1, June, 1917. No attempt will be made here to relate and discuss the details of the experiments conducted nor the conclusions arrived at. The remarkable and astounding outstanding feature, however, has been the apparent demonstration that quinin in the doses and methods ordinarily employed does not disinfect infected persons nor prevent relapse. It appears from these experiments that, if quinin treatment is effective, it must be given in doses of as much as forty-five grains a day for at least two days out of the week. It is very remarkable that they were able to find parasites in the blood of patients who were taking large quantities of quinin, and who had been taking it for several days. Another remarkable thing they seemed to demonstrate is that a larger number of malaria-infected persons can be disinfected by giving forty-five grains of quinin on each of two successive days weekly than by giving the same amount daily.

Some of the findings by this commission are in such strong contrast to the experiences of many of us that I am sure that we shall have to wait for other evidence and experience before we are prepared to accept these findings as applicable generally. Who amongst us here has ever seen malaria parasites persist in the blood for days or weeks in the presence of even twenty or thirty grains of quinin a day?

It may be possible that the explanation of the apparently unusual findings of this commission rests very largely upon the fact that the subjects upon whom the experiments were made had been infected months before and had been unsuccessfully treated with improper methods, and had become much more resistant and difficult cases. All of us have seen exceptional cases of malaria, that were

particularly difficult to disinfect. The selection of the cases in this way would likely lead to the use of resistant cases nearly altogether in the experiments referred to. The results of experiments on a group of all resistant cases would naturally be very different from the results upon cases as they occur ordinarily. For instance, in a community in this country where there are many persons infected with malaria there is comparatively only a small number of the resistant and especially difficult cases to disinfect. If we gathered them all together, however, and by experiment worked out a treatment that would be applicable to and would cure all of them, we would in all probability have a much more exacting treatment than would be required in ordinary cases. If this is not the explanation, then I do not know what it may be. One thing I wish to do is to warn against the idea that the results obtained in such a group of people, if found difficult and impractical, is not necessarily what would be required for ordinary purposes.

Another phase of tropical medicine that is brought out by the war is the possibility of spread of tropical diseases in countries where they have prevailed very little, if at all, before. Men returning from those battle-fields and campaigns, where they were infected with many tropical parasites, have been returned and are still returning to their homes. Perhaps the sick and those known to be infected are not released from observation and treatment, but what about the carriers? Hundreds and thousands of men affected with malaria, dysentery and other tropical parasites, not sick at the time of their discharge, are sure to carry these parasites into practically all parts of the civilized world.

In England,⁵ where there has been no malaria transmission for many years, malaria has already begun to be transmitted. I have not the figures for 1918, but during the summer and autumn of 1917 there were at least 178 cases of malaria, undoubtedly contracted locally, in certain southeastern counties in England. Anopheline mosquitoes are known to exist in many parts of England and Wales. Whether there are localities in England where Anopheline mosquitoes are sufficiently abundant to give rise to much transmission of malaria remains to be seen. If such should be the case, there would be no great surprise if the disease should gain a foothold, and for the time at least spread and increase in England.

According to Leger and others,⁶ before the danger was recognized several active foci had developed in France. There may be many

more foci than have been recognized. A commission was appointed to chart France with reference to where Anophelines exist, and malaria-infected soldiers returning from Macedonia are now sent to non-Anopheline districts. This is certainly a very clever way of handling the situation, but must be temporary. In the first place, they cannot be sent to and kept in these districts away from home for long periods of time. Naturally they will be discharged or allowed to go to other district as soon as they are supposed to be rid of their infection. Unfortunately, we have no method by which disinfection could be established beyond doubt. The inefficient prophylactic measures and methods of treatment carried out by the French medical officers in Macedonia and elsewhere permitted the infection to take place, showing their inability, it seems to me, to successfully combat malaria, should it become prevalent in France.

Even if those who are sent to non-Anopheline districts because they are known to be infected should be disinfected before they were allowed to leave, there would still be the carrier—persons who were infected, but were never recognized as such. No method of blood examination that is likely to be carried out finds all malaria carriers. It seems very certain, therefore, that malaria, dysentery, and probably other tropical diseases, must be scattered all over England and France and other countries.

Another tropical disease that was allowed to strike down many of the soldiers from non-tropical countries is amebic dysentery. It seems that bacillary dysentery was far the more important, but much amebic dysentery occurred also. Few people who get infected with pathogenic ameba are ever disinfected. They will be returned to their native lands ameba carriers, if not worse. Just as it occurred, following our Spanish-American War, that there was a great increase in the number of cases of abscess of the liver, so we may expect in England and France, and other countries where little amebic dysentery was formerly seen, to see a great increase.

One of the developments in connection with amebic dysentery in England as a result of the attention given to the infection in returning soldiers has been the discovery that *Ameba histolytica* is quite prevalent in natives in England. It has been found, according to recent publications by Yorke and others,⁷ that *Entameba histolytica* is demonstrable in persons who have never been out of England in almost as large percentage of instances as in those who have been in the tropics, including even troops invalided home on

account of dysentery. This calls to mind the idea held by many that some other factor in addition to ameba is necessary to cause amebic dysentery. However the disease is caused, it remains a fact that ameba carriers are now being scattered throughout all the civilized countries. The presence of troops from the colonies in France and England, and the expeditions to Macedonia and elsewhere, have made amebic dysentery one of the prominent questions of the day because of the fact that it is liable to gain a foothold before its nature is suspected.

That it is possible to control tropical diseases under military conditions has been demonstrated in our own country. Large numbers of training camps and cantonments throughout the United States were conducted in such a manner, from a sanitary standpoint, that there was practically no *Anopheles* breeding within the camps, and therefore no opportunity for transmission originating there. The fact that large numbers of men, many of them carriers of tropical diseases, were brought together with large numbers of non-immune men from other parts of the country made it the more important that conditions should not be permitted to exist which would allow transmission to take place.

Large numbers of malaria carriers and hookworm-infected men were brought together in camps located in malaria territory. In many instances perfect sanitation of the camps would not have prevented the transmission of malaria, because the sanitation extended only as far as the military zone extended. Fortunately, the United States Public Health Service coöperated to prevent mosquito-breeding in the extra-cantonment zones, consisting approximately of a zone one mile wide around the different camps. In many instances the camps were located in the most unfavorable places to do anti-mosquito work and where mosquitoes were most prevalent. In some instances at least—for instance, at Quantico, Va.—it would seem to those who look at it from the standpoint of health that the greatest disregard for this important feature of camp location was lost sight of. In a few instances at least, so far as I can learn, camps were unwisely located from this standpoint, without consultation with competent medical advice. Fortunately, the control measures put into effect by the Public Health Service in the extra-cantonment zones were sufficient to prevent any considerable transmission of malaria taking place, in spite of the fact that some camps were so unwisely located.

In some instances they were located in places where any competent authority on tropical diseases, especially malaria, would have advised that they should not be. Though there was always cordial coöperation between the medical officers of the army and the Public Health Service, insufficient consideration was given to the opinion of either of them, especially with reference to the prevention of this particular tropical and semi-tropical disease, malaria.

This brings me to the idea that I should like to leave with you, and that is that, for some reason or other, those who have been engaged in the investigation of tropical and preventable diseases have not commanded sufficient recognition for their opinions. I cannot say whether it is because we have not learned enough about tropical diseases or whether we have failed to bring the knowledge we possess to the attention of others, or whether there is some other fault, but it remains a fact, nevertheless, that during the present war there has been great neglect of some of the things we have known about tropical diseases for many years. The very fact that England and France have sent armies into countries known to be infested with malaria, and had them stricken down by the thousands by one of the tropical diseases about which we know most, absolutely preventable and controllable, and that they are now returning to every part of the country carriers of tropical diseases, shows that there is something wrong.

Even we, with our recent experience in the Spanish-American War, where it was demonstrated that certain tropical diseases, malaria and dysentery especially, if allowed to run their course, were absolutely masters of the situation, and with our recent demonstration to the world of the accomplishment of a great engineering feat, constructing the Panama Canal, depending for success absolutely upon controlling certain tropical diseases, even with this experience we were negligent. I think those of us who are engaged in the study of tropical diseases should take a hint and see if we cannot remedy it if the fault rests with us, which I am afraid it does to a great extent. Is it possible that we have not advanced to the place where all people of civilized countries realize that, whenever undertaking any task in which tropical diseases are likely to dictate the results, they can and should consult and follow the advice of those who are informed? It is not that our medical officers—and medical officers throughout the world—were not, many of them, prepared to give proper advice, but the evidence at present

is that it was not sought as often as it should have been. Whenever sought, in many instances its full importance was not appreciated.

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TRANSACTIONS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

The fifteenth annual meeting of the American Society of Tropical Medicine was called to order on Monday, June 16, 1919, at the Odd Fellows' Hall, South New York avenue, Atlantic City, N. J., with the President, Dr. C. C. Bass, in the chair. Dr. S. K. Simon served as Secretary, in the place of Dr. Swan, who was still absent on military duty.

The following members were present: Dr. D. Rivas, Philadelphia; Dr. H. J. Nichols, Washington; Dr. C. Y. White, Philadelphia; Dr. H. R. Carter, Baltimore; Dr. W. H. Seemann, New Orleans; Dr. Juan Guiteras, Havana; Dr. Clara S. Ludlow, Washington; Dr. Victor Heiser, New York; Dr. L. O. Howard, Washington; Dr. J. H. White, New York; Dr. Isadore Dyer, New Orleans.

The guests included: Dr. G. W. Woods, Washington; Dr. J. Labredo, Havana; Dr. Weneslao Pareja, Ecuador, and a number of others.

The President presented his address, entitled "*Some Phases of Tropical Medicine in the Recent World Conflict.*" No Discussion.

A paper on "*The Surgical Treatment of Typhoid Carriers,*" by Drs. H. J. Nichols, J. Simmons and C. O. Stimmel, was read by Dr. Nichols. This paper was discussed by Dr. R. Rivas and Dr. H. J. Nichols.

A paper entitled "*Tropical Resources and Hygiene*" was presented by Dr. D. Rivas, Philadelphia. Drs. Juan Guiteras, L. O. Howard and D. Rivas took part in the discussion.

Miss Clara S. Ledlow, Washington, read a paper entitled "*One Phase of the Mosquito Work Connected with Army Camps in*

1918," which was discussed by Drs. H. R. Carter, L. O. Howard and C. S. Ludlow.

• The final paper of the first day's session was read by Dr. D. Rivas, and had for its subject "*The Treatment of Malaria, with Special Reference to the Dose of Quinin, the Time and Mode of Administration, and the Length of Treatment.*" This paper was discussed by Drs. H. J. Nichols, W. H. Seemann, V. C. Heiser, H. R. Carter, C. C. Bass and D. Rivas.

The paper of Dr. John L. Todd, of McGill University, of Montreal, Canada, entitled: I. "*The After Treatment of Trypanosomiasis in Africa,*" II. "*Concerning Immunity to Human Trypanosomiasis,*" was read by title.

Following the scientific section the President suggested a short executive session, to obtain the sentiment of the general membership of the Society in regard to several important matters which were pending. The first matter discussed was the proposal that had been made to change the name of the Society to the American Society of Tropical and Preventive Medicine. Dr. Rivas also suggested the advisability of the name, "Pan-American Society of Tropical Medicine and Parasitology." In the discussion, the point was stressed that a change of name might not be acceptable to the Congress of American Physicians and Surgeons. The question was finally laid on the table without action.

A report from the Committee on Bulletin was read by the Secretary. The committee recommended that, in view of the financial condition of the Society at the present time, no attempt be made to publish an independent bulletin of the transactions for the coming year. The report was ordered received. Dr. Isadore Dyer stated that the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL would be inclined to meet the Society upon a fair and equitable basis if allowed the privilege of publishing the transactions during the coming year. Several suggestions were made by the members present, and the entire matter was finally referred to the Council for action.

The President asked for an expression of opinion in regard to the remission of dues in behalf of absent members serving in the ranks during the war. This was likewise, after discussion, left to the discretion of the Council.

The meeting then adjourned.

MINUTES OF THE COUNCIL MEETING.

The meeting of the Council was held on Monday, June 16, 1919, at 10 p. m. at the Hotel Traymore, Atlantic City, N. J. Drs. C. C. Bass, H. J. Nichols and S. K. Simon were present. Drs. J. H. White, Victor C. Heiser and D. Rivas also were present as invited guests.

The minutes of the last Council meeting were read and approved.

Dr. C. C. Bass, as President, reported that he had appointed Dr. S. K. Simon as acting Secretary and Treasurer, in place of Dr. Swan, who had entered the military service.

The President likewise related the causes that led up to the postponement of the meeting of the Society at Asheville during November, 1918.

The acting Secretary and Treasurer read a report of the activities of his office, which was ordered received.

The Auditing Committee, composed of Drs. V. C. Heiser and W. H. Seemann, previously appointed by the President, reported that they had found all balances correct. Their report was approved.

The Secretary read the names of the following members who had resigned during the past two years: Dr. W. A. Korn, Dr. Jos. McFarland, Dr. J. Chalmers Da Costa, Dr. J. R. Hurley, Dr. Carroll Fox, Dr. Isaac W. Brewer. These resignations were accepted by the Council.

In regard to the matter of remission of dues to those members who had been in active military service, the Treasurer was instructed to notify these members that their dues would be remitted during the period of active military service if written request were made to that effect.

The following proposals for active membership were acted upon favorably: Dr. M. L. Graves, Galveston, Texas; Dr. Joseph Sailer, Philadelphia; Dr. Harvey C. Barnett, Charlotte, N. C.; Dr. Mark F. Boyd, Galveston, Texas; Dr. Joseph Leidy, Philadelphia; Major C. A. Kofoid, New York; Dr. P. L. Querens, New Orleans.

The following were proposed for corresponding members and approved: Dr. Alexandrino Padreso, San Paulo, Brazil; Dr. Mario G. Labrado, Havana, Cuba; Dr. Wenes Lac Pareja, Guayaquil, Ecuador; Dr. Vital Brazil, Brazil.

As honorary member, Dr. Carlos Chagas, Brazil.

Dr. D. Rivas presented the report of the committee appointed at the last meeting of the Society to obtain a larger membership among those interested in tropical medicine in the Latin Americas. Two hundred and sixty men, in all, had been communicated with, some of whom had signified willingness to become members of the Society. In view of the fact that many of the men communicated with had not as yet had opportunity of replying, it was decided to postpone final action upon these applications until the next annual meeting. Dr. Rivas and his committee were given a vote of thanks in behalf of the Society.

The following change in the By-Laws was proposed, and will come up for final action at the next annual meeting: That Article 2 of the By-Laws be amended to read as follows:

“The regular dues shall be paid by active and corresponding members. Honorary members shall be exempt from dues.”

In view of the stringent financial condition of the Society at the present time, the Treasurer was requested to institute a vigorous policy in regard to delinquent membership dues. Those members who remain in arrears for three consecutive years, without adequate excuse, will in the future be dropped by the Society.

It was recommended that the Secretary make suitable arrangements with the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* to continue the publication of the transactions of the Society for the coming year upon some equable basis. It was to be understood with the *JOURNAL* that such arrangement would continue only until the next annual meeting.

The report of the special Committee on Bulletin was ordered received and the committee was discharged.

The following officers were elected for the coming year: President, Dr. Henry J. Nichols, Washington, D. C.; vice-president, Dr. John M. Swan, Rochester, N. Y.; vice-president, Dr. Karl F. Meyer, San Francisco, Cal.; secretary, Dr. Sidney K. Simon, New Orleans, La.; assistant secretary, Dr. Allen J. Smith, Philadelphia, Pa.; treasurer, Dr. Sidney K. Simon, New Orleans, La.

Councilors—To serve three years, Dr. C. L. Furbush, Philadelphia, Pa.; to serve four years, Dr. V. G. Heiser, New York, N. Y.; to serve five years, Dr. J. H. White, Washington, D. C.

New Orleans was selected as the location for the next annual meeting. Adjourned.

The second scientific session of the Society was called to order by the President, Dr. C. C. Bass, at 9:30 a. m. on Tuesday, June 17, 1919, at Odd Fellows' Hall. Twenty-six members and a number of guests were present.

The President requested the Secretary to read the report from the Council. This report contained a summary of the various resolutions and motions passed by the Council at its meeting, which was held the preceding evening. The nomination of officers for the ensuing year was likewise presented. Upon motion duly seconded, the recommendations of the Council were approved in full.

The President then announced that the subject of the morning's program would be a "*Symposium on Yellow Fever.*"

Dr. Charles A. Elliott, Chicago, read the first paper, "*The Clinical Manifestations of Yellow Fever as Observed in Guayaquil in 1918*" (lantern slide demonstration).

The next paper was presented by Dr. Hideyo Noguchi, New York, who spoke on "*Experimental Studies in Yellow Fever*" (lantern slide demonstration).

Dr. Weneslao Pareja, Guayaquil, Ecuador, submitted a paper entitled "*A Brief Account of Yellow Fever in Guayaquil,*" which was read by Dr. Juan Guiteras.

The paper of Dr. Mario J. Labredo, Havana, entitled "*Consideration of Dr. Noguchi's Publication of Experimental Work on Yellow Fever,*" with further notes appended, was likewise read by Dr. Guiteras, at the author's request.

Dr. Juan Guiteras, Havana, then read a paper of his own, entitled "*A Report on Epidemic Jaundice at Barbados.*"

These papers were discussed by Drs. J. H. White, H. R. Carter, H. Noguchi, Weneslao Pareja, M. J. Labredo and J. Guiteras.

After this discussion the symposium was completed by the reading of the following two papers, "*The Mechanism of the Spontaneous Elimination of Yellow Fever from Epidemic Centers,*" by Dr. H. R. Carter, Baltimore, and "*The Eradication of Yellow Fever in the Tropics,*" by Dr. J. H. White, Washington.

A further paper on "*Blood Pressure in Yellow Fever,*" presented by Dr. J. Birney Guthrie, of New Orleans, was read by title.

Owing to the lateness of the hour, the papers of Drs. Carter and White were only briefly discussed.

Adjourned.

REPORT OF THE SECRETARY.

To the President and Councilors of the American Society of Tropical Medicine:

Gentlemen—Your acting Secretary wishes to submit the following report of the activities of his office:

In the early part of January, 1918, I was requested by the President, Dr. C. C. Bass, to take charge of this office, owing to the enforced absence of Dr. John M. Swan, who had volunteered for military duty overseas. Dr. Swan turned over all of the records in a well-kept condition, and otherwise assisted generously up to the time of his departure for the war area.

According to resolutions passed by the Council at the last annual meeting in New York City, the Society was to have met at Asheville, N. C., during November, 1918, in conjunction with the meeting of the Southern Medical Association. All arrangements had been made for this meeting, including a well-filled program, when, on account of the severity of the influenzal epidemic prevailing at that time, postponement was ordered by the President. Though we have received a cordial invitation from the Southern Medical Association to hold a meeting with them again next November, the assembling of the Congress of American Physicians and Surgeons at this time has made it impossible to postpone the 1919 session until then.

The membership of the Society at the present time consists of the following:

Active members.	123
Honorary members.	35
Corresponding members.	17

During the time that has elapsed since the annual meeting of two years ago the following members have resigned: Dr. W. A. Korn, Dr. J. Chalmers DaCosta, Dr. Joseph McFarland, Dr. J. H. Hurley, Dr. Carroll Fox, Dr. Isaac W. Brewer.

Death has claimed three of our members during the same period, namely: Dr. Ramon Guiteras, Dr. Samuel S. Dixon, Dr. F. M. Sandwith.

Some of the members who had been in active service during the period of the war have asked the privilege of a remission of dues covering that time. The matter of granting their request, as well as the shaping of a general policy to cover the disposition of the dues in the case of all who entered military service, is referred to you for your consideration.

The Committee on New Membership, under the chairmanship of Dr. D. Rivas, which was appointed by the President at the last annual meeting, has been very active during the past year. Your acting Secretary has assisted in every way possible to further the plans of this committee. A report will be submitted by Dr. Rivas himself, outlining the results of the activities of this committee.

There is likewise before you for consideration a report from the Committee on the Publication of the Bulletin, of which Dr. Isadore Dyer is chairman. The entire subject-matter regarding the publication of the transaction of the Society must be carefully considered at this meeting.

I wish to call attention to the good services rendered by the chairman of the Arrangements Committee, Dr. C. Y. White, of Philadelphia,

in obtaining suitable quarters for our present meeting, and would ask that a special vote of thanks be accorded him for his efforts in behalf of the Society.

Respectfully submitted,
(Signed) SIDNEY K. SIMON, Acting Secretary.

TREASURER'S STATEMENT.

STATEMENT FOR 1918.

Receipts.

1819.

Jan. 7, 1918.	Received from Dr. Swan, Treasurer for General Fund:	
	By New York draft.....	\$ 96.16
	Additional dues from membership, 1918	316.00
		<hr/>
		\$412.16

Disbursements.

1918.		
Jan. 1.	John W. Swan (postage stamps).....	\$ 3.00
Feb. —.	Exchange. . . . .	.10
Feb. 27.	New Orleans Medical and Surgical Journal..	200.00
	Exchange. . . . .	.05
May 17.	Total exchange. . . . .	.40
Aug. 31.	New Orleans Medical and Surgical Journal..	100.00
Oct. 2.	New Orleans Medical and Surgical Journal (envelopes, stamps and stationery)....	17.63
Nov. 13.	Tulane Press (printing)	2.25
	Total exchange. . . . .	.50
		<hr/>
		\$323.93

Balance on hand January 24, 1919..... \$88.23

STATEMENT FOR 1919.

Receipts.

1919.		
Jan. 24.	Balance as per book.....	\$ 88.23
	Dues from membership up to June 1, 1919....	252.00
		<hr/>
		\$340.23

Disbursements.

Feb. 7.	Stenographer's fees.	\$ 25.00
Nov. 12.	New Orleans Medical and Surgical Journal..	150.00
Nov. 24.	Tulane Press (printing).....	16.50
June 1.	Total exchange on checks.....	1.65
		<hr/>
		\$193.15

Balance on hand June 1, 1919..... \$147.08

Library Fund. 30.83

Total resources at present date..... \$177.91

The following accounts are submitted for your approval:

New Orleans Medical and Surgical Journal, membership subscriptions, 1918-1919	\$250.00
Stenographer's fees, January 1 to June 1, 1919.....	15.00
Acting Secretary, for stamps.....	19.06
Tulane Press (printing programs).....	4.25
	<hr/>
	\$288.31

(Signed) SIDNEY K. SIMON, Acting Secretary.

LOUISIANA STATE MEDICAL SOCIETY NOTES

REPORT OF THE HOUSE OF DELEGATES TO THE GENERAL ASSEMBLY, APRIL 10, 1919.

The House of Delegates begs to report that four meetings of the Society were held, during which all the business of the Society was transacted.

The minutes of the various meetings held during the year by the several committees were approved, as were also the reports of the officers.

Tribute was paid to Dr. E. W. Mahler for the success of his work in the passage of the Medical Practice Act.

By motion carried, the Committee on Employees' Compensation was given the title of "Committee on Industrial and Economic Relations to Medicine."

A committee, consisting of the incoming President and Secretary, was appointed to revise the Constitution and By-Laws and issue a new edition for circulation among the members.

A communication from Dr. P. T. Talbot, Secretary, regretting his absence on account of foreign military duty, was read and filed.

A motion was carried to amend the By-Laws so as to make the Chairman of the House of Delegates *ex-officio* member of the Executive Committee.

The following amendment to the Constitution, recommended by a special Committee on Program in its report of April 7, 1919, was approved:

"The scientific program of each meeting shall be divided into two principal divisions, namely: Medicine and its allied branches, and surgery and its allied branches. These two main subdivisions shall be further subdivided into the following sections, each section having the specified number of papers, as follows:

Medicine and Allied Branches.

Medicine and Therapeutics	10
Pediatrics.	3
Nervous Diseases.	3
Bacteriology and Pathology	3
Public Health and Sanitation.....	5—24

Surgery and Allied Branches.

General Surgery.	10
Gynecology and Obstetrics	4
Eye, Ear, Nose and Throat, including Stomatology.....	5
Genito-Urinary and Rectal Diseases.....	2
Dermatology.	2
Radiology.	3—26

“The President shall appoint the chairmen of the various sections not later than six months following his election, and these chairmen shall submit all titles of papers not later than sixty days prior to date of annual meeting.”

The Society went on record as protesting against the increase in Federal tax on narcotics, and a motion was carried that the Society apprise its Representatives in Washington of this fact, and also that it ask the American Medical Association to present this matter to its individual bodies.

The following resolutions were adopted:

“Whereas, the United States Public Health Association will meet in New Orleans in the early part of October of this year; and,

“Whereas, this organization represents the largest and most important aggregation of men concerned in health conservation;

“Be it resolved, That the Louisiana State Medical Society gladly looks forward to the benefits to be derived from this meeting and most earnestly requests that its members become members of the American Public Health Association, and, whether they do so or not, at any rate to attend the meeting.”

“Whereas, the ladies, the medical profession, the Mayor and City Commissioners, the Chamber of Commerce, the Provident Association, the North Louisiana Sanitarium, the Shumpert Sanitarium, the Highland Sanitarium, the various hotels and the press have left nothing undone to make the meeting of the Louisiana State Medical Society most pleasant and profitable;

“Be it resolved, That the deepest thanks be extended on behalf of the Society to all concerned for their gracious and untiring efforts to make our stay in their midst most profitable.”

“Whereas, the State Board of Medical Examiners, as represented by its executive officers, has been watchful and earnest in the discharge of its duties;

“Be it resolved, That the Society commend the past course of the Board and pledges its wholehearted support to the Board in the continued discharge of its duties.”

“Whereas, Our membership has so loyally and spontaneously responded to the needs of the nation during the war, both in civil and military capacities,

“Be it resolved, That the Society expresses its pride in their expected, but no less appreciated, response to the call of duty.”

“Whereas, the officers and the clerical force of the Society have been so untiring and successful in their efforts to maintain the strength and standing of our societies during the troubled times just past,

“Be it resolved, That the thanks of the Society are extended to our retiring officers and the office force for their unflinching devotion to our beloved Society.”

The following officers were elected: Dr. L. E. Henry, Lecompte, president; Dr. C. P. Gray, Monroe, first vice-president; Dr. S. C. Barrow, Shreveport, second vice-president; Dr. T. J. Dimitry, New Orleans, third vice-president; Dr. P. T. Talbot, New Orleans, secretary (in service); Dr. E. W. Mahler, New Orleans, acting secretary; Dr. H. E. Bernadas, Chairman House of Delegates.

Councilors: Dr. P. J. Gelpi, New Orleans, Councilor, First Congressional District; Dr. H. Dupuy, New Orleans, Councilor, Second Congressional District; Dr. B. W. Smith, Franklin, Councilor, Third Congressional District; Dr. J. E. Knighton, Shreveport, Councilor, Fourth Congressional District; Dr. J. L. Adams, Monroe, Councilor, Fifth Congressional District; Dr. Clarence Pierson, Jackson, Councilor, Sixth Congressional District; Dr. E. M. Ellis, Crowley, Councilor, Seventh Congressional District; Dr. S. J. Couvillion, Moreauville, Councilor, Eighth Congressional District.

COMMITTEES.

Scientific Work—P. T. Talbot, Chairman; C. V. Unsworth, W. J. Durel, Public Health—T. A. Roy, Mansura; Louis Abramson, Shreveport; M. W. Swords, New Orleans.

Publication—P. T. Talbot, Chairman; J. E. Knighton, Shreveport; A. Granger, New Orleans.

Memorial—W. H. Seemann, New Orleans; J. A. O'Hara, New Orleans; A. E. Fossier, New Orleans; J. N. Thomas, Pineville; R. G. Holcomb, Lake Charles.

Medical Defense—J. C. Willis, Sr., Shreveport; H. Leidenheimer, New Orleans; P. T. Talbot, Chairman.

Health and Public Instruction—W. H. Robin, New Orleans; W. H. Knolle, New Orleans; T. A. Roy, Mansura; C. Chassaignac, New Orleans.

Cancer Research—A. Granger, New Orleans; Wm. Harris, New Orleans; H. B. Gessner, New Orleans.

Hospitals—J. N. Hendricks, Shreveport; D. J. McAnn, Atkins; J. L. Adams, Monroe; R. O. Simmons, Alexandria.

Budget and Finance—H. E. Bernadas, H. W. E. Walther, F. J. Chalaron, New Orleans; A. A. Herold, Shreveport; H. A. King, New Iberia.

Industrial and Economic Relations to Medicine—Isidore Cohn, Chairman; A. E. Fossier, W. H. Block, Geo. Roeling, New Orleans.

Medical Education—W. H. Knolle, New Orleans, Chairman; J. E. Knighton, Shreveport; Carroll W. Allen, New Orleans.

Hospital Standardization—R. O. Simmons, Alexandria, Chairman; J. C. Willis, Sr., Shreveport; H. W. Kostmayer, New Orleans; J. A. Estopinal, Arabi; Isadore Dyer, New Orleans; L. Abramson, Shreveport; C. P. Gray, Monroe, E. W. Mahler, New Orleans.

Legislation—Clarence Pierson, Jackson, Chairman. (Full committee not yet appointed.)

Journal—P. J. Gelpi, New Orleans, Chairman; Homer Dupuy, T. J. Dimitry, New Orleans.

Delegates to A. M. A.—W. H. Seemann, New Orleans; Clarence Pierson, Jackson.

NEWS AND COMMENT

AMERICAN MEDICAL ASSOCIATION'S NEW OFFICERS.—At the annual meeting of the American Medical Association, held in Atlantic City, June 9-13, 1919, the following officers were elected for the ensuing year: President, Surgeon-General William C. Braisted, U. S. N.; first vice-president, Dr. Daniel L. Edsall, Boston; second vice-president, Dr. Emery Marvel, Atlantic City; third vice-president, Dr. Eugene S. Talbot, Decatur, Ill.; fourth vice-president, Dr. Geo. Kress, Los Angeles; reelected secretary, Dr. Alexander R. Craig, Chicago; reelected treasurer, Dr. William A. Pusey. The next convention will be held in New Orleans.

THE OKLAHOMA STATE MEDICAL ASSOCIATION held its annual meeting in Muskogee, May 20-22, and elected the following officers: President, Dr. J. W. Duke, Guthrie; secretary, Dr. Claude Thompson. The next meeting will be held in Oklahoma City in 1920.

MEDICAL MEN HONORED BY YALE.—At the 219th commencement, on June 18, 1919, Yale University awarded the honorary degree of master of arts to Col. Samuel Hosea Wadhams, Medical Corps, Army General Staff, and the honorary degree of doctor of science to Col. Harvey Cushing, neurological expert of the army. There were two experts in public health among the graduates.

WASHINGTON UNIVERSITY MEDICAL SCHOOL TENDERED LARGE SUM.—The General Education Board has tendered Washington University School of Medicine the sum of \$150,000, on condition that an equal amount be raised by subscription. This fund is to be used for the endowment of the department of pharmacology.

AMERICA NOW MAKES COLLODION.—To the list of medicinal and laboratory products formerly imported from Germany and now manufactured in this country must be added collodion, the lack of which for a time was a matter of serious concern to laboratory workers in histology, pathology and embryology.

CHINESE HOSPITAL IN FRANCE.—According to the *American Journal of Public Health*, the largest hospital in the world exclusively for Chinese is not in China, but in France. It serves the 140,000 laborers and other Chinese who have been brought to France during the war.

CANCER STUDY IMPEDED BY SHORTAGE OF MICE.—Because of the shortage of mice, and also because many physicians were taken from research work, cancer study during the war has been impeded, according to the report of Dr. Francis Carter Wood, Director of the George Crocker Special Research Fund of Columbia University. Mice, which breathe rapidly and are far more sensitive to gases than human beings, were used in large quantities by the Allied Armies for the detection of gas and the diagnosis of certain types of disease.

TUE MISSISSIPPI STATE MEDICAL ASSOCIATION held its annual meeting in Hattiesburg, May 14, and elected the following officers for the ensuing year: President Dr. F. J. Underwood, Aberdeen; secretary, Dr. I. M. Dye, Clarksdale; treasurer, Dr. J. M. Buchanan.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION, at its Golden Anniversary meeting in Atlantic City, June 9 and 10, under the presidency of Dr. George W. Kosmak, of New York, elected the following officers for the ensuing year: President, Dr. Seale Harris, Birmingham, Ala.; first and second vice-presidents, respectively, Dr. Franklin H. Martin, Chicago, and Dr. H. S. Baketel, New York; secretary, Dr. Joseph McDonald, Jr. Executive Committee: Dr. George W. Kosmak, New York; Dr. E. H. Lewis, New York, and Dr. D. S. Fairchild, Clinton, Iowa.

BEQUESTS TO MEDICAL COLLEGES AND HOSPITALS.—By the will of the late Dr. J. Ewing Mears, of Philadelphia, the sum of \$100,000 is bequeathed to Harvard University for the study of methods to reform and cure criminals and mental defectives by surgical means; the sum of \$5,000 to Jefferson Medical College for a free scholarship; \$8,000 to the Rush Hospital for Consumption and Allied Diseases, for free beds in Memory of Frances B. Tyson; \$2,000 to the Pennsylvania Training School for Feeble-minded Children at Elwyn, Pa.

GERMANS DROPPED FROM MEMBERSHIP.—At the annual meeting of the American Medical Association in Atlantic City, June 17, it was unanimously voted to drop all German and Austrian honorary fellows from its roll of membership.

NEW REGULATIONS GOVERNING THE SALE OF ALCOHOL.—On June 30 the Bureau of Internal Revenue issued regulations governing the sale of alcohol for medical purposes. The regulations state

that physicians may prescribe wines and liquors for internal use or alcohol for external use, but in every such case each prescription shall be in duplicate and both copies be in the physician's handwriting. The quantity prescribed for such a patient in a given time shall not exceed one quart. In no case shall a physician prescribe alcoholic liquors unless the patient is under his constant supervision. All prescriptions must indicate clearly the patient's name, street address and apartment number, if any, the date when written, the condition or illness for which prescribed and the name of the pharmacist to whom the prescription is to be presented. Similar detailed restrictions for the sale of alcohol by drug stores have also been promulgated.

VOCATIONAL BOARD TO ENLIST PHYSICIANS.—Major J. R. McDill, chief medical officer of the central office of the Federal Vocational Educational Board at Washington, has decided to increase the medical staff of the board, and competent physicians are to be selected in all centers of population in the States of Mississippi, Alabama and Louisiana to cooperate with the board. A recent amendment to the act which created the board places the entire responsibility of determining the physical condition of applicants for training upon the Federal Board, making the function of the board half medical and half vocational. Major McDill states that about 240,000 men had been discharged from the service with disabilities since the war started and that there are 40,000 men in the military hospitals of the United States. So far, the board has put 4,500 men in training and there are 10,000 more ready to train. Specialists in every line of medicine will be called upon to help, and contracts with hospitals in every center are being made to take care of cases. According to Major McDill, the work of the board in New Orleans is progressing very satisfactorily.

THE SEMI-ANNUAL EXAMINATION OF THE LOUISIANA NURSES' BOARD OF EXAMINERS was held in New Orleans and Shreveport, June 23 -24. Thirty-one applicants qualified as registered nurses. The successful applicants are: Misses Eva Lenora Abbott, Felvia Adair, Angela Josephine Allen, Cornelia Anderson, Lillian Mary Bentz, Louise Broussard, Madie M. Butler, Maud Buttner, Carrie Bisland Cage, Susie May A. Collins, Mrs. J. Florian Cox, Mrs. Maude Crossett, Misses Effie Davis, Sadie Drake, Mrs. F. P. F. Duffy, Misses Mary Ellen Frost, Margaret Glover, Annie Greer,

Meta Grimshaw, Lillian M. Ham, Sister Martina, Sister M. Serena McCafferty, Misses Bertha Moffet, Mae Eulalia Moran, Sister Alicia Murphy, Misses Ella R. Newman, Agnes Hazel Oechsner, Gertrude Pitts, Gertrude Lee Roberts, Esther Schultz, Mrs. Martha Janke Scott, Misses Ella A. Simmons, Olivia Bernice Starks, Alice Gretchen Treen, Mrs. Carrie McCall Vincent, Misses Gladys Ione Whittington, Gussie Wright, Mrs. Mattie Barthe Wynn, Bessie B. Shortt. The Louisiana Nurses' Board of Examiners is composed of the following: Dr. J. T. Crebbin, president; Dr. J. S. Hébert, acting secretary-treasurer; Dr. C. A. Bahn, Major, M. C., Army Educational Commission; Dr. G. S. Brown, Dr. F. J. Frater, Shreveport. Dr. Crebbin has just returned from the national convention of the League of Nursing Education in Chicago, where it was stated that the Louisiana Nurses' Board of Examiners is one of the most progressive boards in the United States.

NATIONAL BOARD EXAMINATION.—The examination held by the National Board of Medical Examiners in Philadelphia, June 2 to 7, had fifty-two candidates, the largest number in the history of the board.

BILL AGAINST VIVISECTION PROPOSED.—In a bill recently introduced in the Senate, Senator Myers, of Montana, would prohibit experiments on living dogs in the District of Columbia, territories and insular possessions.

APPROPRIATION FOR STUDY OF INFLUENZA.—The Committee on Scientific Research of the American Medical Association has made an appropriation for the preparation of a critical summary of the epidemiology and bacteriology of the influenza pandemic. The work has been placed in charge of Prof. Edwin O. Jordan, of the University of Chicago. Reprints of articles and statistical records may be forwarded to Prof. Jordan as soon as published.

INCREASE IN DRUG ADDICTS.—According to its final report, issued June 13, the Treasury Department states, through its special investigating committee, that the nation-wide use of narcotic drugs for other than legitimate medical purposes has been steadily increasing in the United States during the last four years, despite vigorous efforts in the enforcement of the Federal law. The number of drug addicts in the United States is estimated to be in excess

of 1,000,000, and the imports of opium products and coca leaves into the United States have increased twice as rapidly as the growth of population.

PASTEUR INSTITUTE AT ATHENS FOUNDED.—The Greek Government has received a donation from M. Zacharoff for the foundation of a Pasteur Institute at Athens. The new institute will be founded on the same lines as that in Paris.

PERSONALS.—Dr. Isadore Dyer has been commissioned Colonel in the Medical Section, Officers' Reserve Corps, U. S. Army.

Dr. C. Jeff. Miller has returned from a five weeks' vacation spent in Atlantic City and other points in the North.

Dr. Charles Chassaignac and family are spending the month of August in Manitou, Colorado.

The Adams-Gradwohl Biological Laboratories have been established in New Orleans, with headquarters in the Maison-Blanche Building Annex. Dr. Geo. B. Adams is associated with Dr. B. H. Gradwohl, of St. Louis, as head of the New Orleans branch.

Dr. Adolph Henriques and associates, Drs. L. J. Menville and W. J. Devlin, announce that they are prepared to treat all cases in which the use of radium is indicated.

Among the Louisiana men who have returned since our last list from service in this country or abroad are: Drs. J. T. O'Ferrall, J. C. Menendez, A. E. Naef, L. J. Robin, J. W. Rosenthal, I. N. Tucker, G. C. Remley, New Orleans; G. W. Wright, Monroe; T. J. McHugh, Baton Rouge; H. L. Crow, Elm Grove; E. B. Middleton, Heflin.

REMOVALS.—Dr. H. W. Mannings, from Eureka to Emporia, Kansas.

Dr. H. Daspit, from 1225 Maison Blanche Building to 415 Medical Building.

Dr. S. D. Wall, from Baton Rouge, La., to Grayburg, Texas.

MARRIED.—On June 24, 1919, Dr. M. M. Mouton to Miss Alice Louise Campbell, both of Lafayette, La.

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 Disabled Soldier, by Douglass C. McMurtrie. The Macmillan Company, New York.

The author has splendidly set forth the possibilities for the crippled soldier. First, there is a review of the history of practices regarding the care of the wounded soldier in earlier times. The origin of comfortable provision for such soldiers is given, and the story is brought from its beginnings up to the present time. To all who are interested in the future of our soldiers who have suffered loss of limbs or sight, the book is full of sympathetic suggestions, and wherever reconstruction is undertaken the broad encouragement of the author will bring help.

DYER.

The Practical Medicine Series, 1918. Under the general editorial charge of Charles L. Mix, A. M., M. D. **Volume 1, General Medicine**, edited by Frank Billings, M. S., M. D., assisted by Burrell O. Raulsten, A. B., M. D. The Year Book Publishers, Chicago.

This is an excellent mirror of the progress made during the past year in the field of general medicine. The editors have carefully sifted, from a mass of good material, that which they deemed to be best, and presented it in abstract form, together with editorial comment. In reviewing a work of this type it would be difficult to select any particular group of articles for special discussion. As a work of reference, the Practical Medicine Series is of inestimable value.

GEO. S. BROWN.

The Diseases of Infancy and Childhood, by Henry Koplik, M. D. Fourth edition, revised and enlarged. Lea & Febiger, Philadelphia and New York.

In reviewing so popular and well-known a work as that of Dr. Koplik, little more is necessary than to record the changes that have been made incident to the advances in the various fields of pediatrics. In this edition many subjects which were more or less obscure when the third edition was published have received careful attention. This is noticeable particularly in the chapter on Acidosis in Infancy. While the last word concerning the various problems of infant feeding has not been spoken, the section devoted to this important subject contains much that is new and helpful in the daily work of the practitioner. This applies as well to the chapters upon Diphtheria, Poliomyelitis, Meningitis and Tuberculosis. In revising the chapters upon Circulatory Diseases the author has placed emphasis upon the more recent methods of diagnosis and treatment.

One of the strongest forces of Dr. Koplik's work is the liberal space allotted to the symptoms and treatment of the various diseases, and it is refreshing to note that he handles the subject in a concrete, rather than an abstract, way.

Valuable statistics, taken directly from the author's hospital experience have been introduced throughout the work. The book is illustrated with 239 engravings and twenty-five plates in color, many of which are new.

GEO. S. B.

Practical Physiological Chemistry, by Philip B. Hawk, M. S., Ph. D.
Sixth edition. P. Blakiston's Son & Co., Philadelphia.

This latest edition of Hawk's *Physiological Chemistry* is very timely, and is, from many viewpoints, excellent. The several foodstuffs and their derivatives are discussed thoroughly in the first part of this work, followed by a full and up-to-date review of the digestions.

The chapter on Acidosis is of marked value to the student of medicine, and the newer methods of Van Slyke and Cullen and others, for the accurate estimation of this condition, are given in detail.

In the section dealing with Blood Analysis the reader will find exact and full working data for the newer methods of carrying out blood chemistry.

As in the previous editions, the section discussing the Chemistry of the Urine is thoroughly and clearly stated. The closing chapter briefly reviews Metabolism, and includes a statement of the recent work of Osborne and Mendel dealing with the influence of accessory food substances—i. e., Fat Soluble A and Water Soluble B.

The pages discussing the influence of Physical Exercise upon Blood Sugar and the timely relations of Protein Metabolism are of much value and strengthen this splendid work.

F. P. CHILLINGWORTH.

Le Français, by P. Dessagnes. Masson & Co., Paris, 1919.

This is the first volume of an elementary course to teach the French language to foreigners, but even in that volume it is possible to introduce a subject of greater interest—that of the French nation itself, its history and its literature. As the publishers put it so well: "That American youths should learn what France really is, and that the new French generations should try to get acquainted with America—is this not, for the well-being of the world, 'a consummation devoutly to be wished?'"

C. C.

Practical Medicine Series. Volume III. The Eye, Ear, Nose and Throat.

Edited by Casey Wood, Albert H. Andrews and George E. Shambaugh. Series 1918. The Year Book Publishers, Chicago.

The editor of the Eye Department, Dr. Casey Woods, reminds us that the world-war has affected even ophthalmic literature, besides killing off some of our best observers and experimentators. However, much valuable material has been added to our stock of knowledge, and the substance of this matter has been ably presented in the present volume of the Year Book.

It is gratifying to learn that Dr. Casey Woods' removal to California will not cause a cessation of his editorship of this valuable series of books.

The Ear Department and the Nose and Throat Department are edited by Dr. Andrews and Dr. Shambaugh with their accustomed ability. The present volume takes its normal position alongside of its predecessors as a valuable summary of the progress realized in the subject discussed.

McSHANE.

Concerning Some Headaches and Eye Disorders of Nasal Origin, by Greenfield Sluder, M. D. With 115 illustrations. C. V. Mosby Company, St. Louis.

In this striking work Sluder has given to the profession the fruit of many years of work in one of the most distressing fields of pathology. The subject of headache, migraine and trigeminal neuralgia has occupied the attention of mankind ever since headaches obtruded themselves on human notice. The multiplicity and wide distribution of the origin of this distressing symptom caused the profession to grope for centuries after the causes and cure of this ailment, and the search is not yet ended. Many contributions have been made to the elucidation of the subject, and Sluder's is the latest and perhaps one of the most notable. The connection of nasal disease and headaches has long been known, but, even so, much remained to be explained, and Sluder has rendered a notable service in gathering valuable material from all sides, and offering it in a clear, concise and well-digested form. Not the least valuable of this material is culled from his own experience.

The sufferer from long-standing migraine or tic-douloureux is an object of pity. Unfortunately, for a long time these cases baffled medical science, but now a bright ray of hope is held out by Sluder, for he has presented the subject in a new and scientific light, and has considerably narrowed down the list of "incurable cases." He brings out forcibly the importance of so-called "vacuum headaches." The part played by Meckel's ganglion in the etiology of these pains is clearly traced, and the means of combating them are fully described. He also stresses the importance of hyperplastic sphenoiditis and post-ethmoido-sphenoiditis in their relations to ocular symptoms and neuralgic disorders. How distressing this neuralgia can become is well shown by a remark of a patient of the writer's a few weeks ago. The patient was a powerful machinist, with acute suppuration of the antrum; the pain was so intense that he volunteered the information that he now understood why some men commit suicide. The agonizing pain of these sufferers should stir every one of us to do his best to give relief. Those who have tried and failed in their efforts can get fresh inspiration by carefully studying Sluder's valuable works. The full descriptions of the operative technic are adequately supported by numerous excellent illustrations, many of which are original with the author.

McSHANE.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1919.

The Medical Clinics of North America. March, 1919.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1919.

The Essentials of Surgery, by Archibald Leete McDonald, M. D.

F. A. DAVIS COMPANY, Philadelphia and London, 1919.

A Manual of Exercises for the Correction of Speech Disorders, by May Kirk Scripture, B. A., and Eugene Jackson, B. A.

Gyno-Plastic Technology, by Arnold Sturmdorf, M. D.

C. V. MOSBY COMPANY, St. Louis, 1919.

Pediatrics, by Malford W. Thewlis, M. D. With an introduction by A. Jacobi, M. D., LL. D., and I. L. Nascher, M. D.

Symptoms of Visceral Disease, by Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P.

GOVERNMENT PRINTING OFFICE, Washington, D. C., 1919.

Public Health Reports. Vol. 34, Nos. 21, 22, 23, 24 and 25.

MISCELLANEOUS:

Squibb's Materia Medica for the Physician and the Surgeon. (E. R. Squibb & Sons, 80 Beekman street, New York.)

Japanese Medical Literature. (Reprinted from the **China Medical Journal**, Presbyterian Mission Press, Shanghai, China.)

Freedom's Call. A Patriotic Address, by Curran Pope, M. D.

John Coakley Lettsom and the Foundation of the Medical Society. (Presidential address delivered before the Medical Society of London, by Sir St. Clair Thomson, M. D., F. R. C. P., F. R. C. S.)

The Johns Hopkins Hospital Reports. Vol. XVIII. (The Johns Hopkins Press, Baltimore, 1919.)

Report of the Health Department of the Panama Canal. July, August, September, 1918. (The Panama Canal Press, Mount Hope, C. Z., 1919.)

The Chemical Foundation, Incorporated. (Address by A. Mitchell Palmer and Francis P. Garvin, New York, 1919.)

REPRINTS.

Some of the Salient Duties of a Nurse, by S. E. Earp, M. D.

A Brief Report on Pandemic Influenza in Korea, With Special Reference to Its Etiology, by Frank W. Schofield, D. V. Sc., and H. C. Cynn, 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, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	6	3	9
Intermittent Fever (Malarial Cachexia)	1		1
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough		1	1
Diphtheria and Croup			
Influenza	3	3	6
Cholera Nostras			
Pyemia and Septicemia		1	1
Tuberculosis	37	38	75
Cancer	25	12	37
Rheumatism and Gout	1	3	4
Diabetes	6		6
Alcoholism	1		1
Encephalitis and Meningitis	1		1
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	12	15	27
Paralysis	2	1	3
Convulsions of Infancy			
Other Diseases of Infancy	11	6	17
Tetanus		2	2
Other Nervous Diseases	2	1	3
Heart Diseases	70	27	97
Bronchitis	1		1
Pneumonia and Broncho-Pneumonia	12	16	28
Other Respiratory Diseases	3	2	5
Ulcer of Stomach	1		1
Other Diseases of the Stomach			
Diarrhea, Dysentery and Enteritis	15	17	32
Hernia, Intestinal Obstruction	5	1	6
Cirrhosis of Liver	2	2	4
Other Diseases of the Liver	4	2	6
Simple Peritonitis			
Appendicitis	9	2	11
Bright's Disease	26	12	38
Other Genito-Urinary Diseases	11	5	16
Puerperal Diseases	7	4	11
Senile Debility	3	1	4
Suicide	3		3
Injuries	24	17	41
All Other Causes	12	24	36
TOTAL	316	218	534

Still-born Children—White, 16; colored, 17; total, 33.

Population of City (estimated)—White, 233,000; colored, 106,000; total, 339,000.

Death Rate per 1,000 per Annum for Month—White, 13.40; colored, 24.68; total, 16.47. Non-residents excluded, 12.45.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 29.99
 Mean temperature. 80.
 Total precipitation. 4.50 inches
 Prevailing direction of wind, southeast.



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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ISADORE DYER, M. D.

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- ROY M. VAN WART, M. D., Tulane University of Louisiana.

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SEPTEMBER, 1919

No. 3

EDITORIAL

MORALS AND VENEREAL DISEASES.

Considerable notoriety has attached to New Orleans recently because of undue publicity in the work of government investigators, who appear to have run counter to the municipal authorities. The conditions in New Orleans are not exceptional, notwithstanding the unsavory interchange of controversial newspaper publications from those concerned. The same sort of investigation has gone on elsewhere, even before the war, and both New York and Chicago have been fully advertised in the particulars of the variety and extent of their wicked ways.

New Orleans has always been different from many cities in its attitude to this particular phase of vice. Its segregated district was for years so open that everybody knew it and, through certain misguided ideas of compensatory moral judgment, the district was condoned.

Like all other places, when the War Department regulations found our open prostitution, the clandestine methods obtained, and in New Orleans, as elsewhere, it will be a long time before the evil is stopped, if it is ever stopped.

It is unfortunate that the efforts of the Federal investigators should have met with any antagonism from the municipal authorities, but it is not evident, at the same time, that there has been any strong move on either side to establish a friendly coöperation. There may be some ground for criticism on both sides. In other places where the United States Public Health Service operated during the war the authorities were in rather close sympathy with what was being done, and all means were used to restrict vice. On the other hand, the supererogation of the Federal investigators of an authority which placed the medical profession on the plane of bad children, surely did not inspire the physician, nor did it invoke the best in him for good work. The best results will only be reached when an entire community is concerted in effort; surely not when those who are responsible develop contrary forces in a community, which is thereby divided against itself.

The element in any community which is suborned to vice should be negligible in a crusade for a sane city, and it is not fair to estimate the *morale* of a public upon the exposure of a discredited minority. It must rest upon the majority, however, to make that discrediting complete. New Orleans is no better and no worse than other large cities. It needs to realize, however, that it has the same problems as other cities, and if the efforts of government employees have, by their method, proven unwelcome and are objectionable, the city authorities and the people themselves should organize to make the city clean. There is enough of the proper spirit in the city, and it should only need to be awakened to get the right result.

The whole problem of venereal disease control is a public health question and it has many ramifications. The provision for clinics for venereal diseases, suggested by us over a year ago, has already started, and may be further extended. Some cities have even estab-

lished stations where prophylaxis after sex contact may be obtained, and the hospitals themselves are beginning to provide for venereal diseases, when formerly these were excluded for indoor care.

Prostitution is just a phase of the question. Even if groups of women, or houses harboring such, are done away with, venereal diseases will only be checked in so far as the trade of prostitution has been restricted. It may be a safe conjecture that most cases of venereal disease among white subjects arise from contacts which were not originated in houses of prostitution, and even rigid laws will not stop irregular sex relations. The laws requiring report of such cases will do this much good: it will establish far better treatment than has heretofore obtained, but it will *not* prevent the contacts. It will reduce the number of cases of venereal disease, but it will not reduce the number of exposures to likely infection.

We shall probably never have a written or published story of the prevalence of immorality in our army and navy. It is perhaps best unwritten, but we must heed some of the stories told by the men themselves, both at home and abroad. The people who live in the towns nearby army cantonments have much to say on this question, and it is not flattering. What conditions might have been without the religious and moral influences of the Y. M. C. A., the Red Cross and the Knights of Columbus, it is frightful to contemplate. The story is not new to such aggregations of sturdy men, released from vigorous discipline now and then. Deductions have been drawn, and they lead to the same conclusions, whenever the question is debated, namely, that so long as the moral laws for men and women are different, the male instinct will prevail at the expense of woman.

It is a difficult problem—one too difficult to be overcome either by laws or by terrorism. The male differs from the female in all animal life, and the human is no exception. The education of the growing youth may bring salutary influence so as to protect coming generations, but such education must be organized and must begin with the parents, so that they may realize the need of such teaching to their children. It is too late when children go to school, and the teachers in the schools are not sufficiently intimate with children to undertake this education as it should be given.

In this age of luxury, where, in dress and in habit, the young girl is sophisticated before her time, so far as worldly things go, and where the deference to sex, which obtained a generation ago, has

entirely passed, because of woman's assumption of man's place in all things, it must be the task of women to protect their own kind.

The public press no longer hesitates to print scandalous news in plain terms; the works of fiction are filled with sex problems, and it is certain that these have not yet proven of value in reform; so far, they rather cater to the prurient than serve as moral staffs of strength.

The psychology of the times points to a real desire for better things, but, just now, we seem to be struggling in a morass of doubt, in which all efforts seem to move in a circle, now and then doing good, but with an outbreak of some new morbid issue as a reaction.

Organized vice is no longer hydra-headed. Prohibition has removed much of its incentive, and the constituted efforts of law and order have driven its exponents into close hiding. Public morals are elastic and are moulded by public habit and by public opinion. Good women and good men are needed now more than ever to think over the status of their children and of their children's children. Influence, rather than control, must weigh in easting the model for a future integrity. Girls must not only be safeguarded at home, but they should not parade the streets to invite the contact with the shadows of vice, which are only too prevalent in these times of luxurious waste. The responsibility for the future of the child must rest with the parent, and to-day the young American boy and girl are too free to go and to do as they please—and long before they are strong enough to meet the temptations which lurk in their paths.

We may continue to legislate and to investigate, and we may succeed in destroying the grosser evidences of vice—but until the foundation of a higher morality, public and individual, is established, we may not hope for the cure of the evils now combatted.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

A PLEA FOR THE MORE CAREFUL EXAMINATION OF THE URINE IN SUSPECTED URINOLOGICAL CONDITIONS.*

By H. W. E. WALTHER, M. D., New Orleans.

There is an old saying that it is the little things in life that count. Many procedures which some designate as "little things" in diagnosis could not well be dispensed with. Not the least among these is urinalysis. Yet, to get the most value out of a report on the analysis of a specimen of urine, it must be known in what manner the specimen was collected. This applies particularly to urines obtained from females. What will be said here is not new. Urologists and laboratory workers have long known this, but the profession generally has not awakened to the necessity of laying sufficient stress upon this all-important subject. My personal case records tend to show that this matter holds little interest for the average physician. Until we awaken from this apparent lethargy we can expect many incorrect diagnoses being made in suspected infections of the kidneys, ureters and bladder of the female.

My article might be summed up in a single sentence. That is this: Unless a specimen has been collected from the female aseptically by drawing off the urine from the bladder by direct means of a sterile catheter, the findings are worthless. The *rationale* of the thing should be obvious to all. And yet the proportion of voided specimens studied as compared to those catheterized can, I venture to say, be safely placed at the ratio of one hundred to one.

Now, it has long been an established fact that it is next to impossible to render the vagina and the external genitalia in the female absolutely sterile. The proportion of women with some degree of leucorrhœa is very large. Smegma and other saprophytic bacteria normally inhabit the folds of the genitalia. And, even with mechanical cleansing of the parts as a preliminary to voiding, the urethra may still harbor bacteria and pus which, when admixed with the urine, may lead the examiner astray.

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

As arguments can best be elucidated by facts, the following three typical case history reports, briefly stated, will illustrate the point in question:

Case 1 was a female twenty-nine years old, referred to me for cystoscopic examination. She complained of a pain in her right side which had persisted for twenty-four hours. Five years previous the patient had a right nephropexy done. Her present pain was non-radiating in character; there was some urinary frequency; no burning; no hematuria; no fever. No tenderness in either loin. Voided specimens of urine had been reported as containing pus and bacteria. At cystoscopy a specimen from bladder was collected by catheter and separate urines from kidneys were collected with ureteral catheters. Bladder and ureteral examination normal. All urines normal. Her pain disappeared in a few days and patient left hospital.

Case 2 was a female thirty-two years old, referred to me for cystoscopy. Her doctor suspected renal tuberculosis. The patient complained of left-sided pain and urinary frequency—a condition which had been present intermittently over a period of nine years. Patient stated that she had lost fifteen pounds in weight within the past year. For past five days pains in left side had been most severe; she felt feverish at times; there was no frequency; no burning; no hematuria. Appetite good; sleeps well; bowels chronically constipated. Voided specimens of urine had always shown pus. At cystoscopy bladder was catheterized; then double ureteral catheterization done through cystoscope. All urines normal.

Case 3 was a little girl four and one-half years old, referred to me by a physician with request that I do a cystoscopic examination. The complaint was "bladder trouble," accompanied by some urinary frequency. One year previously child had fallen down, striking on her left side, for which injury she was confined to bed for some weeks. An orthopedist had examined the case for hip trouble because of stiffness in left side and left leg. He reported negative for joint trouble. Urine did not burn patient; there was no fever. Voided specimens only had been examined and all had been found containing pus cells. At cystoscopy, which was performed under nitrous oxide anesthesia, an 8 F. catheter was passed and bladder urine collected for study. After dilating urethra an 18 F. cystoscope was easily introduced and ureters catheterized. Cystoscopy negative; all urines normal.

It is not necessary to continue this list *ad infinitum*, although many more such experiences, seen within the last year, could be related. Do these case records teach anything? They show, at least to my way of thinking, that we are not doing all we might for our female cases if, in cases of suspected urinary infection, we persistently ignore the correct and only scientific means of urine collections and study.

From what has been said it should not be concluded that there is any intention of in any way minimizing the importance of thor-

oughly examining the urinary tract with the aid of the cystoscope, ureteral catheter, etc. The value of such examinations has long since been firmly established. The pity is that they are not used more frequently in true urinary infections, so as to more definitely and accurately establish a diagnosis. But to request such examinations in cases in which no study or, at best, a poor, unscientific study of the urine has been made, is not doing justice by the patient.

It is almost with an air of apology that the writer presents an entire article on what seems at first glance so trivial a matter. But because of our ever-expanding interest in better work, which inevitably leads to better results, the subject is considered of sufficient importance to bring to your attention.

In conclusion, I will but reiterate the slogan: That only catheterized specimens of urine from females should be considered worthy of microscopic examination in suspected infections of the urinary tract.

DISCUSSION OF DR. WALTHER'S PAPER.

Dr. A. Nelken, New Orleans: All who do urological work appreciate the importance of getting a good specimen from the female. My experience is that when patients are referred for cystoscopic examination the voided urine usually contains pus washed out of the vagina. Most people think the catheterization of female children an especially difficult proposition, but there is no reason why the female baby should not be catheterized as well as the adult female. Only when that is done are we in position to form conclusions from our examination, because we do see vaginal discharges sometimes even in very young girl children.

Dr. H. W. E. Walther (closing): I want to thank Dr. Nelken for his discussion of the main part of my paper—the child part. There is no reason why children cannot be catheterized or why they should not be cystoscoped. There seems to be a misunderstanding, even among pediatricists—some think they are too little to have this done. Our instruments are not as small as we would like to have them, but we make out very well and we do not injure the patients.

The word “altruism” has been brought out in one or two papers in this meeting. I appeal to you gentlemen from the smaller communities not to send your cases in to us until you give them more serious and careful study. You will save your patients a great deal of money and trouble by studying them more carefully. A great many of these people are not endowed with much worldly goods, and, while it is taking money out of our pockets, for the good of humanity I want to bring this point before you—that in these cases you study them carefully. We will not then get cases we should not get, and we will not be subjecting people to cystoscopy where it is not needed. If any of you have ever been cystoscoped you do not care to have the procedure repeated, so why subject your patients to unnecessary examination?

PNEUMONIA THERAPY, WITH SPECIAL REFERENCE TO INFLUENZA BRONCHO-PNEUMONIA.*

By ARTHUR A. HEROLD, M. D., Shreveport, La.

There is no subject, I feel sure, which would serve to recall more anxious days of the past six months than the one which I have chosen. The question of how best to treat the so-called broncho-pneumonia of influenza has, for the present at least, replaced discussions on quinin in malaria hematuria and on the etiology and treatment of pellagra. But before beginning to analyze the therapeutic measures at our disposal in this dreaded disease let me stress the point that, in the treatment of pneumonia probably more than in anything else, we must treat the *patient* rather than the disease. Each case requires individualizing, and no set therapy that obtains good results in one case will necessarily do as well in another.

The author presented a paper before this Society at its New Orleans session in 1909 entitled "Indications for Digitalis in Pneumonia," in which he cited cases and made a plea for the use of this drug *before* cardiac failure is imminent, when, as we all know, it is too late to obtain its therapeutic value; at that time I had reference especially to lobar pneumonia. What I said then still holds good; furthermore, the late epidemic taught us, I feel, that the early, energetic, but careful use of digitalis is a decided aid in these broncho-pneumonias. Often we might call it a sheet-anchor, for, with the heart thus fortified, the battle is half won, but not entirely, for in many cases, in spite of our efforts, toxemia gets the upper hand and cardiac failure ensues, without mechanical dilatation. However, tone up the circulation, brace up the heart muscle by improved nutrition (direct result of digitalis medication), and your patient has something much more substantial to fall back upon than if you should ignore this remedy.

Generally speaking, the outline for the treatment of pneumonia is absolute rest in bed, substantial, easily-digested food, keeping all the excretions active, and watching the circulatory apparatus. Some cases require sedatives, which should be given cautiously; some need expectorants, while others show indications for alkaline and carbohydrate therapy for acidosis.

To come to our main point, viz: so-called influenza broncho-pneumonia, a disease which was undoubtedly more prevalent than

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

diagnosed, there are special indications to be met which tax the resources of the attending physician to the utmost. Christian, of Boston, and Riesman, of Philadelphia, maintain that all severe, protracted influenza cases are really pneumonias, unrecognized in many instances, as proven by careful physical examinations and autopsy findings. All of us who saw many cases during the rushes of the late epidemic will agree with these claims; therefore every pronounced case of influenza should be treated as a broncho-pneumonia. The patient should be put to bed and kept warm in a well-ventilated but not too draughty room, given an initial laxative and an alkaline diuretic (sodium or potassium citrate or the alkaline mixture of spirits of ammoni, aromatic liquid ammoni acetatis, and liquid potass. citratis) for the headache; small doses of acetphenitidin, with or without codein, combined with camphor or some other diffusible stimulant, are useful, and certainly not harmful, unless used to excess. If the pulse rate is over 100 or irregular, or blood pressure below 110 (in adults), I begin tincture of digitalis in 10 or 15 minim (not drop) doses every six hours, later increasing or reducing dose, as per indications. If we see the case early, counter-irritation of chest with mustard or strong turpentine poultice (if kidneys are normal) is useful, but in advanced cases I believe this procedure is energy wasted. For the fever, some tolerate ice bag to head, but others it chills so rapidly that it has to be dispensed with. For hyperpyrexia, cool enemata or hot packs probably give the most rapid relief.

For the thick, putrid expectoration, carbonate of creosote or one of the many creosote preparations on the market may be used. In advanced cases, with bronchorrea, atropin may have to be used, to prevent "drowning"; it should be used early in this emergency, in small doses, withholding it too long often rendering it useless. Opiates, as a rule, should not be exhibited, but some cases show a happy improvement after small doses, especially Dover's powder with a laxative. While bromides or one of the mild chloral preparations are to be preferred where a sedative becomes necessary, resort to opiates to obtain rest is sometimes advisable, in which cases a small dose of codein or heroin often suffices. Blood-letting and oxygen inhalations in this disease are, in the opinion of the writer useless.

A paper on pneumonia therapy would be incomplete, indeed, without a discussion of the use of the sera and vaccines in this

disease. The literature has been heavy, of late, with references to the serum treatment of pneumonia, but especially so with articles regarding identifying the type of pneumococcus we are dealing with. The work of Cole and others at Rockefeller Institute, while holding out great hope, has not as yet borne the fruit which we had expected about two years ago. A recent paper of Prof. Johns, of Tulane, in reference to identifying the type of organism that we are dealing with, explains:

“The drawback comes in the large number of Type IV infections seen in broncho-pneumonia, and against which type a serum is not practicable, owing to the large number of strains comprising the group.”

The so-called “polyvalent” antipneumococcic sera on the market sometimes yield brilliant results in lobar pneumonia, and this is said to obtain when we are dealing with Type I only. These preparations are of absolutely no value in influenza broncho-pneumonia, even the combined, as has been advised, with antistreptococcic serum. Recently work has been done, in extreme cases, with human serum from recovered patients, and also with direct transfusion from convalescents. The results have been good enough to warrant a continuance of this kind of therapy, but, it seems to me, our greatest hope should be in getting a horse serum which would prove effectual and which, of course, could be obtained in sufficient quantities to “go around.”

As to the vaccins, we should not expect results from them during the acute stage, but in those cases of influenza broncho-pneumonia that subside by very slow lysis, autogenous vaccins have proven helpful in my hands. I believe, too, that I have seen some beneficial results from the use of sensitized mixed stock vaccins during the acute attack, but when we realize that there is no unanimity of opinion as to the causative agent in this influenza epidemic (and therefore, too, in these broncho-pneumonias) we are in this, to some extent at least, groping in the dark, so that if we feel that good results are obtained in any cases from stock vaccins we should be mindful of the possibilities of non-specific vaccin therapy. To date, Rosenow's preparation seems the most rational, containing organisms most frequently found in the recent outbreak.

A patient who has had a well-marked pneumonia should be kept in bed for at least a week after subsidence of acute symptoms. A careful examination of lungs, heart and kidneys should be made

before he is dismissed, and he should be warned if any evidence of aftermaths exists.

In this paper I have not attempted any long dissertation on this ever-important subject, but I have tried to deal as briefly as possible with how best to fight our troublesome enemy of the past fall and winter, realizing that pneumonia and epidemic influenza are so closely intertwined, feeling that by thus broaching the matter many of you will be given an opportunity of informing us as to what therapeutic means and measures you think best to pursue.

DISCUSSION OF DR. HEROLD'S PAPER.

Dr. C. M. Tucker, Haughton: In all of our bad cases of influenza, such as we have had this year, each one was treated as a broncho-pneumonia to start with. There has been such a small line drawn between bronchitis and broncho-pneumonia as we have had it this winter that I want to emphasize that we should treat them primarily as cases of broncho-pneumonia.

Dr. E. M. Ellis, Crowley: There is one point I wish to emphasize. During the last epidemic we all know our experiences in treating influenza pneumonia were very unsatisfactory. I wish to lay emphasis on the serum treatment in connection with the very severe cases I was called in to see. One case seemed hopelessly ill, but, as we had been very unsuccessful with our methods, we decided to use every means available. About that time the report came from Camp Sherman of twenty-five cases having been treated by the serum of the convalescent patient, and we determined to try this; but we could not find any one who was convalescent from pneumonia; our pneumonia patients were all dead, so we could not get the serum. But we took the matter up with Dr. Eshleman in New Orleans and he secured the serum there from a convalescent nurse in Touro Infirmary. He sent six ounces of serum. When we began to use this serum she had a pulse of 160 and was cyanotic. We gave her three ounces of this serum, and in six or eight hours she showed improvement. In fourteen hours we gave her the other three ounces and she made an uneventful recovery.

Dr. Allan C. Eustis, New Orleans: Most of us received our medical education under Dr. John B. Elliott, Sr., and he used to talk about a condition known as "capillary bronchitis." Latterly we have been taught that capillary bronchitis was broncho-pneumonia. This epidemic we have just gone through is entirely different from the broncho-pneumonias we are wont to see due to pneumococcal infection, and it seems to me the former might be called capillary bronchitis—where the patients are drowned in their own secretions in twenty-four hours. You will never learn this in your text-books, but I think we should bear this in mind. It is an acute inflammatory condition of the minute bronchi, a condition which we have been overlooking.

Dr. A. A. Herold (closing): I have nothing further to add, except that Dr. Eustis brought out the point of this being a capillary bronchitis. I was careful to say so-called "broncho-pneumonia." Some one has suggested the name of "bronchiolitis."

EPIDEMIC MENINGITIS FROM A CONTROL STANDPOINT.*

By W. H. SEEMANN, M. D., New Orleans.

The endemicity of cerebrospinal meningitis is subject to considerable variation. At times we are confronted, especially in smaller communities, with outbreaks that threaten to become general, and at other times there are practically no cases present. Ordinarily in the winter months we find a more or less consistent increase in the occurrence of this disease.

During the winter just passed I have been impressed with the comparatively small number of cases reported of this, as well as other similarly transmitted diseases, with the great exception of influenza, which we all know swept the world with terrible consequences.

It is hard to explain how the great outbreaks of 1917-18 have been followed by a comparative lull in this disease in the army camps, because there has been a constant new supply of potential victims. Possibly the lessons learned from the first outbreak have served to lessen the subsequent loopholes, and the improvement may thus be explained. Still, in civilian communities, where these arguments would not hold with the same force, we find years of great outbreaks coming suddenly, after years of comparative absence of the disease; thus the great outbreak in New York in 1904-05 and in Texas in 1912 stand as awe-inspiring examples.

We all know, as demonstrated by many investigations, that meningococci infect the nose, pharynx and tonsils of many otherwise healthy individuals; in fact, the percentage of healthy carriers found varies from one-half to 50 per cent, as reported by various persons in their individual investigations. The class of individuals who, though apparently well, harbor in themselves germs of disease, potentially virulent, are popularly in medical literature called "carriers."

We recognize different types of "carriers." The acute or accidental carrier is one who, though unsusceptible to the continued growth of meningococci, having been exposed to contact with the germs, affords them temporary harborage. Chronic carriers are those persons in whom the germ found suitable environments for continued existence and multiplication.

The question is often asked by the laity, and occasionally brought

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

up as an argument by some of the profession, as to why, with so many persons harboring disease germs, we do not have more cases of the disease. It is well understood generally that the production of disease spreads not only on the invasion of sufficient number of virulent disease germs, but also on the presence of an individual of sufficient susceptibility to prevent their implantation and successful biological activities.

In cities, especially, we have an almost constant supply of the more common disease germs, and as a result there is very generally more or less continued inoculation, naturally and sufficiently, to produce a relative immunity. This is not true, in the same degree, in the rural districts, and we find that, as a result, many young adults from the latter source fall victims to meningitis and similar diseases when exposed to concentrated infection in army camps or similar congregations. In cities the meningitis victims are generally among the very young, who have not attained sufficient immunity.

It has been estimated that there are at least ten carriers to each case of meningitis. I feel sure that this is too moderate an estimate. We must remember that it is extremely difficult to attain exact figures in estimates of this kind, and if we will realize that the "healthy" carrier is potentially a much greater spreader of disease than the patient who is *comparatively innocuous*, in that light we can understand that, given the proper germs and the proper opportunity, there is hardly a limit to the proper dissemination.

The general examination of an entire community is obviously impractical. Our attention is usually directed to the entourage and the antecedent contact of the sick person. For this attention, to be productive of the most good, demands an early access to the case. This is impossible until the case is recognized; hence the importance of diagnosis.

There is no space here, nor desire on my part, to go into the diagnostic symptoms, nor is it necessary. I wish to impress, however, that when all is said and done the examination of the spinal fluid is the final arbiter in cases of meningitis, as to the etiology.

The differentiation of the so-called pus meningitides on the one hand, and poliomyelitis, meningism, tubercular meningitis and encephalitis lethargica on the other, can almost be made instantly by the appearance of the fluid—at any rate, in most cases.

A bedside cell and bacterial study is possible in nearly all cases, but none of these aids are available unless a spinal puncture is

made, and I want to make a plea for the more general use of this procedure.

Ten years, or fifteen years ago, very few men would make a vein puncture, and, many who did, did so with some trepidation. Today venepuncture is an everyday and unnoticed procedure. With spinal puncture, among the general profession, the latter state of mind has not been reached.

The operation itself is comparatively simple and safe, if accompanied by ordinary elementary safeguards. Whatever difficulties are present are as likely to happen to an experienced operator as to a tyro, and can usually be easily overcome.

Once a diagnosis has been made, the work of the sanitarian is needed but in a small way as to the patient. The latter constitutes but an indifferent source of danger. As a rule, before convalescence has been established the patient is free of meningococci in the upper respiratory tract. Ordinarily, when cases occur in the same house, they are simultaneous, or nearly so, and are usually not due to one another; however, it must be presumed that the infection is close at hand.

Generally speaking, isolation and the ordinary method of handling sick cases of an infectious character will suffice here. Notification and placarding are obviously to be demanded. Quarantine and examination of all members of the household is essentially necessary.

Patients who are coughing or sneezing are much more dangerous than others. I have seen what I have believed to be good results from the use of screens and the use of sprays judiciously. The use of masks on coughing patients is so often impossible, from a medical and humanitarian standpoint, as to be applicable in only a few cases.

Now, as to the use of masks by the attendants and physicians. Our recent outbreak of influenza, and its attending professional and popular hysteria, has led to quite a discussion, pro and con, as to the value of masks. I am convinced that the conscientious and proper use of a well-constructed gauze mask is of great value. In this connection I want to emphasize the possibilities of the eyes as an atrium for disease and to call your attention to the article of Moxey, in the *Journal of the A. M. A.*, in which the greater area of exposed space for entrance of an infection in the eyes, as compared to the nose and mouth, is especially stressed. In order that gauze mask-protection should be raised to the highest efficiency, the eyes should be likewise protected, and, as gauze is obviously not

feasible, I have used goggles, such as are used to protect from the dust in driving, to which pads of gauze can be attached readily by a loop around the part which holds the glasses to the ear and fastens around the neck with a detachable elastic. In this way a package of clean pads could be carried and no objection could be raised as to the old method, that the infected side would come in contact with the face. Soiled pads could easily be cleaned and sterilized.

As to disinfection, I must say that I am more than ever convinced of the value of ordinary soap-and-water cleanliness and less impressed with the efficiency of ordinarily practiced gaseous disinfection. There is so much to say in regard to this subject that one must limit oneself, but I feel that, in the handling of these cases, the use of sprays must be discussed. The improper use of sprays in the nose is always disagreeable, and may be harmful, and, generally speaking, has not met with the greatest favor. I have such personal experience with what I have believed the beneficial results of sprays that I am still in the position to conscientiously recommend their use. I have used, in one outbreak at Jackson Barracks, of which I had charge, in the absence of dichloramin-T, which was not available, and iodine phenol camphor, liquid petroleum spray, with good results.

It is generally proven that it is in the naso-pharynx where the meningococci can be earliest and most surely found, and that a bacteremia precedes the infection of the nervous tissues, hence any method that will reduce the number of bacteria in the naso-pharynx will naturally reduce the size of the dose available, at any rate, and this latter effect I have found uniformly the result of spraying.

DISCUSSION OF THE PAPER OF DR. SEEMANN.

Dr. C. L. Eshleman, New Orleans: As the doctor has said, spinal puncture is very easily performed, and we should not hesitate to attempt it. If the fluid is turbid it means meningitis, but what type of meningitis must be determined by bacteriological examination. The finding of the meningococcus is not particularly difficult. When it is present it is an intracellular organism that looks very much like the gonococcus. If the fluid is turbid and you do not find the organism in the smear, it has been suggested to centrifuge the specimen. If you do not find it then, take part of the specimen and grow it twelve to twenty-four hours. If you do not find it then, and cannot make a diagnosis of any other form of meningitis, go ahead and give the serum, anyhow.

The point that Dr. Seemann made about the eyes, I think, is a good one. I believe it has been recently shown that this condition is not alone

a meningitis—that is, an inflammation of the cerebral membranes, but it is also a systemic bacterial infection. The blood is infected and the organism is found in the blood streams as often as in the spinal fluid. Being, therefore, a bacteriemia, we have evidence of the disease in other organs—for instance, joint involvement, with arthritis. Pericarditis has been another form, and ophthalmia another. I recently saw a case that showed ophthalmia, a pericardial rub, and joint involvement, as well as spinal involvement. Perhaps the ophthalmia in this case is an infection by the individual from the nose by the fingers and then rubbing the eye; perhaps it is through the blood streams.

As far as treatment is concerned, serum should be injected, not only in the spinal canal, but into the blood. It should be injected every eight to ten hours, to get results. As to the serum you use, it is not often that I recommend a preparation of any particular make, but I do say this much, that in my experience the serum made by the Rockefeller Institute is unquestionably the best serum for this disease. Dr. Flexner, I believe, has traveled all over the country studying this disease, and the serum made there is made of cultures of various strains of the organism gathered all over the country; hence the potency.

THE PARHAM-MARTIN BAND IN OBLIQUE FRACTURES OF THE LONG BONES.*

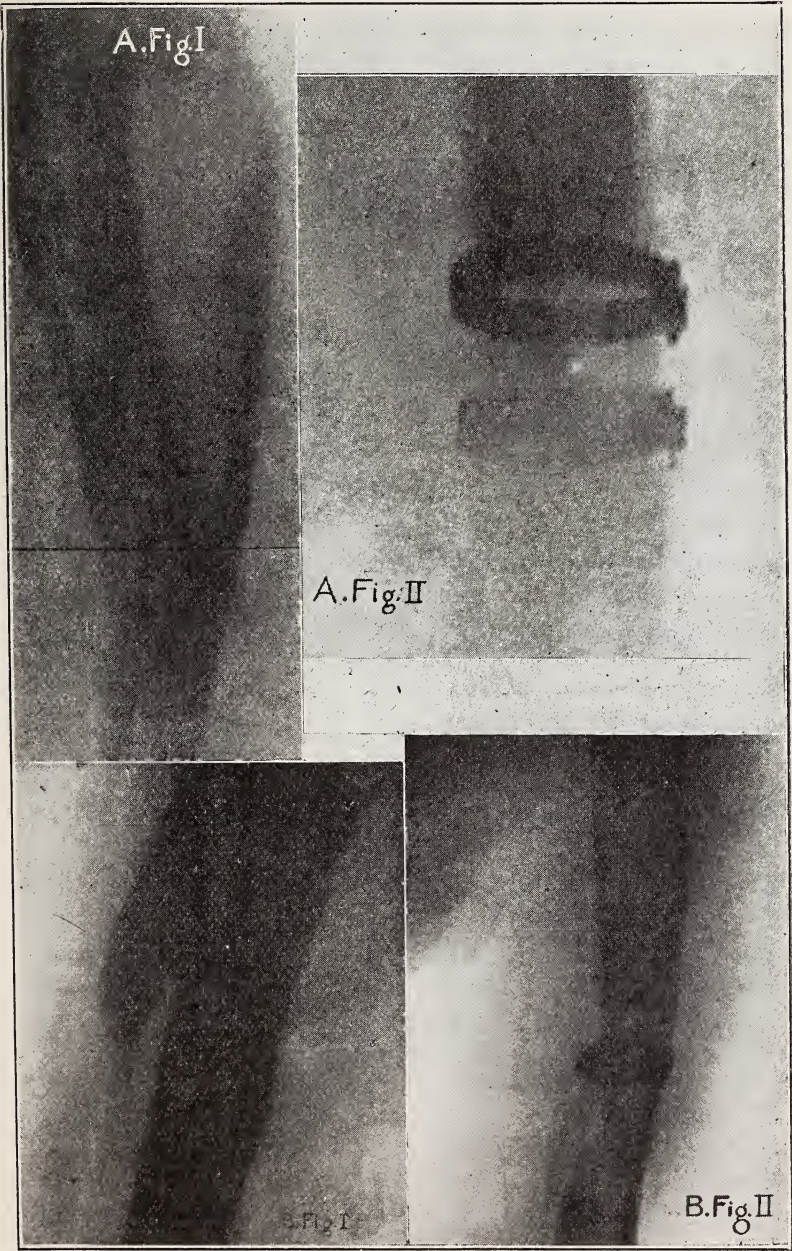
By HERMANN B. GESSNER, M. D., New Orleans.

The purpose of this paper is to put briefly before you our experience with the Parham-Martin band in a total of six cases. These comprise five of the femur and one of the humerus.

In these cases the strict Lane technic, or what has been called the knife-and-fork technic, was employed. Nothing that is to go into the wound is touched even with the gloved hand. Sponging is done with gauze mops at the end of forceps. Preferably two knives are used—one for dividing the skin, the second for the deeper tissues. Periosteotomes touch the glove by the handle only; the same is true of the bone-holding forceps. Above all the foreign body, the band is handled with forceps during its introduction, and later with the tightening mechanism, only the handle of which is touched.

A little trick that simplifies the use of the band consists in passing it behind one of the fragments when freed, instead of waiting to approximate them and then pass the band. Another point, probably not new to those who have done open work on fractures, is that the limb is not to be fixed in position on the orthopedic table until the fragments have been manipulated into proper

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.



ILLUSTRATING DR. GESSNER'S ARTICLE.
(Disregard diagonal line, A Fig. 1.)

apposition. Before fixation is effected, reduction is more conveniently managed. All of these cases healed by primary union.

I shall give the leading facts of two of the cases which were of special interest.

One of these was a boy of twelve, in whom, six weeks after primary operation for spiral fracture of the femur, we operated a second time to remove the band. It had been suggested that the band, encircling a young bone, might arrest the growth in thickness and predispose to subsequent fracture. Removal was accomplished with ease. The old teaching, that accurate reduction with thorough immobilization is attended with a minimum of callus formation, was borne out in this case, as the site of fracture looked as though it had been patched with a liquid glue.

In a second case, fracture of the femur, due to a pistol-ball injury, there had been infection, and there was still a slight serous discharge. Nevertheless there was prompt healing and an excellent result. This was a case in which the obliquity was of such extent that it was necessary to use two bands to secure complete immobilization. The latter case, one recently infected, brings out what we consider to be one of the chief advantages of the band. There was no drilling of holes or driving of screws into the marrow of the bone. The danger of sepsis is minimized. The method amounts to tying a steel string about the two ends of an obliquely broken bone—a simple technic, as compared with that of plates or grafts.

The six cases gave four completely satisfactory results, two in which untoward conditions prevented an equally happy termination. One of these was an old man, whose fracture of the femoral shaft followed a slight fall, suggesting a pathologic fracture. Skiagraphs and operation did not confirm this suspicion. In this case the band held the fragments together properly, but union was delayed. In another case, a fracture of the humerus, union was delayed in a patient who had both malarial and syphilitic infections to cope with.

To sum up our conclusions, we are convinced that, for oblique fractures of the long bones, the band offers a simple, effective means of securing accurate reduction and firm immobilization.

DISCUSSION OF DR. GESSNER'S PAPER.

Dr. B. C. Garrett, Shreveport: I want to discuss the phase of the knife-and-fork technic. While in General Hospital No. 14, after Col.

Martin became chief surgeon, he did not let anybody operating in the hospital put his fingers in the wound. He tied all the ligatures with hemostats, using an instrument once and discarding it, and never touching the wound with his fingers. At first it was pretty hard, but after a while we got around to it. You could do it pretty rapidly—just about as fast as putting your finger into the wound. You cannot save quite as much catgut, but you can tie off ligatures perfectly well. I assisted in two or three bone-sliding operations, and they healed up by primary intention.

I would like to ask Dr. Gessner if he ever has to take these bands off?

Dr. Gessner: We took one off in a growing boy, but the rest have been left in situ and have done no harm.

Dr. R. M. Penick, Shreveport: I want to report a case of very severe fracture of the femur in a girl sixteen years old. She had great loss of muscular tissue on the outside of the thigh—an automobile accident. We tried in every way to use extension, but it was a failure, because there was so much traumatism in a nervous little patient. I finally had to go in and I used two steel splints, each three and a half inches long, and two Parham-Martin bands. My idea is, that in all fractures, the best technic is to use autogenous splints if possible. If you have careful assistants you will be all right. But I used this method because I had rotation of the bone, even in a plaster cast, but I would hesitate to do it again. I felt the same way before I put all this hardware in this little girl's leg, but I had to have a very strong splint on that bone, so I put one of the splints on the inside and the other parallel to it on the outside, putting one splint—the inner—a little higher, to facilitate removing later, and then I put a Parham-Martin band above and below the fracture. I had two well-trained young men to help me, and we used the knife-and-fork technic, and got along beautifully. I went in eight weeks afterwards and took all the hardware out, because she was only sixteen, and I was afraid there would be rarefaction of the bone. I had a splendid result. She had about three inches shortening of the bone previously, but after we got through she had none. The bone is a little bit bowed, because of the pulling of the internal muscles. I went cleanly into the scar and slipped out the splints and band, and in six to ten days it was entirely healed. This is an interesting case, because I used a great deal of hardware—in fact, an unusual amount.

Dr. H. B. Gessner (closing): To take up the question of transverse fracture, it has been suggested that the band be used for this as Dr. Penick has used it, employing two straight metal splints and a Parham-Martin band above and below. Another way is to take a piece of steel, bent lengthwise at a right angle, then make a groove in the bone above and below and slip one edge of the bent steel into the groove; then a band is put on above and below. It is a sort of steel ferrule used with the Parham-Martin bands.

About the removal of the band: I removed the band in one case—a boy of twelve. I am not convinced that this is necessary. It would take further observation to tell us that it is necessary to take it out, even in the young, on account of the idea that the bone, failing to grow in thickness, may not be able to resist strain. I think perhaps it will take some experimental work on animals to clear that up.

I have never used a band on a compound fracture, but I believe it is a reasonable thing to use it in that way. I have stressed the point in

my paper that, in using the Parham-Martin band, you do not drill into the marrow of the bone or drive screws into it; working under these conditions, it ought to be quite safe to use the band in compound fracture.

One thing that has been brought out in the war experience is the enormous importance of good immobilization in compound fracture. If you do not have good immobilization the irritation of the fragments moving about increases the spread of possible infection, and I believe the advantage of good immobilization would more than make up for the disadvantages of the incision.

I do not mean to give the idea that this band should be used in all cases of oblique fracture. When the fracture is not spiral, if the skiagram shows good apposition, then I would simply take that apposition and not do an open operation.

Dr. Peniek raises an interesting point in regard to the quantity of hardware he had to put into the wound, but he had only two plates and two bands. The men who have been using this method have found that it does not make any difference how much iron or steel you put in if it is sterile, if you do not carry any bacteria with it. It is quality that counts, not quantity.

ACUTE MASTOID ANTRUM INFECTION IN INFANTS.*

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

There is really no mastoid process in the new-born. But there is present, behind and slightly above the ear, one well-defined and comparatively large air-space, known as the antrum. This cavity communicates with the middle ear through a canal, the *aditus ad antrum*. This communicating passage-way makes the middle ear continuous with the antrum. Such a structural arrangement, therefore, favors the spread of infection from the middle-ear cavity into the antrum. The mastoid process proper, with its cell structure, begins to develop after the first year of life, and only attains the adult type at the third year. The infant is certainly not exempt from inflammatory infections of the ear. With a large antrum contiguous to and continuous with its middle ear, involvement of this cavity can and does occur. This condition may be unrecognized, and thus such sequels as septicemia or meningitis will be attributed to some other unproven cause.

The following brief records of six cases taken from hospital and private practice will serve to illustrate the salient features which usually present themselves in this class of ear complications:

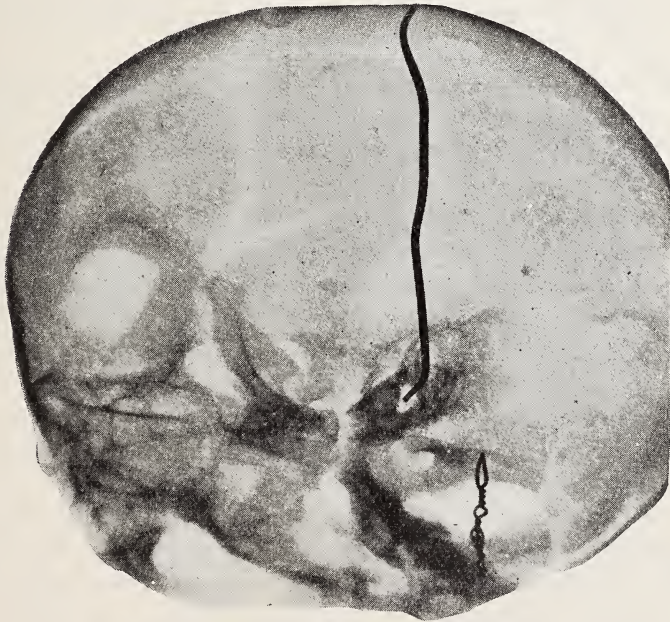
Case 1. W. M., aged three months, referred by Dr. DeGravelles, of Morgan City. History of earaches, profuse otorrhea, and temperature

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

rises for several weeks. Post-aural swelling, right side, appeared three days before my examination. At operation found subperiosteal abscess and fistula in cortex leading to antrum, which contained pus and granulation tissue. Recovery.

Case 2. W. F., aged eight months, referred by Dr. DeGravelles, of Morgan City. Slight otorrhea, accompanied by violent earaches, with temperature rises for over one week. Swelling behind ear has only appeared thirty-six hours. Operation disclosed fistula high up in cortex. Pus in antrum. Recovery.

Case 3. W. M., aged eleven months, referred by Dr. W. H. Seemann. Baby cross and fretful for several days, when slight discharge appeared in left ear. Temperature ranging from 99° to 102°. On the eighth day



ILLUSTRATING DR. DUPUY'S ARTICLE.

Skull of eight-months infant. Probe passing from antrum into middle ear.
From the X-Ray Laboratory, Hotel Dieu, Drs. Henriques, Menville, Devlin.

edema appeared above and behind left auricle. Operation discovered fistulous tract leading to antrum, which contained a large quantity of pus. Recovery.

Case 4. W. M., aged eight months, referred by Dr. P. Tetreau, of Lafourche. Ears discharging for several weeks, during which time the baby appeared fretful, but displayed no signs of intense pain. Post-aural infiltration on both sides. Operation disclosed subperiosteal abscesses on both sides. There were no fistulae in cortex. Pus, granulation tissue, in both antra. Recovery.

Case 5. W. M., aged six months, referred by Dr. Thomason, of New Orleans. For several days violent earache, accompanied by periodic discharges from right ear. At the end of the week, slight edema behind right ear. Patient referred to me. Tympanotomy performed and pus obtained from ear. Edema behind ear increased and hyper-pyrexia continued. Operation showed fistula leading to antrum. Latter contained pus and granulations. Recovery.

Case 6. W. M., aged ten months, referred by Dr. Yenni, of New Orleans. Had broncho-pneumonia, in the wake of which signs of middle-ear trouble appeared, with secondary rises in temperature. Tympanotomy on both sides. Pus in both ears. Absolute relief from earache, but septic temperature continued. Lungs normal. White blood count, 47,000. No post-aural swellings. One week after tympanotomy patient showed signs of meningeal irritation, with temperature reaching 105° F. Operation disclosed a normal cortex, but there was a great quantity of pus in both antra. Recovery.

The youngest patient was three months, and the oldest ten months of age. Every one presented a large mastoid antrum, without the slightest trace of the usual cell structure and arrangement of older subjects.

Pain, while a constant symptom, expressed itself rather in fretfulness than in violent crying. This series certainly emphasizes that we cannot gauge the seriousness of ear troubles in infants by the degree of pain exhibited. Intense pain may be associated with a slight middle-ear involvement, while a suppurative process may only cause fretfulness.

Profuse otorrhea was present in some, while it was only slight in others. But in every instance there had been some evidence of an ear discharge.

In every case but two a fistula was present, establishing communication between the outer surface of the skull and the mastoid antrum. This explains the frequency of post-aural swellings behind and above the auricle in the above series of cases. This swelling was the chief indication which led to operation. One case (No. 6) presented not the slightest post-aural infiltration. The diagnosis of antrum infection on both sides was reached through two symptoms—a profuse otorrhea and a high white blood count.

The post-aural swellings were all late developments, the child being sick usually over one week before the appearance of this phenomenon.

Case No. 6 teaches the following valuable lessons:

1. Not to wait for post-aural swelling in infants as the only indication for operation.

2. With a persistent otorrhea, septic temperature and a leucocytosis, operation becomes imperative.

3. In the infant, while a thin cortex over the mastoid antrum invites perforation from the antrum side, not a few cases must succumb to intracranial and septic complications before the appearance of a post-aural swelling. In the absence of this sign we will have to be guided by the temperature record and by the leucocytic count.

DISCUSSION OF DR. DUPUY'S PAPER.

Dr. M. P. Boebinger, New Orleans, presented a specimen from a child one year old. In the new-born and young infant you find only an antrum, there being no mastoid cells present. In the infant there is a complete absence of the mastoid process—only a flat surface is found, the antrum and facial exit are superficially placed, so the surgeon must incise cautiously in doing a mastoidectomy. The annulus tympanicus is open at the top; there is direct communication between the dura and mucous membrane lining of the middle ear.

The petro-squamous fissure is still ununited, hence always the liability of brain abscess, as well as meningitis. The cartilaginous membrane of the external meatus is attached to the annulus tympanicus, there being no bony wall present in the new-born, so pulling and tugging the auricle will elicit pain in middle-ear disease of the infant.

The facial nerve enters the middle ear just in front and above the fenestra vestibuli; often this portion is covered by a thick, delicate bone, or even an abscess, being protected by only a membrane; so, gentlemen, you can easily understand why facial paralysis can complicate middle-ear infections.

The cleft left in the undeveloped annulus tympanicus, the petro-squamous fissure will often explain why an infant will develop cerebral abscess or meningitis.

Before closing my discussion, let me call your attention to the position of the pharyngeal opening of the eustachian tube. This is shorter, lies close to the posterior chonæ, and, as the infant develops, it recedes and is found higher and further away from the chonæ.

Dr. Homer Dupuy (closing): Dr. Boebinger spoke of facial nerve paralysis in infants. I differ with him, as I have never seen a case under one year of age in which the middle-ear trouble was associated with this paralysis. It is well to emphasize that the petro-squamous fissure which passes just over the antrum affords frequently in the infant an outlet for the accumulation of pus in the antrum. This explains why it is that the Wilde's incision, made behind the ear, over the swelling, sometimes succeeds in these very young subjects. But it must be admitted that to stop with the skin incision is insufficient surgery, and that in every instance where there is a post-aural swelling we should treat the patient surgically, as if it were a mastoid antrum infection, and enter the bone

LESSONS LEARNED AND RESULTS ACCOMPLISHED DURING THE INFLUENZA EPIDEMIC.*

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

For six and a half years I have fought all air-borne epidemic diseases by means of isolation and ventilation, and have always found this method effective in stamping them out when the disease is feared by the people.

Diseases like measles and chickenpox, while difficult to suppress, have been kept at a minimum. To obtain the coöperation of the people, it is necessary not to ask of them too much, so my policy has been to ask of them only the essentials and give them common-sense reasons for the request; if you do more, the people become confused and embarrassed, until they cease to give intelligent coöperation, if they give any at all.

Years ago, when I learned that no disease could be contracted by placing the germs on the unbroken skin, I decided that there was no such thing as contagious diseases and all diseases were contracted in three ways—through the digestive tract, the respiratory tract, or by inoculation. Since nature provides means to protect the system from a certain quantity of disease germs, it is only when concentrated in sufficient quantities to overcome this resistance that disease results. I believe the principal, if not the only means by which influenza is contracted, is by breathing into the lungs air in ill-ventilated places where the germs are concentrated in sufficient quantities to produce the disease. Fortunately, the first few cases brought into Shreveport proved, to my mind, conclusively, that it is contracted by breathing the germs that were thrown into the air from the lungs of the patient, so I had a clear idea of what, in my opinion, was necessary to protect, and it gave me the necessary firmness to resist the hysterical demands of a great many of the people. In all previous epidemics the people's money has been spent freely and business has been paralyzed unnecessarily, when in a city it is absolutely essential for business to go on, for so many people depend on their daily labor for their bread. I know of men to-day in Shreveport who, previous to former epidemics, were prosperous, who were rendered bankrupt by destroying the commerce of the city in attempts to suppress epidemics by means which are now known to have been absolutely useless as a protection.

I will give you the reasons why I say that the influenza epidemic

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

in Shreveport proved that influenza is spread by breathing in the germs concentrated in ill-ventilated places. One of the first cases, if not the first case, was brought to one of the sanitariums dying with pneumonia. It was not suspected of being influenza, and in less than twenty-four hours two doctors and five nurses, all on the same floor, were down with the disease, and within three days four more nurses contracted it. Although the hospital was full of patients, not one of them contracted the disease. Later, when the epidemic was at its height, forty influenza cases were in the hospital for days without another nurse or patient contracting the disease. This was the experience in all of the hospitals. Another sanitarium had a hundred cases constantly on hand, and over twenty nurses, besides doctors, contracted the disease, without any of the other patients taking it. In dozens, if not hundreds of homes in the city, one case occurred without other members of the household contracting the disease, and invariably it was in homes where there was free ventilation, by keeping the doors and windows wide open. On the other hand, where homes were not freely ventilated, almost invariably all the occupants contracted the disease, and this was in homes where they feared a draught and the pure air of heaven. I reasoned that, in carrying a hundred cases into a hospital and opening the doors necessary to feed these cases, would necessarily contaminate the general air of the hospital to a certain extent, and any place of public gathering where ventilation was sufficiently free to sweep out the exhalations from the lungs of the crowd would be freer from "flu" germs than the air in the hospitals, and, since the air in the hospitals did not spread the disease, gatherings would be safe with proper precautions.

In November, when the Federal and State health officials raised the quarantine, stating that the influenza epidemic was over and the danger passed, I published a bulletin in the Shreveport papers, stating that, in my opinion, the only way for an epidemic to end, was for the disease to use up the material or the germs to lose their virulence; that we had plenty of unused material in Shreveport and the germs had not lost their virulence, and as soon as cold weather or winter caused the people to stop ventilating freely there would be a recrudescence of the epidemic, but I favored the raising of the quarantine, because free ventilation would give the necessary protection. This statement was borne out by results.

In sixteen days, before the quarantine was raised in Shreveport,

there were twenty-one deaths from influenza and all forms of pneumonia; during the forty-six days following the opening up of everything there were only twenty-four deaths. With the recrudescence of the epidemic throughout the United States after raising the quarantine and the recommendation of the health authorities that the quarantine be reinstated, the people went into a panic, and most sensational statements were spread broadcast in our city and great pressure was brought to bear on me to close everything, especially the schools and picture shows. I replied, as regards the schools, that the children would be safer in schools, with windows and doors open, than they would be at large, and that, as to the picture shows, if they were kept open and the exhaust fans kept running to renew the air promptly, they would be safe, and out of 170 cases reported since the opening of the picture shows only six had even attended a picture show. They invariably replied that all cases were not reported and that the town was filled with influenza and that it was as bad as it ever was. I replied that, of course, all cases were not reported, but all deaths were reported, and no new cases had been brought into our hospitals for five days, and there were only about a dozen old ones, which sustained the fact that the conditions were better than ever before in Shreveport. This statement of facts usually had no effect, so I ended the argument by stating that I would injure no man's business or interfere with the amusement of the people when I knew that they were not spreading the disease.

During the terribly cold spell at the end of the year for a few days everything was closed tight, and there was a recrudescence of the disease, as I had warned the people in November would occur. Twenty-one children out of forty in one grade were taken on almost the same day. I told the Board of Health and School Board that it was open up or close up the schools; that I was satisfied that if the windows and doors were thrown open, regardless of the cold, and the children who were not properly clothed were sent home, that it would save many lives, not only from influenza, but other diseases. I knew that many of the people and some of the doctors feared draughts and that I would be condemned for the regulations, that any sickness occurring would be attributed to me, but I was so confident that we would show a reduction in deaths among the children that I was willing to shoulder the responsibility. What was the result? During the months of December and Janu-

ary there were twenty-five children under ten years of age to die; twelve of these deaths were from influenza and pneumonia; only one of the twenty-five was taken sick while attending school. I tabulated the deaths for these months for five years preceding, and the average deaths were twenty-five, with a smaller population and no influenza epidemic. On opening the windows and doors of the schools in January the influenza immediately stopped spreading to any extent among the children, and as soon as it got a little warmer and people and business houses opened up the windows, the epidemic was practically ended in Shreveport. During the last ten days of January only sixteen cases were reported, and there were only fourteen deaths in February from influenza and all forms of pneumonia—exactly the same as occurred in February last year, when no influenza epidemic prevailed, which I think justifies the statement that the influenza epidemic ceased in Shreveport in the latter part of January.

The fight to control the influenza epidemic in Shreveport was based on the theory that the disease was only contracted by breathing into the lungs the air in ill-ventilated places, contaminated by concentration of the germs from the throat and lungs of patients or carriers of the disease. Before the disease appeared in Shreveport I began a campaign of education, impressing on the people that free ventilation was the best preventive of influenza. The people were warned by bulletins in the press that influenza was certain to invade our city, and the way to protect themselves was to keep the windows and doors wide open. Letters were sent to all ministers, white and colored, and to leaders in the various organizations, asking assistance in educating the people on the absolute necessity of free ventilation as means of protection, not only from influenza, but other diseases. The fight against the influenza epidemic was made by the Board of Health without asking or receiving a dollar for that purpose. Some of our benevolent organizations spent some money in furnishing nurses and necessities to those unable to obtain them.

When the disease invaded our city every case was posted so people would not expose themselves, and the occupants were given a card telling them how to protect the rest of the family, and they were urged to cut out visiting; if they did visit, to confine themselves to the porch in the open air. During the influenza epidemic, in my opinion, there were only two things to do—either close up and

stop public gatherings, or open windows and doors. The latter method is, in my opinion, by far the most effective; closing places of public gatherings is necessary unless you can get the coöperation of the people in free ventilation. Closing places of business and amusement of the people excites and harasses them and prevents cheerful and intelligent coöperation, so necessary for the control of epidemics.

I have never favored the closing of our schools or any place where the regulations as to ventilation could be and were carried out. Public gatherings were prohibited in Shreveport for thirty-five days, without consultation or previous notice to the City Board of Health. During this time there were eighty-one deaths from influenza and penumonia, twenty-one of which occurred in fifteen days preceding the raising of the embargo; during the thirty-five days following, there were nineteen deaths, and during the entire 116 days that public gatherings were allowed during the epidemic there were only seventy-six deaths. The only time after the public gatherings were allowed that showed an increase in the disease was in January, immediately following the intensely cold spell in the latter part of December, which caused every one to close up for a few days, but the spread was practically immediately stopped in the schools by opening up, and in a short time the spread was stopped throughout the city. Out of the 398 cases reported in January, only sixteen were reported in the last ten days of the month. I doubt if any place where gatherings were prohibited can show a similar prompt suppression of the disease.

Free ventilation is not only the best prevention for influenza and its complications, but it is also the best method for cure. Certainly, when only part of the lungs must do the work of the entire lungs, if the patient is supplied with air depleted of its oxygen and containing the impurities of the body, it certainly lessens the chances of recovery. I have always believed and taught the people that the disease is never contracted in the open air or by means of food.

Experiments have since failed to produce the disease by means of food or inoculation, which confirms these views, for we all know that when a case is brought into an ill-ventilated house others will contract the disease. In times of epidemics it is absolutely necessary to confine your requests to people for coöperation to essentials. If you make regulations because you are requested to do so, simply because they are harmless in themselves, you will confuse the people,

for they cannot differentiate the important from the non-important; besides, you will harass them until they will cease to give co-operation, so necessary for protection.

In conclusion I will say, estimating our population at 42,000, which I think is fair, our death rate for October, November and December was 2.7 per 1,000 of population; if January and February are included, the rate would be 3.7 per 1,000 of population. Our non-resident deaths were seventy-seven. Non-resident deaths do not materially increase the rate in large cities, but in small cities, like Shreveport, it makes a great increase, and does not show health conditions. In 1918, 597 deaths from all causes occurred in our hospitals, most of them brought into our city for treatment, while deaths in the city outside of the hospitals were only 488. We had four non-resident deaths from the influenza and pneumonia in Shreveport from four towns before there was a death in our city from this disease.

The assistant secretary of the Board of Health has tabulated all influenza and pneumonia deaths from the original death certificates; it may be of interest to you to see the various localities from which these cases came.

DISCUSSION OF DR. CHANDLER'S PAPER.

Dr. Francis M. Furman, Shreveport: As bearing out some of the points made in Dr. Chandler's paper I might give you a little history of our organization. We landed—a regiment of 1,260 men—at Brest on September 12. We were marched out and given a field. The men were put in pup tents, some of the officers slept in the barn with the cows, one of which was pretty friendly, and a rat suffering from insomnia. We immediately threw around these men a guard to keep them in that field. The hospital was so crowded with cases of influenza that they could only take care of the serious cases. We had a few cases of influenza only, and in order to treat these cases we had to put up tents and make an emergency hospital, where we treated most of the mild cases. Around Brest the type of influenza was particularly bad. Almost everybody had it. We got away from there about the 23rd of September. On the last day we had about twelve new cases of influenza. We went on a French train to the interior and landed in a little town where the "flu" was not so bad. Our men were put in lofts and barns, some of them fairly well ventilated and some not. We made the men hang their shelter tents between them, so that each man slept practically in a box, so they could not cough in each other's faces. But, in spite of our precautions, shortly after we got to the little town we began to have influenza, and about September 28 or 29 we had ninety new cases. Unquestionably we picked up a few cases in Brest, but the true influenza cases did not develop until after we left Brest, until we landed in this little town, where the men slept in French homes, where the ventilation is not as perfect as it is in tents.

BONE-GRAFTING FOR NONUNION OF FRACTURES, WITH DISCUSSION OF ALBEE'S SAW.*

By E. L. SANDERSON, M. D., Shreveport, La.

The purpose of this short paper is to discuss one method of treating nonunion of fractures, explaining the use of Albee's saw, stressing some points of importance and bringing forward some improvements in the technic, especially in the design of the saw.

All surgeons are seeking more and more to imitate nature in the repair of the human anatomy. Many methods have been used in an effort to make a bone heal or unite where nature had failed. None have followed nature quite so closely or has been quite so successful as bone-grafting. And no method of bone-grafting has been quite so successful as the sliding graft made possible by the saw designed by Albee.

For the benefit of those not familiar with this operation, and to bring out the points I wish to stress, I will recite the technic, and as we proceed I will emphasize the points upon which uniform success depends.

We will suppose the femur has been broken in its middle third and has not united after the usual time allowed for healing.

Under general anesthesia a lengthwise incision is made over the break, preferably on the outer aspect of the limb. It should be mentioned here that this operation cannot be performed with any degree of success without a fracture-table or an extension apparatus similar to the Lorenz. The patient should be placed in extension as soon as asleep. I prefer to extend him before the anesthetic is given, so that any discomfort about the crotch or feet may be corrected. The break is exposed and the bone freed of periosteum to a width of about half an inch, extending about one inch on one side of the break and about two inches the other side.

It goes without saying that the most rigid asepsis must be observed. Surgeons who do a great deal of bone-work become very proficient in doing the entire operation with instruments only. The ordinary surgeon has great trouble in attempting this technic. There is no sane reason why a rubber glove boiled with the instruments should not be just as sterile as the instruments—and it is, so long as the surgeon keeps it sterile. By using the hands the usual surgeon can do better mechanical work, and do it quicker.

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

However, there is little in this operation that cannot be done easily with instruments.

The break is now observed for intervening tissues and the ends freshened if necessary. The bones, now under full extension, will assume a straight line and remain in perfect relation. We are now ready for the Albee saw. This instrument is an electrically-driven flexible shaft, not unlike that seen propelling the vibrator in the barber shop. At the end of the flexible shaft is a detachable hand-piece, which may be boiled. This handpiece carries two circular saws about two inches in diameter and a centimeter apart. There are two designs; one saws crosswise to the handle, the other is made like an ell, with the saws cutting parallel with the handle. The first style is difficult in stout patients, as the saws are so arranged that a wound that is more than one inch deep almost precludes their use. The other, being offset to the side, makes it difficult to carry or guide it through the bone. I have designed a handpiece like a double-tracer wheel. A saw is on either side of the end of the handle, and the pressure of one equals the other while in action. They are adjustable, so that a different width of cut may be secured.

We proceed now by sawing into the canal of the bone two lengthwise cuts extending one inch on one side of the break and two inches on the other. The short piece of bone is lifted out and the long piece slid over the break. The short piece is now placed behind the long piece and the wound closed and a plaster coat applied, including foot and pelvis, the entire procedure being done while under extension.

The saws run at a very high speed. Sawdust and blood are thrown up into your face, and may fall back infected. I have devised a guard, shaped somewhat like the bicycle guard, which stops all the residue, and from which it may easily be collected and troweled between the break somewhat like the mason fills a joint with mortar. This bone sawdust cement is the only part of the technic for which I claim originality. It is the nearest approach to nature's early callus that one can imagine. It is made of the patient's own blood and bone, and applied when made.

This technic, when rigidly followed, will give uniformly successful results in cases of nonunion, provided, of course, that systemic conditions are given the attention always demanded.

DISCUSSION OF DR. SANDERSON'S PAPER.

Dr. B. C. Garrett, Shreveport: I had the pleasure of working with Dr. Albee a little while in the army and helped him in four cases. Three of these were fracture of the femur and one was a tubercular spine condition. We did a sliding graft in the fractures of the femur and a bone transplantation in the case of the tubercular spine; all healed by first intention. The knife-and-fork technic was carried out.

Dr. Nelson and myself have had five or six cases of bone transplantation since I have been here in Shreveport, and the results are very satisfactory.

Dr. R. M. Penick, Shreveport: I have used the sliding graft, as described by Albee, as Dr. Garrett says, and I take heavy chromic gut and run it through drilled transverse holes in the graft and shaft, loop it over and tie. It seems quite sufficient to hold it in place.

INTERLOBAR PLEURISY.*

By M. S. PICARD, M. D., Shreveport, La.

This is more a case presentation than a thesis of this condition. This is due to the paucity of the literature on this subject, and, above all, to the fact that this condition belongs more to the radiologist than the internist or pediatricist, for without the radiologist, on account of the obscurity of the disease, the vague symptoms and the absence of physical findings, a diagnosis is almost impossible.

While cases in adults, especially of interlobar empyema, are met with, while the "flu" epidemic has given every varied form of respiratory condition in the adult, and many were observed, yet in children this condition is rare or unobserved. In going through the various American text-books—Holt, Kerley, Fisher, Dun, McKee and Wells—no mention of an interlobar pleurisy or empyema can be found. The same is true of the German text-books and literature on this subject in children.

The very absence of symptoms makes this condition interesting. A case comes under observation with symptoms pointing to the respiratory tract; there is cough, temperature; temperature, cough; few physical signs, aside from a few large râles by auscultation, and percussion negative, the blood count (white) being either high or low, depending on whether it is an interlobar pleurisy or empyema. Diagnosis, a prolonged form of grippe. A few cases, however, present other symptoms. By the lightest percussion one detects a

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

band-like layer of dullness; above and below it a tympanitic note. Diagnosis, encapsulated empyema, lung abscess, thickened pleura, sepsis, and, only when the patient passes or expectorates pus, is the diagnosis made, and not with any certainty.

A condition which resembles this to some extent, and which runs with the same temperature and cough, is a foreign body in the lung—a grain of corn, a pea, peanut, or pecan shell, around whose lodgment an abscess is forming. Here the X-ray is negative, the only symptoms being whistling râles.

The first observation of this condition was made by Gerhardt in 1892. His case, an adult, commenced acutely with cough, chill, high temperature, pain in the side. At first, by auscultation, nothing was found; later a band of dullness two to three centimeters was found. This was surrounded by a tympanitic note. Gerhardt's diagnosis was encapsulated empyema. Gerhardt had a series of these cases, and in all he made a diagnosis of encapsulated empyema, lung abscess or sepsis. These cases ran from two to six weeks, ending in recovery or the expectoration of pus. It was Gerhardt again who first described a case with the aid of the X-ray, and gave all the X-ray characteristics of this disease. This case, an adult, had an acute onset, with high temperature, cough, pain in the side, a band of dullness extending from the right mammary line backwards. A diagnosis of encapsulated empyema was made. X-ray diagnosis, an interlobar pleurisy, two fingers wide, extending backwards, becoming smaller. This was the first interlobar pleurisy diagnosed with the X-ray.

My interest in this condition, as a pediatricist, is based on its rarity; a knowledge that it does exist; a knowledge which sometimes may clear up our obscure cases.

That a small amount of fluid in the pleural cavity offers great difficulties in diagnosis is apparent from the studies of Muller. Muller states that unless the fluid in the chest cavity amounts to one-quarter or one-half liter it cannot be detected by percussion. Again, in the interlobar pleurisy or empyema, you have an immovable fluid. Diterlen reported six cases of interlobar pleurisy—three following pneumonia and three complicating tuberculosis. In three cases only were definite physical findings, the typical X-ray findings; the physical examination was negative.

The following case appeared in my practice in January, 1918:

Miss M., aged nine years, was suddenly taken sick, with high tem-

perature and cough. I saw her three weeks after the onset of the disease. Family history: Father and mother both in good health; one aunt, living with her parents, died of pneumonia. This was a full-term child, breast-fed, nursed until fourteen months old, thrived well as a baby, had no disease except whooping-cough and measles in 1916 and 1917. Physical examination shows a well-nourished child, slight enlargement of the cervical and inguinal glands. Examination of the chest, with the exception of a few large râles, negative; no dullness or decreased respiratory sounds; no enlargement of the liver or spleen. Temperature, while under observation and previous to it, was of a remittent character, ranging between 100° and $103\frac{1}{2}^{\circ}$. Widal, plasmodia, stool, negative. White count, on admission, 7,500; one week later, 8,500. Von Pirquet positive. The low white count and the positive Von Pirquet made me think of tuberculosis, especially as her history showed that she had lived in a tubercular environment. The temperature reaction was too severe to have tuberculosis, without some clinical or physical manifestations. Dyspnea was not marked enough to make diagnosis of acute miliary tuberculosis. The case was referred to Dr. Barrow for an X-ray picture of the chest. This cleared up the diagnosis. A fluid was found between the upper and middle lobes. This child was kept in a sanitarium for ten days, during which time no physical signs could be found. Believing that the best and quickest results could be obtained from a change of climate, I sent the child to Pass Christian. A complete recovery took place in three weeks. The total duration of the disease was seven weeks. No subsequent picture was made.

DISCUSSION OF DR. PICARD'S PAPER.

Dr. E. C. Samuels, New Orleans: I would like to ask the doctor how he arrives at a diagnosis of fluid in that case—whether it could not have been a band from an old pleurisy. I have been unable to make a diagnosis with the X-ray in interlobar pleurisy without the aid of the screen and fluoroscope, and in so far as drawing the conclusion that that is fluid, I cannot see exactly how the diagnosis was made. Probably Dr. Picard will be able to tell us in closing.

Dr. S. C. Barrow, Shreveport: I could not imagine the question of Dr. Samuels being raised. The X-ray findings, not only in interlobar pleurisy, but interlobar empyema, are extremely characteristic. There is no error if you hold in your mind the real pathology. The plate that Dr. Picard has shown here is characteristic, but unfortunately it was washed badly and is now old; but the shadow as shown on that plate will be seen in all cases of interlobar pleurisy. I take the stand that nothing of that type can be demonstrated by the fluoroscope; it can be better shown by the X-ray plate, and the X-ray plate is permanent. It is recognized by Röntgenologists that more defects of the chest can be shown by the X-ray plate than they ever imagined by the fluoroscope. If you have an interlobar band there you would not get the expansion that is shown on the plate. The pleural folds fall together, unless they are separated by fluid—you cannot get that triangular shadow. If you hold in mind the anatomy of the pleura you can readily imagine how that shadow would be formed. Such cases are rare; I have had three, and two were aspirated and confirmed. There is no doubt in my mind that that was interlobar pleurisy.

THE MECHANICAL TREATMENT OF NOSE-BLEED.

By D. T. ATKINSON, M. D., San Antonio, Texas.

The subject of this paper calls for no apology, for violent epistaxis, whether traumatic, the result of broken-down neoplasms or due to constitutional dyscrasias, is a condition which has caused nearly every physician no little concern at some time during his professional life.

Probably the most trying of these epistaxis cases are those of traumatic origin, and these occur usually where the facilities for examination and treatment are as bad as could be possible. These cases are usually surrounded by a host of anxious friends and interested onlookers, and if the physician fails to control the hemorrhage the condition becomes very unpleasant, if not dangerous, to the patient and extremely embarrassing to the doctor.

Although a number of methods of controlling nasal hemorrhage are advocated, such as the insufflation of powdered alum, spraying with astringent solutions, acetate of lead, sulphate of copper, of tannin, applications of collodion to the bleeding surface, the administration of ergot, etc., it is nearly always necessary, in cases sufficiently severe to necessitate the summoning of a physician, to resort to some mechanical method of treatment if the desired results are to be had.

Perhaps the first thing indicated in the majority of cases is the application of pressure to the bleeding surfaces, by means of pledgets, of gauze or absorbent cotton, with or without astringent solutions. The bleeding surface should be sought for, if possible. That is a very easy matter in the doctor's office, but in emergencies it is usually impossible to locate a spurting vessel because of the lack of facilities for making examinations. In such cases, pledgets of cotton saturated in a styptic, preferably adrenalin chlorid, may be pushed up into the nares at random, with the hope that the point of bleeding may be covered and the hemorrhage stopped. Pieces of string should be fastened to the plugs to facilitate their removal.

Where a good light can be had and, with the head-mirror and nasal speculum at command, the simplest and most efficacious method of controlling nose-bleed lies in the gauze tampon. The gauze strips should be about an inch in width. In emergencies a narrow gauze bandage may be used. A ball of gauze is carried, with forceps, high up to the roof of the nose, and is pressed into position between the middle turbinate and the septum.

The gauze is now fed into the nares in a zigzag manner, extending from the roof to the floor of the nasal cavity, until the anterior nares is reached. The slip is now cut off and the end tucked into the nostril. For the styptic effect, the gauze may be soaked in adrenalin chlorid or solution of tannic acid or other astringents. This method has the advantage of bringing the gauze in contact with the whole mucous surface of the nose. The gauze fills with clotted blood, thus equalizing the pressure, and the bleeding point is usually reached and the hemorrhage controlled.

A very ingenious and efficacious method of tamponing the nostril was suggested by Casselberry (*Illinois Medical Journal*, March, 1909). His tampon consists of a thin rubber finger cot, which is inserted in the nose and plugged with small pieces of cotton. I have used this method a number of times after nasal operations with very good results. Its advantage consists chiefly in its presence in the nose causing a minimum amount of danger of infection of the accessory sinuses and middle ear. The gauze, not being saturated with nasal secretions, does not putrefy. Its smooth surface does not adhere to the wound, so it is easily removed. To introduce, the cot is pushed up in the nostril on the point of a catheter or any blunt instrument. Its opening is held with a forcep, while pledgets of cotton are fed into it until its lumen is enlarged and its wall hugs the bleeding surface. This method was devised more as a prevention of hemorrhage after operation than as a controller of hemorrhage once established, but is applicable to either.

For the control of persistent epistaxas of the seeping rather than the spurting type, various kinds of rubber bags have been used. These are inserted into the nostril and inflated with air, with results which have been more or less satisfactory. I have seen used, in a number of cases, the bag expanded with water rather than air. This latter method of plugging the nares is of more value, probably, than the former, as the walls of the bag filled with water have more resisting power than they would were the bag inflated with air, and the clot formed over the bleeding vessel is held more tightly over its surface.

In case of severe traumatism, with violent and dangerous hemorrhages, or in cases which resist all the simpler methods of treatment, plugging the nares, both posteriorly and anteriorly, should be resorted to. This is rather a painful procedure, and is not often

borne gracefully by the patient, but is often necessary in the severer cases to save life. When the posterior and anterior nares are to be plugged the operator proceeds in the following manner. A small catheter is passed through the nostril and is caught with a forcep as it glides along the pharyngeal wall. It is then pulled through the mouth, grasped by the operator, and a piece of string, to which is attached a plug of wet cotton, is tied to it. The catheter is now withdrawn through the nose, bringing the string with it. The physician now makes tension on the string with one hand while the finger of the other is passed into the mouth, and the plug is pushed above the soft palate and pulled into position. The string in the anterior nares is now drawn tight and tied over a plug of cotton outside the nostril. This is the last resort in nasal hemorrhage, and will control, while in position, practically all cases of nose-bleed.

Nasal tampons should not be kept in place any longer than is necessary to cause the formation of a clot. If allowed to remain too long, infection of the sinuses and other conditions may follow the putrefaction of secretions and the retention of pus. The tampons should be removed in at least twenty-four hours, to be replaced, if necessary, after the nose is cleaned by gently syringing. A day or two after the hemorrhage is checked the nares can be freed from clots by injections of mild astringent solutions and the patient dismissed, with instructions to avoid violent exercise for a time.

ELIXIR TRICHLORETHIDEN PROPENYL ETHER IN OBSTETRICS.

By J. W. LAMON, M. D., Donner, La.

The intense interest manifested in the scopalamin-morphin treatment of obstetrical cases and the universal disappointment when it proved to be dangerous, make us realize the necessity of leaving no stone unturned to relieve suffering during parturition.

I have used elixir trichlorethiden propenyl ether in combination, with one-eighth of a grain of morphin, in fifty-six cases, with the most gratifying results. Not one case of depression or any other bad effect followed its use.

My attention was first called to the fact that this drug is very little of a depressent when I was called to see an infant suffering with earache. The baby was given a very small dose of morphin

when warm applications failed, and a bottle of elixir trichlorethiden propenyl ether was left to be given at certain intervals. The mother, who was quite ignorant, gave four times the quantity prescribed. Neither the pulse nor the respiration of the baby was at all affected. This incident suggested the idea of using it in obstetrical cases, as it is usually the infant who is affected unfavorably by the scopolamin-morphin treatment.

I will mention three typical cases where this treatment was used. As the patients are the best judges as to the relief given them, I will quote their statements *verbatim*:

Case No. 1. Mrs. H. L., age 22, primipara. Examinations showed os dilated to size of silver dollar. She was very nervous. The pains were continuous, with no interval of rest. She was given one-eighth grain of morphin hypodermically, with apparently no effect. This was followed by two tablespoonfuls of elixir trichlorethiden propenyl ether. The patient became quiet in about fifteen minutes. When the head reached the perineum the nurse began giving whiffs of chloroform during each pain. The patient objected, however, saying, "The pains are not so bad now. I would rather stand them than to be bothered with that stuff" (meaning the chloroform).

Case No. 2. Mrs. F. H. R., primipara, age 21, only child, raised by an indulgent mother. Highly educated and self-centered. We all expected lots of trouble. When the os had dilated to the size of a 50-cent piece one-eighth of a grain of morphin was administered hypodermically and two tablespoonfuls of elixir trichlorethiden propenyl ether given by mouth. A second dose of the elixir was given when the os had dilated somewhat larger than a silver dollar. When the girl baby was born the nurse risked what ordinarily means a "calling down" from the patient by saying, "You ought to have a little boy the next time." The patient's reply showed that she did not dread going through the ordeal again, as she said, "Yes, I would like to have a little boy."

Case No. 3. Mrs. J. E. B., age 36, multipara. Patient had been in labor all night when I was called in. Pains were lacking force, but prevented sleep. Os dilated to the size of a half-dollar. I administered one-eighth grain of morphin hypodermically and two tablespoonsful of the elixir orally. Pains increased in force, and the intervals between pains lengthened. She slept well between pains. She volunteered the information that she had suffered much more before the drug was administered than during the second stage of labor.

This article is submitted with the hope that this treatment will prove as satisfactory in other hands as it has in my own practice.

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

ONE PHASE OF THE MOSQUITO WORK CONNECTED WITH THE ARMY CAMPS IN 1918.*

By C. S. LUDLOW,
Army Medical Museum, Washington, D. C.

Among the various activities which developed during the war, none are perhaps more marked than those connected with the health of our soldiers. Supported by an authority never before at its command, the Medical Corps of the Army has been able to control the subordinate branches and details in regard to sanitation and hygiene, with the result that the health of the army has been of a quality not possible of attainment at any previous time. It is not the province of this paper to enter into a discussion of these various branches, for even to mention them and designate their activities would take considerable time.

Probably the most important is the subject of preventive medicine, the value of which, with its many subdivisions, it is almost impossible to exaggerate. Under this subject, as one of the small subdivisions, comes medical entomology and its closely related branch, insect control, which covers control of breeding places and adults, and protection of the men from insect attacks by various mechanical and chemical means.

The work of medical entomology, as connected with our army, in respect to the study of mosquitoes, was being carried on, under the auspices of the Surgeon General of the Army, as far back as 1901 in the Philippines, and collections were taken at many of the posts and subposts in these islands, the work being vigorously pushed for some years, and, in a less extensive way, is still in progress. Later, about 1905, one summer's work was done in the continental United States, and collections from various points have been received occasionally ever since. This research was done from the entomological standpoint, did not include any experiments in transmission, and was intended to show what mosquitoes were present at a given station, and what diseases were coincidentally

* All the data given in this article, including the distribution of certain Anophelines, are taken from the records of army camps for 1918, and do not, in any instance, include any other records made by various authorities.—C. S. L.

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present, in this way serving as a suggestion where transmissions experiments might be undertaken.

In the Philippine Islands this research was, of course, pioneer work, while that done in the United States, Hawaii, Porto Rico, etc., has merely given added information to that already obtained from other sources. The epochal work in Cuba had already been done, and the wonderful work in Panama, covering so many sides of the subject and done by a separate body of men, is, of course, unique in many ways and complete in itself.

Before going into any details of this study in medical entomology it is perhaps well to state what is believed to be its relation to the coördinate branch, insect control, which, with the work in insect transmission, seems to form the completed triad.

As any control work necessarily means a knowledge of the conditions to be controlled, so, in regard to mosquitoes, the identification of the forms present at a given station (post or sub-post) should be a preliminary and concomitant study, preceding and accompanying the control work throughout its whole course; otherwise much unnecessary labor and expense are likely to be entailed.

First of all, it must be known whether the aim is merely a question of added comfort—or lessened discomfort—to the inhabitants of the locality, or whether increased health and efficiency are the definite results desired, and this, because the different groups of these insects vary considerably in breeding places, life habits, etc., and these are not the same, even in different species of the same group, so that some initiative knowledge as to the mosquitoes present is desirable before control work is begun, and a cotemporary study, running hand-in-hand with the control, should act as a sort of compass, indicating possible changes in methods and directions of attack, as shown by the species found to be present.

For this reason, and that the results might be recorded and correlated, and so made available for future use by the Medical Corps, this research was instituted.

The work for the camps, cantonments and fields in 1918 was initiated by Col. D. C. Howard, Medical Corps, U. S. Army, in charge, Division of Sanitation, Surgeon General's office, when he issued (March 21), "by direction of the Surgeon General," a letter to the division surgeons, stating, "It is desired that collections of mosquitoes be made in your camp and immediate vicinity," and directing that these collections be sent to "the Army Medical

Museum for a classification." Of course, the "desire" of the Surgeon General, like a "request" from the President, is equivalent to a command and carries the same weight.

The necessary instructions for taking and mailing the insects, the boxes for collections and wooden mailing boxes followed immediately, and these, with Col. Howard's letter, were sent to fifty-eight stations by March 25, and the newer camps, cantonments and fields, as they were created, were supplied as promptly as possible, the total amounting to seventy-eight posts.

These instructions were quite complete, and gave the period which a given collection was expected to cover, and the hours of collection. The killer of preference was indicated, and how it should be made, and suggestions as to other killers and traps given. The places from which collections might advantageously be made were stated, and specific directions as to the care necessary in taking and mailing the specimens and for the marking of the collecting (pill) and mailing boxes were also given.

These methods had been tried out for several years in the Philippine Island and the United States and proven successful. The choice of places where collections might wisely be taken was guided by the fact that disease-bearing mosquitoes are usually found in close connection with the living conditions of man, and sylvan mosquitoes are rarely connected with the transmission of disease. This may be illustrated by three significant collections from the Philippine Islands.

1. The best and most valuable collections of Anophelines ever received in this work, and which extended over a period of some months, were taken by Col. W. P. Chamberlain, M. C., at Camp Gregg, who tells me that he put the ward collections, mostly daytime, in the hands of reliable hospital corps men, but that by far the greater number of mosquitoes were taken at night, after the lamps were lit, when he personally collected from the outside of the screens of the porch of his quarters, and that he was able to take these insects in large numbers, because the sound of the mosquitoes buzzing on the screens was "like the rushing sound of distant waves."

2. The most interesting collection of sylvan mosquitoes, which included many new forms, were taken by Col. E. P. Whitmore, M. C., at Camp Stotsenberg. Col. Whitmore took collecting tubes, killer and vials, and went, about 2 p. m., into the jungle near the

camp, staying for two or three hours and sitting so quietly that "the wild hens paid no attention" to him, allowed the mosquitoes to settle and bite, and so secured rare specimens, some of which have never been duplicated. And this was in 1904!

The very few disease-bearers among them were marked, "Caught in the woods, hospital and quarters," and it is to be remembered that Col. Whitmore's collecting stations were not far from the camp.

3. I have myself, in the Philippines, often taken many Anophelines about 5 a. m., when the early morning sun was sending level rays into the houses and these mosquitoes were eagerly seeking the way out. In fact, no collections I ever made compared with these for the number of Anophelines. This does, not, however, mean that this is the only part of the daylight in which Anophelines may be taken. There have been too many excellent collections taken during midday to allow of such a statement, and the experience in some parts of Panama, where control of adults can only be effected by "hand-catching" would entirely disprove it.

I also found daylight collections, taken during the hours of the "siesta," in the partly darkened rooms, gave excellent results in securing *Stegomyia fasciata* and other house-infesting culicines.

The first response to Col. Howard's letter was quite general. During the summer, collections have been received from fifty-seven stations, but while the records from some stations show the collections to have been regular and without intermission, unfortunately they are much the minority. From one-third of the posts only one collection was received, and that in spite of various reminders, while from three no collections at all have come, and in one instance came the naive excuse that *after August 20* efforts had been made to secure specimens, but none had been obtained, and this in response to directions issued in March! At any one of these three stations the chances of there being no Anophelines during the season, still less of there being no mosquitoes during that time, are extremely small.

Part of the failure to send continuous collections was due to the fact that when the divisions were ordered to new stations the papers and records were taken with them, and the officers who succeeded in command of the posts were often entirely uninformed in the matter. This condition was not at once recognized at the Surgeon General's office, and there was some delay in sending duplicate instructions.

Only a general idea of the results can be given, but the records from the collections are interesting and may prove instructive.

From Camp Lewis, America Lake, Washington, were sent very brilliantly marked *Anopheles punctipennis*, and from Camp Custer, Battle Creek, Mich., came *Anopheles quadrimaculatus*, *Anopheles punctipennis* and *Anopheles walkeri*, but neither of these posts has record of any but "recurrent" cases of malaria. Further South some of the sections showed as many as four species of Anophelines, and three of them malaria carriers! It is needless to say malaria was present.

The distribution of Anophelines is also of some interest. Of these, *Anopheles punctipennis* is, so far as these collections go, much the most widespread of all, being taken in Washington, Michigan, the Western, Southwestern, the Southern border, the Gulf and Middle Western States and the Atlantic States so far North as collections have been made in connection with this work. It occurs in connection with each of the other Anophelines as well as alone.

Anopheles quadrimaculatus, *A. barberi*, and *A. stropos* are all taken in the Atlantic coast States, the first spreading over into other sections rather generally, but apparently not so widespread as *punctipennis*, and, either because it is present in less numbers or because it is more shy and less easily taken, is not sent in so frequently or in such large numbers as *punctipennis*. The other two species have definitely restricted localities, but *stropos* has been taken in Louisiana, and is not well known.

Anopheles pseudopunctipennis is confined to a comparatively small region in the Southwest, apparently not east of Texas nor north of San Francisco, but extends Southward, and is taken in large numbers in Panama.

Anopheles crucians shows a rather definite choice of localities, extending from the general vicinity of Washington and a little further north in the late summer, down the Atlantic Coast States (on the general coastal plain), in the Gulf States as far as Louisiana, and probably eastern Texas, and up the Mississippi River as far, at least, as Little Rock, Ark. The localities suggest some peculiar choice of breeding places, not yet sufficiently worked out to admit of definite statement, though Dr. Metz* article, "*Anopheles crucians*, Habits of Larvæ and Adults," gives very interesting points which apparently lead along this line.

* Metz, C. W., Ph. D., Special Investigator, P. H. Report, Vol. 33, No. 49, Dec. 6, 1918.

The highest record of Anophelines at any one post in any one collection was eighty-four *Anopheles punctipennis* and sixteen *A. quadrimaculatus*; here also malaria was present. The next highest records are of thirty-four *Anopheles* in one collection, both of these being in camps in the United States. These records are, however, not to be considered as in any way reflecting on the sanitary officers at these places, because it is not always possible, even with the most careful and intelligent work, to control the breeding places in the camps, and our present knowledge precludes as unwise the assumption of a definite limit of flight from the extra-cantonment areas, which cannot perhaps be controlled.

The first specimen of *Stegomyia fasciata* from these camps was from Chattanooga, and it was rather quickly followed by specimens from Austin, San Antonio, Montgomery, Carlstrom Field, Florida, and Camp J. E. Johnston, Florida, the largest number coming from Camp Travis, San Antonio.

The routine methods at the Army Medical Museum have been, and are, the examination and determination of specimens, and the recording of each lot under its proper post. The records cover all points available; date and hour of collection, name and number of each species, the report as to insect-borne diseases present, and the average strength of the command, each being entered in successive columns on the same page, so that the whole story may be read at a glance and be quickly available for reference. A report of the findings of the collection is then sent to the camp surgeon and a memorandum sent to Col. Howard showing the posts, dates and in what numbers disease-bearing mosquitoes were taken. This method keeps the camp surgeon informed as to the kind of collections sent in and the Division of Sanitation of the whereabouts of the disease-bearing forms.

The lack of uniformity in the collecting has, of course, affected seriously the records, but, while not so complete as had been hoped for, it is believed they will prove of some value, not merely for the Medical Corps of the Army, but, in connection with the work of the Public Health Service, will serve in that general survey of our country when, for the health of the whole people, the extermination of malaria is taken up as thoroughly as the hookworm has been, and, while the work was done by and specifically for the army, this thought has always been in mind.

TROPICAL RESOURCES AND HYGIENE.*

By D. RIVAS, PH. D., M. D.,
University of Pennsylvania, Philadelphia.

While in general it may be said that the wealth of a country is judged by the natural resources it possesses, in a more concrete sense the development of such resources in reality has a more direct bearing upon that index. The vast resources of the tropics, for instance, are almost inexhaustible, and yet it is common knowledge that they have remained for generations practically unused, and only recently have been but merely touched, this being due in part to the prevalence of diseases which make these regions almost uninhabitable.

In the discussion of this subject a brief outline will be given, first concerning the resources of the tropics, and secondly the sanitation of those regions, with special reference to the intimate relationship which the one bears to the other.

It is beyond the scope of this article to deal in any great detail concerning the resources of the tropics; however, a general and brief resumé, drawn from the references given at the end, will suffice the purpose. For the same reason, the discussion will be limited to the resources of tropical America, with which the writer is better acquainted, although what applies to tropical America may be said to apply, more or less, to other tropical countries.

TROPICAL RESOURCES.

In tropical America are found almost all the minerals, from coal and iron to silver, gold and precious stones, and also diamonds. The world largely depends upon South America for the supply of bismuth. Bolivia produces about 500 tons annually, with the mines of Brazil still unexploited. Chili produced over 40,000 tons of copper in 1914, and Peru over 33,000 in the same year.

Brazil possesses the largest known iron ore territory in the world, with a resource of 7,000,000,000 tons, and Chili has an annual output of almost 2,000,000 tons. The same country produced about 2,500,000 tons of nitre.

Brazil produced about \$450,000 of gold and silver in 1914, Colombia over \$7,000,000, and Mexico over \$18,000,000 in the same year, which is not in proportion to their large resources.

The almost inexhaustible oil resources of Mexico may be appreciated by the rapid development which this industry has reached

in a few years. From 220,000 barrels of oil produced in 1904, the production was over 3,000,000 in 1910, and over 21,000,000 in 1914, with a total output of 90,000,000 barrels from 1894 to 1914. As to other countries, Peru produced 47,000 barrels in 1896; it reached 500,000 in 1906, and over 1,000,000 barrels in 1914, with a total output of 14,000,000 from 1896 to 1914.

Oil is also produced in most tropical American countries, and in this connection mention may be made of the enormous resource of asphalt of Venezuela, which is still to be developed.

An idea as to the agricultural resources, one of the most important sources of wealth of tropical America, may be illustrated as follows: In 1913 Brazil produced 30,000,000 head of cattle, 7,000,000 horses, 3,000,000 mules and donkeys, 10,000,000 goats, 10,000,000 sheep and 18,000,000 hogs, with a total of 80,000,000 head for the year, or four head per capita. This branch of agriculture is also developed in other Latin-American countries.

The vast production of coffee by Brazil and tropical America is well known, as upon this coffee supply the world largely depends, and the same is true of rubber, etc.

A brief insight as to the forest resources of tropical America, and the potential wealth of these countries, may be illustrated by the number of square miles of forest in South America. Argentina has 231,000; Brazil, 1,500,000; Bolivia, 284,000; Chili, 59,000; Colombia, 240,000; Ecuador, 145,000; Guiana, 64,000; Paraguay, 84,000; Peru, 175,000, and Venezuela, 180,000, which makes a total of about 3,000,000 square miles of forest, divided as follows: Tropical hardwood, of which cedar is the most important, 1,613,000; Parana pine, 309,000; sub-tropical hardwood, 259,000; green heart mora forest, 241,000; mahogany, 84,000; Chilian pine, 96,000, and quebrachio, 404,000.

Very little is known concerning the commercial value of these vast forests, but the presence of utilizable woods in tropical forests, in addition to the rare woods, such as mahogany, dye woods, etc., and the present scarcity of lumber, makes it very probable that the world may be obliged to largely depend upon the tropical forests for the common timber supply.

The above brief outline of the natural resources of the tropics, the greater part of which still remains undeveloped, clearly shows the potentiality of wealth of these countries. Taking Brazil, for instance, with an area of 8,524,770 square kilometers, a little more

than the area of the United States of America, excluding Alaska, it has a population of only one-fifth of that country, or 20,000,000 inhabitants. This naturally leaves vast areas of undeveloped land, the price of which a few years ago varied from 25 cents to \$2 per acre, and the same is true of other tropical countries.

TROPICAL HYGIENE.

Various have been the views advanced from time to time as to the cause of neglect by which for generations the resources of tropical America have remained undeveloped. But why make theoretical speculations, when a more simple and logical one is evident, namely, *disease?*

That diseases are the most potent factors in determining the development of a country or a continent, and that upon them depends the achievement of any enterprise, admits of no doubt. We need only to mention the failure of the French Government to build the Panama Canal, because of the prevalence of disease in that zone, contrasted with the rapid and marvelous accomplishment of the Government of the United States of America after the sanitation of that region.

Disease, in fact, has directed the development and moulded the destiny of the human race and has been the real builder of empires. The diseases common to the Orient were an insurmountable barrier to Alexander and to the Crusaders. Cholera and other diseases of India have been the chief obstacles in the development and settlement of that country by Europeans, and the same is true of sleeping-sickness, malaria, etc., of central Africa. For the same reason the Anglo-Saxon and other races of northern Europe have made permanent settlement in North America, as well as the Latin race of southern Europe, of tropical and sub-tropical America. In other words, each race has followed the natural channels of emigration to similar or nearly corresponding surroundings. But above all, if Europe as a whole conquered America and made permanent settlement of this continent, it was because she was armed by the most powerful weapons of defense—the disease she imported—which rapidly spread among the natives with fatal consequences.

Smallpox, in 1507, exterminated whole tribes in the West Indies, a few years later depopulated San Domingo and destroyed 3,500,000 of people in Mexico (Hirsh), and the same happened in other countries. This was true also of other infectious and bacterial diseases,

but the protagonist in this evolutionary tragedy was tubercle bacillus. Most bacterial diseases leave a certain degree of immunity, which is not the case with tuberculosis. The Caribes of the West Indies are nearly extinct. The Indians of North America are rapidly disappearing, as are also the aborigines of cold and temperate South America. The Indians could not in a few generations undergo such an evolution as to acquire an immunity against tuberculosis, which the European has accomplished by natural selection in thousands of years. This clearly shows that diseases, and not the sword, have been the real builder of empires.

But the era of the bacteria as builders of empires, as admirably described by Reid, is past. The time of discovering new continents and lands, of great conquest and migration of the human race, is closing, and diseases have spread all over the world. The era of speculation as to the cause of diseases is likewise closing. Bacteriology and parasitology have not only discovered the cause of diseases, but also the means of their prevention. Specific treatments have been discovered even for diseases of still unknown etiology, and hygiene and sanitation in general has become an exact science.

Of the common diseases of the tropics, such as leprosy, dysentery, trypanosomiasis, filariasis, ancylostomiasis, etc., and, the most important of all, malaria, the cause, mode of transmission, prevention and treatment are known. It is a common knowledge that these diseases are prevalent in those countries where hygienic and sanitary conditions are unfavorable, as is known, too, that they are an insurmountable barrier to the development of the vast resources of tropical America and the progress of the Latin-American countries.

With the instrumentality of modern hygiene and sanitation at our disposal for the prevention and eradication of these diseases, it is beyond any reasonable understanding why the sanitation of the tropics has not received due attention. The Rockefeller Foundation has done much in that direction, it is true, but much more, and still much more, the most essential is needed—the earnest co-operation of the respective governments of those countries.

The problem of sanitation of tropical America will be aided, to a large extent, by the fact that the greater part of the inhabitants of those countries, the *Latin-Americans*, represent a race admirably adapted to stand the unfavorable climatic conditions of those regions. The people are very healthy by nature, and to a large extent

immune against certain diseases, as may be shown by the components of its evolutionary development.

The present inhabitants of the American continents, it is true, represent almost all the races of the world, but in general the greater part may be said to consist of the following extractions:

1. The Anglo-Saxons, derived chiefly from England and northern Europe.

2. The negroes, imported from Africa.

3. The Latins, derived from Spain, France, Portugal, Italy and some other countries of southern Europe.

4. The Indians, whatever their origin may have been, whether Asiatic or Phenicians, etc., at the time of the discovery of America, were found to have undergone sufficient evolutionary development as to constitute a separate and distinct race, erroneously called Indians because of the belief of Columbus to have discovered a new route to India, and not a new continent, America. The Indians, in an exact sense, are Americans in the same sense that the negroes are Africans; the Jews, Hebrews; the Asiatic, Mongolians; or the Europeans, Caucasians.

5. The Latin-Americans, derived from the intermarriage of the Latins with the native Americans, may properly be regarded as a distinct type and as the youngest of the human races, represented at present, perhaps, by no less than 100,000,000 people of the tropical and sub-tropical Americas. To regard the Latin-Americans as Europeans or Latins would be as erroneous as to regard them as Americans or Indians, because they really represent an amalgamation of the Latins with the Americans, in the sense that the Anglo-Saxon is an amalgamation of the Angles with the Saxons.

The anthropological and biological importance in the evolutionary development of the Latin-American race, from a medical point of view, is that, by having derived from the Latins more or less resistance, are naturally immune against tuberculosis and other European diseases, and, from the native American, more or less resistance, are naturally immune against malaria and other tropical diseases, the race has inherited the strong characteristics of the two, and consequently is better fitted to stand unfavorable climatic and sanitary conditions. The Latin-Americans, therefore, by nature are more resistant to diseases in general—a fact which undoubtedly will greatly aid in the sanitation of tropical and sub-tropical America, where the greater part of this population is found.

Proof of this natural resistance is found in the fact that the Latin-Americans have survived and propagated in the tropics under unfavorable sanitary conditions, and are likewise adaptable to the life in the cold and temperate regions. In contrast to this, we know how susceptible the native Americans still are to tuberculosis when living in association with Europeans, as are the Europeans to the diseases of the tropics.

But this does not imply that life for the inhabitant of northern regions is an impossibility in the tropics—not in the least, because this would amount to saying that the Africans cannot live in northern climates, which is not the case, as over 10,000,000 of them are in North America alone. The advancement in modern sanitation has rendered the earth safe to live in whatever region we may choose. What is still lacking is sufficient sanitation and appropriate training and better knowledge among the laity in general concerning the causes of diseases, their modes of transmission and how to prevent them. It is the neglect of these underlying principles—ignorance, in other words—which is responsible for the sad consequences too often seen and which could easily be avoided among the inhabitants of northern regions who carelessly adventure their future in tropical countries.

In this connection it is of primary importance that those who desire to settle in the tropics, or undertake some enterprise in those countries, should receive, first, appropriate instructions in bacteriology, hygiene and sanitation, parasitology and tropical medicine, and also Spanish or Portuguese.

This instruction may be taken in one or two semesters in any of our universities which offer such courses. The courses should consist of didactic lectures and demonstrations in the laboratory. The student should become proficient in the underlying principles of hygiene and sanitation before receiving a certificate or diploma, and only then should be regarded as a candidate for a position, of whatever kind it may be, in the tropics.

At the same time, the writer believes it is an imperative necessity and of vital importance that the same instruction should be given, not only in all universities and colleges, but also in the schools of all tropical and sub-tropical America. The respective governments of these countries should awake to the requirements of the age by directing their efforts toward the sanitation of the tropics. "Health first," and only then can the almost inexhaustible re-

sources of the tropics be developed, and with it the progress and prosperity of tropical and sub-tropical America and of the Americans as a whole.

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AMERICAN SOCIETY OF TROPICAL MEDICINE

COMMUNICATION.

To the Members of the American Society of Tropical Medicine:

During the war the work of the Society, like many other activities, has been disorganized. No annual meeting was held in 1918, the publications of the Society have not been altogether satisfactory, dues have remained unpaid, and we are somewhat in debt. There is now need for reorganization, and it becomes my duty, as president, to call on all members for assistance in making the Society the rallying point for Americans who are interested in tropical medicine.

It is hardly necessary to say that there is a definite place for the Society to fill. The history of our country shows that many of our citizens have been and are being subjected to diseases of warm climates, and the future will no doubt bring more responsibilities of the same kind. Many of the problems of tropical medicine have been successfully met by American medical men. There is a distinct need for a representative national organization, with all its advantages of mutual stimulus and concerted action. The Society, which has already worked fifteen years in the field, is the logical means to this end.

The main features of the Society have been and should be (1) to provide for an annual professional meeting for the benefit of those who can attend; (2) to provide for publications to keep all mem-

bers in touch with each other's work. In order to accomplish this work, a certain amount of money is, of course, necessary, which must be made up from dues. During the changes of the war many members have probably failed to receive notices of their dues, or at least have not paid them. At the last meeting in June, at Atlantic City, the dues were fixed at \$5, and the treasurer was instructed to drop the names of members who, after notice, remained more than three years in arrears. It was also voted that the dues of those who entered the service from civil life should be remitted on request. Arrangements were also made looking to a satisfactory form of publication. The Society is under financial and moral obligations to the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* for the present year, but a change will be made in 1920 to annual transactions or to occasional bulletins or to a special journal. The consensus of the opinion of the Council was that it would be better to have a smaller number of really active workers as members rather than a large membership with only remote interest.

Under these circumstances, I ask each member to reconsider his connection with the Society. Those who have supported it in the past I ask to take a fresh hold; those who wish to make it a useful and active Society I ask to contribute to the program and to meet at New Orleans next year if possible; those who for any reason wish to withdraw, I ask to do so now, that we may know whom to count on for support. My policy will be to develop the national spirit in the Society, to cultivate cordial relations with workers of other nations through corresponding membership, and to include the results, both of investigation and of application, in the program of the annual meeting and in the publications of the Society.

Any suggestions and criticisms looking to the improvement of the Society will be welcome.

"Take up the white man's burden."

H. J. NICHOLS.

Army Medical School, Washington, D. C., July 4, 1919.

NEWS AND COMMENT

NEW DEAN SCHOOL OF MEDICINE, UNIVERSITY OF TENNESSEE.—Dr. F. D. Bristol, formerly secretary of the State Board of Health of Maine, has been appointed dean of the School of Medicine, University of Tennessee, succeeding Dr. A. H. Wittenborg.

AT A RECENT MEETING OF THE COUNCIL ON MEDICAL EDUCATION Dr. Arthur D. Bevan was elected chairman. Other members of the Council are: Drs. Robert C. Coffey, Portland, Ore.; William D. Haggard, Nashville, Tenn.; William Pepper, Philadelphia, Isadore Dyer, New Orleans; N. P. Colwell, secretary, Chicago.

ADDITIONAL RECIPROCAL RELATIONS.—The Indiana State Board of Medical Registration and Examination recently added Alabama, Georgia and Washington to its list of reciprocal relations. Previously relations existed with Arkansas, Colorado, District of Columbia, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin and Wyoming. This makes thirty-four States with which Indiana now reciprocates in medical licensure.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS will hold their thirty-second annual meeting in Cincinnati, September 15 to 17. Dr. Magnus A. Tate is chairman of the local committee of arrangements.

HONOR CONFERRED ON SECRETARY OF COUNCIL OF PHARMACY AND CHEMISTRY.—The degree of Master of Pharmacy was conferred on Prof. William A. Puckner, Chicago, secretary of the Council of Pharmacy and Chemistry of the American Medical Association, by the Philadelphia College of Pharmacy, in connection with its ninety-eighth annual commencement.

THE ASSOCIATION OF AMERICAN PHYSICIANS, at its annual meeting in Atlantic City, June 16 and 17, elected the following officers for 1919: President, Dr. Herman M. Biggs, New York; vice-president, Dr. William S. Thayer, Baltimore; secretary, Dr. Thomas McCrae, Philadelphia; recorder, Dr. Thomas R. Boggs, Baltimore;

treasurer, Dr. Joseph A. Capps, Chicago, and councilor, Dr. Lewis A. Conner, New York.

TUBERCULOSIS FUNDS AT MADRID.—The annual flower day held at Madrid for the purpose of collecting funds to care for tuberculosis patients resulted in the collection of approximately \$32,000. This is the largest amount collected since this custom was inaugurated six years ago. It is estimated that 50,000 deaths from tuberculosis occur annually in Spain.

CHILD WELFARE IN FRANCE.—The officials of the Department of the Seine Inférieure, with a population of about 200,000, have taken over and provided for the permanent maintenance of an organization for the protection of mothers and children, originally installed by the American Red Cross. It will include a model clinic for children, parental clinic for prospective mothers, a dental clinic, a school for social service workers, courses for midwives, school teachers and students; a maternity hospital, with a capacity of 1,600; a school for children accompanying prospective mothers, a children's hospital with 100 beds, and a model dairy farm. This work has been in charge of Dr. Walter R. Ramsey, of St. Paul, assistant professor of pediatrics in the University of Minnesota Medical School.

MEDICAL ASSISTANCE TO SIBERIA.—Drugs, clothing, foodstuffs and miscellaneous supplies valued at more than \$5,000,000 have been distributed over Siberia by the American Red Cross within the past nine months. The organization is operating at present nine hospitals, with a total capacity of 4,000. The relief work of Siberia has been in charge of Dr. R. B. Tuesler, formerly in charge of St. Luke's Hospital, Tokyo, Japan. A hospital for typhus fever is being operated at Petropavlosk, and it is stated that the spread of typhus fever in this territory has been checked to a great extent by the institution of bathing and disinfecting stations along the railway line. At one of these stations baths were provided for 35,000 persons, clothing disinfected and new garments supplied wherever necessary.

THE AMERICAN RED CROSS has opened one of the biggest hospitals at Cheliabinsk, Siberia. Dr. Henry W. Newman has been placed in charge.

DEBARKATION HOSPITAL No. 3, NEW YORK, handled more than 37,000 patients since its establishment, November last. The medical staff numbered 900, and nearly 150 Red Cross workers handled the reception of visitors and the entertainment of the men. It has been estimated that it cost \$6 per minute to run the hospital, and was in charge of Lieut. Col. William J. Monaghan. The institution is now being evacuated.

ACADEMY BEQUEST.—By the will of Dr. Abraham Jacobi, who died July 10, \$5,000 is left to the New York Academy of Medicine:

ROCKEFELLER INSTITUTE ANNOUNCES NEW APPOINTMENTS.—The board of scientific directors of the Rockefeller Institute for Medical Research announces new appointments and promotions as follows: Dr. Harold L. Amos, heretofore associate in pathology and bacteriology, has been appointed an associate member; Dr. Oswald T. Avery, hitherto an associate in medicine, has also been made an associate member; Miss Clara J. Lynch and Dr. Waro Nakahara appointed assistants in pathology and bacteriology. New appointments are: Dr. Francis G. Blake, associate in medicine; Dr. Raymond G. Hussey, associate in pathology and bacteriology; Dr. J. Harold Austin, assistant in medicine; Dr. Albert H. Ebeling, assistant in experimental medicine; Dr. Ferdinand H. Haessler, assistant in pathology and bacteriology; Dr. Thorston Ingvaldsen, assistant in chemistry; Drs. Charles W. Barrow, J. Jay Keegan and Philip D. McMaster, fellows in bacteriology and pathology.

MEDICAL SCHOOL BUILDING TO BE ERECTED.—The building for the Kansas University Medical School, for which an appropriation of \$200,000 was made by the recent legislature, will be erected if the city of Rosedale furnishes additional ground needed, the value of which is \$60,000.

JACOBI MEMORIAL HOSPITAL.—A campaign committee has completed plans to raise sufficient funds for the erection of an Abraham Jacobi Memorial Hospital in New York City. The active campaign will not begin until November. Dr. S. Robert Schultz has been appointed executive director of the campaign and has issued a call for volunteer workers.

ROSA SPANG FOUNDATION.—Under the will of Mrs. Rosa E. Spang, of New York City, more than \$1,000,000 has been left for

the relief of the poverty and distress of children and babies who are in want, either through abandonment or the death of their parents. The will provides that the foundation shall be known as the Rosa Spang Foundation, and its chief work will be to select children sent to orphanages and homes and make provision for their education and instruction. Former Attorney General Wickersham, Col. Michael Friedsam and Dr. Henry Dwight Chapin are named as directors and executors of the fund.

THE LANE MEDICAL LECTURES, which are held bi-annually at the Stanford University Medical School, will this year be delivered by Dr. Alonzo E. Taylor, professor of physiologic chemistry at the University of Pennsylvania. Dr. Taylor has been representative of the Secretary of Agriculture on the War Trade Board for the past two years, and his lectures will deal with the results of his nutritional and medical survey of European food conditions. The date of the lectures has not been decided on, but will be about December 12, 1919.

ST. LUKE'S HOSPITAL BEQUEST.—The will of Harriet Emily Ogden, of Elizabeth, N. J., leaves a bequest to St. Luke's Hospital of \$7,000 for the Aaron Ogden bed and \$5,000 for the Robert Travers bed.

TROPICAL MEDICINE FLOATING SCHOOL.—The proposal of Dr. Louis Sambon, at the Royal Society of Medicine, for the establishment of an interallied floating school of tropical medicine for investigation, scholastic and hygienic purposes, has met with a cordial reception among British medical men. His idea is to equip a floating laboratory with a staff of experts from the various nations and complete laboratories for the study of the cause and prevention of tropical diseases wherever they exist.

PASTEUR INSTITUTE IN NICARAGUA.—A Pasteur Institute was recently established at Managua by the Nicaraguan Government.

SOCIAL HYGIENE BOARD TO BE CONTINUED.—Approximately \$1,000,000 has been included by Congress in the Sundry Civil Bill for the continuation of the Interdepartmental Social Hygiene Board created in 1918 to prevent the spread and mitigate the danger of venereal diseases. The statement of the work accomplished shows the closing of 124 "red-light" districts in America, the detention

and care of 30,000 delinquent females, special study of the causes of delinquency, enforcement of laws and ordinances relating to venereal diseases, especially in communities adjoining military and naval camps, and the greatest reduction in venereal disease rates ever recorded in the army. It also secured legislation with the States and the establishment of divisions of venereal diseases in various State boards of health.

THE UNIVERSITY OF MICHIGAN will establish an experimental garden of medicinal plants based on plans submitted by Dr. Henry Kraemer, dean of the College of Pharmacy. Frederick Stearns & Co., of Detroit, have promised the financial support necessary to carry on the work. As soon as the experiments prove that certain medicinal plants can be grown profitably, drug farms will be established.

AMERICANS TO FOUND LONDON HOSPITAL.—As an outgrowth of the war, the first steps have been taken towards the establishment of an American hospital in London. It will be open for the medical and surgical treatment of patients of all classes, regardless of creed or nationality, and it is hoped to make the hospital the headquarters of American medicine in Europe. It is to be founded by American residents of London, and it is desired to continue the close relations which existed between British and American medical men and to provide an opportunity for graduates of other countries. The medical committee for Great Britain consists of Sir William Osler, Sir Arbuthnot Lane, Sir Humphrey Rolleston, Sir John Bland-Sutton, J. Y. W. MacAllister and Philip Franklin. The medical committee for the United States consists of Drs. George W. Crile, W. J. Mayo, Albert J. Ochsner, Rudolph Matas and Franklin Martin.

CHARITABLE BEQUESTS.—By the will of the late Oliver B. Wood, of Camden, N. J., \$30,000 is left to Cooper Hospital for the endowment of five free beds, and the sum of \$5,000 to the West Jersey Homeopathic Hospital.

The will of Warren Snyder bequeaths \$10,000 each to the Hudson Hospital, Columbia County, New York, Hospital, and the Brooklyn Home for Consumptives, and to the Long Island College Hospital, for hospital purposes, \$5,000.

Bequests by the will of the late Sarah A. C. Lloyd, of Philadelphia, are made as follows: Twenty-five thousand dollars each to

the Children's Country Week Association, the Children's Homeopathic Hospital, the Children's Aid Society and the Women's Homeopathic Hospital.

WASHINGTON MEDICAL ANNALS announces the removal of its office from 2114 Eighteenth street, N. W., to 1115 Clifton street, N. W.

PERSONALS.—Dr. John Smyth, recently returned from service abroad, has opened offices at 724 Baronne street. Practice limited to surgery.

Among the Louisiana physicians who have returned from service since our last list are the following: Drs. W. M. Perkins, E. L. King, W. E. Barker, Jr., J. L. Locascio, D. J. Murphy, A. L. Weil, J. A. Lanford, E. A. Lines, J. R. D'Aunoy, W. G. Milholland, D. N. Silverman, B. B. Davis, D. R. Heninger, New Orleans; J. M. Bodenheimer, J. C. Willis, Jr., A. G. Heath, A. B. Nelson, W. H. Billingsley, Shreveport; D. D. Gill, Gilbert; J. R. Frazer, Merryville; A. A. Landry, Plaquemine; V. J. Funderburk, Vixen; T. M. Brister, Bogalusa; J. L. Kelly, Melrose; L. J. Williams, Melville; J. C. Sartor, Rayville; G. G. Whitley, Ward; C. A. Lorio, Lake-land; E. E. Archibald, Alberta; J. A. Wilkinson, Homer; E. M. Levy, Jackson; D. H. James, Truxno.

REMOVALS.—Dr. B. C. Blake, from Alexandria, La., to Trout, La. Dr. T. F. Gross, from Orr, Okla., to Lindsay, Okla.

MARRIED.—On July 23, 1919, at Brandon, Miss., Dr. Charles J. Foulks, of Roseland, La., to Miss Bessie McCorkill, of Brandon, Miss.

DIED.—On July 22, 1919, Dr. Gaston A. Hebert, of Hot Springs, Ark.

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The Medical Clinics of North America. May, 1919.

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Hygiene and Public Health, by George M. Price, M. D.

The Principles of Nursing, by Charlotte A. Brown, R. N.

Rules for Recovery from Tuberculosis, by Lawrason Brown, M. D.

Röntgen Interpretation, by George W. Holmes, M. D., and Howard E. Ruggles, M. D.

Pulmonary Tuberculosis, by Maurice Fishberg, M. D.

Text-Book of Urology in Men, Women and Children, by Victor Cox Pederson, A. M., M. D., F. A. C. S.

GOVERNMENT PRINTING OFFICE, Washington, D. C., 1919.

Public Health Reports. Vol. 34, Nos. 26, 27, 28.

MISCELLANEOUS:

Report of the Public Health Department of the Panama Canal. October, November, December, 1918. (The Panama Canal Press, Mount Hope, C. Z., 1919.)

De l'Orthopédie Instrumentale, by Dr. Gabriel Bidou, Paris, 1919.

Transactions of the American Pediatric Society. Vol. 30, 1918.

The Rockefeller Foundation Review for 1918.

REPRINTS.

Practical Congenital Syphilis; Three Cases of Unusual Congenital Origin; Vaccine Therapy—The Most Effective and Rational Method of Treating Whooping-Cough; Tertian Malaria in Two Infants Under Two Months of Age, by Charles J. Bloom, M. D.

Impressions of Dr. S. E. Earp, Chairman Medical Advisory Board No. 56, Division No. 1, Indiana (Indianapolis).

Genital Defects and Venereal Diseases Among the Porto Rican Draft Troops, by Herman Goodman, B. S., M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for July, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	7		7
Intermittent Fever (Malarial Cachexia)	1	2	3
Smallpox	1		1
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	1	1	2
Syphilis	5	4	9
Cholera Nostras			
Pyemia and Septicemia			
Tuberculosis	35	40	75
Cancer	30	14	44
Rheumatism and Gout	1		1
Diabetes	3		3
Alcoholism			
Encephalitis and Meningitis	1	2	3
Locomotor Ataxia	1	1	2
Congestion, Hemorrhage and Softening of Brain	18	9	27
Paralysis	4		4
Convulsions of Infancy			
Other Diseases of Infancy			
Tetanus	1	1	2
Other Nervous Diseases	2		2
Heart Diseases	64	29	93
Bronchitis	2		2
Pneumonia and Broncho-Pneumonia	17	16	33
Other Respiratory Diseases	1		1
Ulcer of Stomach			
Other Diseases of the Stomach	1	1	2
Diarrhea, Dysentery and Enteritis	16	14	30
Hernia, Intestinal Obstruction	5	2	7
Cirrhosis of Liver	5	6	11
Other Diseases of the Liver	2	3	5
Simple Peritonitis			
Appendicitis	6	2	8
Bright's Disease	17	13	30
Other Genito-Urinary Diseases	10	12	22
Puerperal Diseases	7	1	8
Senile Debility	1		1
Suicide	5	2	7
Injuries	20	14	34
All Other Causes	33	24	57
TOTAL	323	213	536

Still-born Children—White, 19; colored, 23; total, 42.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1,000 per Annum for Month—White, 13.70; colored, 24.11; total, 15.53. Non-residents excluded, 13.63.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure	30.01
Mean temperature	83
Total precipitation	7.62 inches
Prevailing direction of wind, west	



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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Vol. 72

OCTOBER, 1919

No. 4

EDITORIAL

THE HIGH COST OF EVERYTHING.

At this writing there is no doubt that what is termed the high cost of living is the paramount question before the people of this country, not to speak of others. It is a question that must be solved intelligently and quickly if we are to avoid serious disruption and revolutions—it is of no use to close our eyes to what is a threaten- ing fact.

The President of the United States and Congress are laboring with the problem, and it is to be hoped that results will soon be obtained. However, if benefits are to be permanent, the trouble must be corrected at the *source*, and the people must all do their share in the battle, once they are shown the way. The selling of provisions by the government can be of only temporary assistance, and might be considered even as merely a sop thrown out to divert attention from the correction of essential principles.

In the meantime it is the professional men who, more than any other class, have suffered from the present inflation of prices. The juggling process going on merrily for some time has not affected them, as yet, mainly because they have been altruistic. Prices of the essentials of life, and also of everything doctors use in their regular work, have gone on increasing; wages of all skilled workers, of laborers, also salaries of clerks and employees in general, have been more or less boosted, even if not in proportion. Roughly speaking, the effect has been to reduce the value of the purchasing power of our dollar to barely one-half. This means that the doctor who earns the same amount he did before the war is actually getting half of what he received in pre-war times. It has reached the point when he can no longer live as he formerly did, nor as he should be able to do, considering the value of his work to the rest of the community.

Altruism is a noble principle, and none more than we have combatted commercialism in the medical profession, but *every* laborer is worthy of his hire, and the time has come when the physician also will have to raise prices unless more radical, yet more satisfactory, measures are adopted to restore the equilibrium.

We have not heard of doctors increasing their fees, and we know there has been at least no general attempt to do so, but we believe that some such move must be considered seriously. Physicians have no unions, still they have no chance to accomplish anything without concerted action, hence we would suggest that the Orleans Parish Medical Society should, as a starter, give the matter earnest and early consideration.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The meeting of this society, as we have previously announced, will be held in this city on October 27 to 30.

We have been unable to obtain any preliminary program for publication but learn from the local committee that all preparations are being pushed rapidly to completion and that an excellent meeting is to be expected.

The sessions of the association always prove interesting, wherever held, and we urge the profession of the city and state not to lose this good opportunity of benefiting by them. They should turn out in large force and add to the success of the occasion by their numbers as well as by their enthusiasm or other contribution.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THE ADMINISTRATION OF TUBERCULINS.*

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

In 1882, Prof. Koch proved beyond question the tubercle bacillus to be the specific organism in the infectiousness of tuberculosis. In 1890, Prof. Koch also announced the discovery of tuberculin, a specific tubercle bacilli toxin which, when injected into the body of a tuberculous subject, promotes the arrest and healing of tuberculosis, by causing certain changes to occur in the tuberculous areas, as well as in the blood immunizing forces.

The announcement of this remedial agent was received with much enthusiasm and favor. However, through the premature and erroneous administration of tuberculin by the profession at large, tuberculin soon fell into almost complete disfavor and disuse.

Fortunately, some of the closer observers and advocates of tuberculin persisted in its use, feeling that, in the careful administration of tuberculin, there had been observed in a great number of cases effects which could be but rightly interpreted as being beneficial to the tuberculous.

At present, after many years of careful study and observation, tuberculin is assuming its proper place in the therapy of tuberculosis. Preparations derived from the tubercle bacillus are all included under the head of "tuberculins." The most used tuberculins are old tuberculin (Koch), Bacilli emulsion (Koch), and Deny's bouillon filtre. For the best results obtained with tuberculin, it matters not so much what preparation of tuberculin is used. It is, however, essentially important that, whosoever administers tuberculin, should be thoroughly familiar with its "Mode of administration," and especially with its effects upon the tissues and cells about the tuberculous foci and with its action upon the immunizing blood cells.

Wolff-Eisner, in an extensive essay written upon the action of tuberculin, states that "the action of tuberculin is due to the bodies of the tubercle bacilli it contains," and that "the particles of tubercle

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

bacilli in themselves do not become active in the animal body, because the tubercle bacillus is not easily absorbed. It is only the lysine-bacteriolysin in the case which brings into activity the substances contained in the particles of the tubercle bacilli."

This is the reason why one who does not harbor a tubercle in his body cannot react to tuberculin, unless the doses given are much larger than those which are effective in the case of tuberculous individuals.

In the non-tuberculous, specific bacteriolysin is not sufficiently abundant to create an amount great enough for producing effects. Furthermore, hypersensibility to tuberculin can only be acquired after the repeated introduction of tubercle bacilli substances in the body. Therefore, tubercle bacilli products injected in the non-tuberculous remain at the point of injection, without producing any effects or reaction. In the tuberculous, the specific bacteriolysin is present in various quantities in different stages of tuberculosis.

Wolff-Eisner further believes that, "in all individuals infected with the tubercle bacillus, a substance is present which is capable of liberating certain substances from the fragments of the tubercle bacilli in the tuberculin, thus producing the tuberculin reaction"; that, "for all tuberculous cases, a uniform change of condition occurs from the normal"; that tuberculin is a preservable endotoxin by special conditions inherent in the tubercle bacillus"; that "the reaction to tuberculin is a highly complex phenomenon, which is composed of the lysis, the fragments of the tubercle bacilli and the action on the body of a liberated toxin, which differs according to the degree of hypersensibility.

The nature of the tuberculous lesions, the avascular tubercle, the caseation in the tubercle and the connective tissue barrier surrounding some tuberculous foci, are accountable reasons why all tuberculous do not react alike to tuberculin.

Only the bacilli which enter the circulation by means of absorption can be bacterialized. The tubercle bacilli, in the center of the tubercle or tuberculous lesions, remain inaccessible to the action of the bacteriolysin. Still, the caseated foci are capable of producing new bacilli from which, when they reach the border of the lesions, poisons are liberated and absorbed, causing the hectic clinical phase of tuberculosis and of the tuberculin reaction.

Let us remember that not only those individuals who are treated

with tuberculin form reactive substances, but all those whose body-cells have come in contact with the tubercle bacillus or its derivatives. In all such individuals the bacteriolysin causes a dissolution of the tubercle bacilli and favors the liberation of new substances derived from the tubercle bacilli fragments contained in the tubercule, eventually promoting the production of the proper anti-substances necessary for the neutralization of the tubercle bacilli and its toxins. The immunizing antibodies, precipitins, agglutinins and opsonins, also furnish the necessary means for the body to rid itself of the tubercle bacillus and its toxins.

In the author's opinion, the chief beneficial action of tuberculin is found in its effects upon the tuberculous tissues, in stimulating and increasing the phagocytic, immunizing and reconstructive action of the local and blood cells about the tuberculous lesions.

Koch, in the early days of tuberculin therapy, attributed the main action of tuberculin to the local changes occurring about the tuberculous lesions. However, Koch's idea in promoting a slough in the tubercle area pictures the acme of certain changes that can occur from the excessive dosage of tuberculin. These extreme reactions are not essential for the best beneficial results with tuberculin, but are attended with certain dangers. The above, however, is no tangible reason why we should discredit tuberculin and deprive the tuberculous of local stimulation in the tuberculous foci. This stimulation is always accompanied by a greater and more effective localization of leucocytes and other blood cells, thus increasing the cellular lung resistance and stimulating the formation of immunized bodies.

When tuberculin is administered to one who has tuberculosis, such an individual will show changes, first, in the neutrophilic blood picture, and, if the dosage has been overtolerant, there will be observed manifest changes about the tuberculous lesions, as indicated by an increase in the physical findings. Furthermore, if the absorption of tuberculin toxins has been too freely promoted, there will be shown marked clinical symptoms, such as a rise in the temperature, pains, headache, nausea, etc.

Changes in the neutrophilic blood picture are due to the specific action of the lysinized tuberculin upon the bone-marrow cells, thus stimulating the latter to a greater activity in the formation of myelocytes, the mother-cells of the neutrophile leucocytes. The newly-formed polynuclear neutrophile leucocytes mature in the blood circuit, showing changes in lobulation, thus developing into

more resistant cells, carrying greater antibody and immunizing forces, and also a better and stronger phagocytic action.

In giving tuberculin we can do much good, but we can do a great deal of harm also. For the good effects of tuberculin, we must stimulate the supply of new leucocytes which, upon maturity, will place in the blood circuit and around the tuberculous lesions a greater amount of cells, carrying more antibodies and better phagocytic action. This means a better resistance of the body to the infection. If, however, by giving too large doses or too frequently repeated doses of tuberculin we stimulate the production of new leucocytes to excess, a severe state of hypersensibility, then we accumulate an excessive number of new and less matured or immunizing neutrophiles (one-lobule cells) in the blood circuit, and we overcrowd the tuberculous areas with weaker and less resistant cells, which, by pressure against each other, soon develop an exudative process, tending to soften whatever protective barrier encloses the tuberculous lesions. Thence we favor a greater absorption of tuberculin autogenous toxins, which still further create a greater accumulation of new and less resistant cells in the blood circuit, diminishing the body's resistance, and eventually proving detrimental to the patient, as noted by the appearance of physical findings, indicating more moisture and softening about the tuberculous lesions, with constitutional symptoms denoting marked, constant and free absorption of tuberculin toxins. Therefore, the dose of tuberculin should be guided according to the power of sensibility of the tuberculous foci to react to a specified dose of tuberculin.

The more active and less protected the lesions, the smaller the doses and the longer should be the interval between doses. The less active and more "walled-in" and better protected the lesions, the larger the doses, and the shorter should be the interval between doses.

In the very active tuberculous there exists no protective barrier around the lesions, and there is always a free and constant absorption of tuberculin toxins. In such cases, tuberculin is not indicated, but by absolute rest in bed we decrease the absorption of tuberculin toxins from the lesions and limit the supply of the autogenous tuberculin in the body, thus promoting the necessary stimulation of the leucocytes and immune bodies in the same way as does the injection of artificial tuberculin. Therefore, in the very active tuberculous, artificial tuberculin is indicated only after cessation of the free absorption of the autogenous tuberculin from the tuberculous foci.

By the clinical method of giving tuberculin we only know that we have provoked an overstimulation and hypersensibility in the tuberculous foci when symptoms of toxicity manifest themselves. Only with the appearance of temperature, headache, pains, etc., do we know that the previous doses of tuberculin have overstimulated the tuberculous areas, and we cannot detect the approach of this danger period until we already have manifestations of the very symptoms denoting the state of toxicity.

Clinical observations show that if tuberculin is administered in small doses every fourth, eighth, fifteenth or twenty-first day, according to the activity of the case under treatment, we do not run a great risk in producing the above-mentioned state of overstimulation or hypersensibility. It is safer, therefore, to start with a small dose of tuberculin—one-trillionth of one milligram—and to carefully increase the dose, according to the activity of the case under treatment. By this way we will eliminate the dangers of too frequent reactions. Still, by the above method, we will often, in the less active cases, deprive them of a stimulating dose of tuberculin, if the doses are not increased rapidly enough or if the interval between doses has been too prolonged. For this reason I suggest the use of the Neutrophilic Index in guiding the dosage of tuberculin.

The author published his first report upon this method of giving tuberculin in the transactions of the National Tuberculosis Association, 1912 and 1913. To simplify this method for all practical purposes, I suggest the following: If the neutrophilic index is 94—*i. e.*, 94 per cent of polynuclear neutrophile leucocytes, with one solid lobule, and 6 per cent of polynuclear neutrophile leucocytes with two separate and distinct lobules, then give tuberculin.

If the neutrophilic index is very low, 80 to 92—*i. e.*, 80 to 92 per cent of polynuclear neutrophile leucocytes, with one solid lobule and 20 to 8 per cent of polynuclear neutrophile leucocytes, with two or more distinctly separate lobules, then double the previous dose.

If the index is repeatedly 94, increase the dose by one, two or more tenths, according to the repeated index at 94.

Never give tuberculin if the neutrophilic index is 96 or above—*i. e.*, 96 per cent. of polynuclear neutrophile leucocytes with one solid lobule, and 4 per cent only of polynuclear neutrophile leucocytes with two or more lobules distinctly separate.

By this method of giving tuberculin we can actually gauge our doses to the point where we know when tuberculin is causing a beneficial stimulation and promoting the necessary supply of matured cells in the blood circuit and around the tuberculous foci, or when we are about to reach an overtolerant dose, which will overcrowd the blood circuit with new polynuclear neutrophile leucocytes, thus producing a state of diminished resistance in the blood and around the tuberculous lesions.

In gauging our doses by the neutrophilic index method we eliminate the dangers of tuberculin and we derive the best results from tuberculin by giving doses which will promote the production of a larger amount of antibody substances in the blood, and which will favor a greater supply of better phagocytic and reconstructive cells about the tuberculous lesions.

With the persistent use of tuberculin, varying from six months in the incipient to one, three or more years in the more advanced tuberculous, we finally acquire a complete healing of the tuberculous foci in a fair percentage of cases. Such completely healed cases cease to react to the larger doses to tuberculin (twenty milligrams), and, in the author's experience, run a very small chance of relapsing. During the past fourteen years of all our cases who persisted in treatment until they ceased to react to tuberculin, not one has relapsed up to this date.

In conclusion, I will state that the neutrophilic index is not based upon the Arnett blood picture, but upon the percentage of neutrophile leucocytes with one solid lobule, relative to the number of polynuclear neutrophile leucocytes, with two or more distinct and separate lobules not connected by an isthmus band.

That tuberculin has proven to be a valuable adjunct in the treatment of tuberculosis in the hands of the author.

That tuberculin should be administered carefully, and only by one who is thoroughly familiar with its action and effects upon the tuberculous body.

That the initial doses should be smaller and the interval between doses longer in the active cases.

That the clinical method of giving tuberculin is not always free from danger, because of the possibility of overstimulation, the only gauge indicating the approach of the overtolerant dose being the appearance of fever, headache, pains, etc.

Furthermore, the likelihood of not causing any stimulation in

the tuberculous foci if the doses are not increased rapidly enough or if the interval between doses is too remote, is another unfavorable factor for the clinical method of administering tuberculin.

By the neutrophilic index method of administering tuberculin the best results with tuberculin are acquired, for we have a fair gauge when to start tuberculin, when to repeat or increase the dose of tuberculin, and especially when not to give tuberculin at all.

DISCUSSION OF DR. DUREL'S PAPER.

Dr. J. E. Knighton, Shreveport: I want to emphasize one point, and that is that while tuberculin is capable of doing great good it is also capable of doing great harm in the hands of inexperienced physicians. I have given tuberculin in just a few cases, and came to the conclusion that it should not be administered except by those who had had opportunity to observe its effects in a great many cases. In other words, I believe it should be left to the specialist.

Dr. A. C. Eustis, New Orleans: I want to thank Dr. Durel for bringing this matter to our attention again. Dr. Durel has been a pioneer in this work and has gone ahead with this neutrophilic count, contrary to the criticism of every pathologist in the country, you might say. I have seen his results, and many of the cases that have not relapsed are cases of mine that I have referred to him. We hear people say, "I do not believe the tuberculin reaction is of any value," but that shows me that the man has not made enough tests to obtain definite information. I want to thank Dr. Durel for bringing this subject before us to-day again, for I know it has distinct value. I have seen the results of his method carried out.

Dr. W. J. Durel (closing): One fact I want to emphasize, and it is that tuberculin is an important adjunct in the treatment of tuberculosis. I do not want to leave you with the idea that tuberculin is the sole treatment for tuberculosis. It is an adjunct to rest, fresh air and a well-balanced mixed diet, and to anything that will increase and improve the patient's resistance to his disease. When we have used the hygienic-dietetic treatment to the point where the patient ceases to improve, then tuberculin, and only tuberculin, will keep up the necessary stimulation in the body and blood cells to the state where a complete healing of the tuberculous foci will be secured.

MAKING THE CURE OF GOITER SAFE.*

By LOUIS LEVY, M. D., New Orleans, La.

About four years ago, at a goiter symposium held in the rooms of the Orleans Parish Medical Society, Dr. Charles Mayo made the following statement:

"One of the greatest vicious cycles that exists in medicine to-day is in the treatment of goiter. The family physician treats goiter until the

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

heart, kidneys, liver, to say nothing of the nervous system, is irreparably damaged, and then advises surgical treatment. The surgeon operates, and in many cases the patient dies. The physician then reasons to himself, 'Why should I refer a case to a surgeon if they are going to die after the surgeon operates? I will continue to treat them myself,' thereby establishing a vicious cycle.'

With the newly awakened interest of physicians as to the rational treatment of this disease, and with the investigation of men like Crile, Plummer and Kendall, and with the improvement in technic as perfected by Crile, the Mayos, Ochsner, Judd and others, we are well advanced in our efforts for making the cure of goiter safe and the breaking of the cycle.

Since mentioning these modern investigators and operators of goiter it is well not to forget the men who blazed the pathways in investigations and operations of this disease—such men as Kocher, Parry and Graves, Basedow, Charcot and Trousseau.

It really seems that the successful and comparatively bloodless operation of goiter to-day is but the carrying further of the old Kocher operation. The making safe of goiter cures does not alone rest in the operating-room, but is due to the recognition of operable cases and the preparation of immediate inoperable cases to operable cases. The day has long passed when goiter cases can be sent into the institution one night and operated the next morning. Great responsibility rests with the general practitioner, and if he can be impressed with the knowledge that the cure of goiter has been made comparatively safe, and then in most cases early interference is making assurance doubly sure, efforts at bandaging, hypodermic treatments, applications and internal medication will be abandoned, and rest or surgical treatment early instituted.

Here a brief review of the pathological types of goiter will not be amiss.

First, the tumorous type, if I may call it by that name, in which the cystic type is most frequently met, is the easiest disposed of. Here nature has placed substances which apparently squeeze the parenchyma and has inhibited the secretion of that thyroid substance that gives the symptoms of a toxic goiter. Consequently this type does not prevent the hypothyroid symptom, and the effect on the patient is mostly pressure symptoms. This goiter is the easiest removed, and is generally removed for fear of malignant degeneration, relief of pressure, fear of interference with recurrent laryngeal nerve and for the relief of tracheal pressure.

Adenomatous goiter and fibrous goiter are included in this class. It is still remembered that the syphilitic, tubercular and amyloid enlargements may occur, and are included in this type, only the syphilitic will respond to anti-luetic treatment.

The second type, the type in which is beginning cystic degeneration and where the parenchyma is functioning, in varying degrees, and where the amount of toxicity varies and only can be measured by its effects on the heart, kidneys, liver and nervous system.

Then the parenchymatous goiter, where apparently a dormant gland is awakened and starts over-functioning, creating hyperthyroidism, with all of its effect on the heart, liver, kidneys and nervous system. Under this heading I can recall a case where the inflammation was so violent there was a breaking-down of gland tissue and abscess formation, with apparent sloughing of the gland, after ordinary incisions and drainage of abscess. The case was reported by Dr. M. J. Gelpi at the display of goiter cases at the Charity Hospital in 1918.

The exophthalmic goiter is the worst type, and is the type which requires the greatest skill in treatment before operation, in operation and after operation. A description of the treatment of exophthalmic goiter with severe tachycardia, kidney complications and nervous system complication, will probably suffice to bring out the idea that this paper wishes to convey.

When a case of hyperthyroidism presents itself the etiology should be the first consideration, and under this heading it is well to remember that at menstruation, pregnancy and during times of emotion, such as great happiness, great worries and constant pain, that the thyroid gland of females will enlarge, and with the enlargement of this thyroid gland the symptoms of hyperthyroidism in a mild degree present themselves. These are the cases that are cured by rest and diversion, and these are the cases in which pressure bandages, hypodermic medication and all forms of treatment that give diversion and rest will achieve a cure. These cases are also responsible for the patent goiter-cures that are gotten out and heartily endorsed by patients that have had slight hyperthyroid symptoms.

Then the endemic goiter, the type that is discovered in certain localities. This type is ascribed to climate, drinking-water, heredity, soil and vegetation, and is the slow, progressive type. This is the surgical type.

The sporadic goiter. These cases occur without any reason in isolated localities, where few goiters are seen, and is really the type of the endemic goiter, only away from the goiter districts.

The tumorous goiter, which is generally a slow-growing goiter, and presents varying degrees of hyperthyroidism. The thyroid secretion is lessened by pressure of the tumor. This type is also a surgical type.

Hyperthyroidism, it is well to be remembered, does not depend on the size of the thyroid, and a small thyroid extremely active may cause more symptoms of toxicity than a large cystic goiter, depending upon the susceptibility of the patient to the thyroid secretion.

The diagnosis of goiter is not synonymous with hyperthyroidism, and all goiters should not be operated, just as all thyroid glands should not be removed. Enlarged thyroids without symptoms, unless they be of tumorous type, should not be removed, excepting for cosmetic effects. Then, indeed, must the operation of goiter be safe, when thyroids are removed to improve the appearance of the owner.

Hyperthyroidism can occasionally be relieved with rest and diversion, and should only be removed if the toxic symptoms reappear after sufficient rest has been given.

The hyperthyroid type in which rest and diversion have failed is the type in which thyroidectomy gives the best results. The determination of operation of toxic goiter is not a rapid process, yet it must not be too long delayed. The patient must not be allowed to continue over an indefinite period with rapid heart, nervous symptoms and organs in the process of degeneration until they are scarcely fit for a surgeon to handle. In my number of cases I can recall more than one that had a pulse rate of over 140 for indefinite periods, and one that had edema of feet and legs that extended up to her knees. I have rested cases for periods from two weeks to three months before they were in condition to undergo operation. I have brought patients to the operating-room from two to five times and found they were not ready for operation. And, at best, no goiter case should know the exact day they are to be operated.

If patients are to be operated, they should be subjected to the least excitement possible, always remembering that thyroid secretion is thrown into the circulation by emotion.

Dr. Crile, in his work on "Anoci-Association, Kinetic Drive, The Origin and Nature of the Emotions," has well exemplified the care that should be taken in the preparation of goiter patients before,

during and after operation. If that extreme care is to be taken of patients before operation, why should not the same care be taken of the conscious mind, then the subconscious mind, and again the conscious mind after operation? This is accomplished in my clinic in the following way:

In nearly every case the pulse of the patient is better on leaving the table than when the operation was started if the goiter is removed under local and nitrous oxid gas anesthesia without traumatism, by bloodless and short operation. In the few cases when this was not so, the fault was readily placed on insufficient anesthesia, loss of blood, length of operation or traumatism.

Cases that cannot be made ready for operation by rest and diversion can be materially helped by cutting off the blood supply of the superior thyroid. This operation could be readily done under local anesthesia, and can be materially shortened by locating the upper outer pole of the gland, which is the entrance of the superior thyroid.

Cases that will not respond to ligation may be further helped by the injection of boiling water into the gland. I have found the use of boiling water only necessary in one case during the past three years. These suggestions are valuable helps to the preparation of goiter patients for the removal of the gland.

THE SAFE OPERATION OF GOITER.

After novocain infiltration, the usual necklace incision is employed (an incision corresponding to a line where a string of beads would cover it if put on the neck). The skin superficial and deep fascia and platysma are dissected up to a point well above the gland, exposing the sternohyoid and the sternothyroid, the inner portion of the sternomastoid and the omyoid. In medium-size growths, muscle separation will permit of the delivery of the tumor. The muscle section of the sternohyoid and thyroid group, if made, should be near their upper attachment, so as not to interfere with their nerve-supply. After the removal of the gland the severed muscles are carefully united by suture. The upper section also permits of early ligation of the superior thyroid artery. The tissue covering the gland is then divided down to the true capsule of the gland. The gland is then elevated and brought into view and is removed from above and behind, the object being to allow the posterior capsule, with small part of goiter tissue, to remain. After exposing

it the upper pole is elevated and the superior thyroid artery is cut between forceps. Forceps are then clamped in twos along the posterior capsule, always remembering to include a portion of the capsule with the goiter tissue. If this is not done, unnecessary bleeding occurs, as goiter tissue itself seldom holds forceps. The capsule is followed down and seized between forceps until only the posterior capsule and the small amount of goiter tissue remain. Capsule then may be sutured over and perfect hemostasis secured. The tissue capsule is then sutured over the goiter capsule, more completely establishing perfect hemostasis. The muscles, if they have been cut, are now sutured. The same operation is done on both sides, and, if the capsule is closely followed, the recurrent laryngeal is never injured, the parathyroids seldom seen and the isthmus not touched. The skin is now brought down and sutured with interrupted sutures and Michel clamps. Drainage may or may not be employed. Most cases are now closed without drainage.

After operation, with the principle of anoci-association still in mind, morphin is used, not by doses, but by result. Goiter patients must be kept absolutely quiet, even if respiration has to be brought down to twelve a minute for the first three days.

After leaving the institution, continued rest, quiet and congenial occupations should be followed until all vestige of toxicity disappears, and nearly all patients then can lead normal lives.

In this paper, case reports will not be taken up, with the exception of a statement that in two years no goiter case has been lost in my service at the Hotel Dieu.

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DISCUSSION OF DR. LEVY'S PAPER.

Dr. J. T. Nix, New Orleans: I think the mistake most of us make in goiter work is that we try to operate too quickly. Dr. Levy says that in some instances he has kept patients three months before operating. I think unquestionably all goiter cases should be known to the surgeon for some time before operation. Many of them could go through the operation without much difficulty then, whereas if they were operated promptly they would probably die or have a hard convalescence.

Dr. Levy did not say much about the boiling-water injections recommended by the Mayos. I had a case that I treated for a good while, and I thought she could stand the operation. Finally she went all to pieces—

a woman of sixty-five. I injected about one ounce of boiling water, and I thought she was going to die. She went back to the ward, did well, and finally left the institution, and now, after two years, is apparently in perfect health. The patient did not look like she had a chance in the world to get well, and I think it was the injecting of the boiling water into the substance of the gland. If there is any virtue in anoci-association, I think it should be used in goiter cases.

Dr. E. H. Blackman, Shreveport: I would like to speak of adolescent goiters. I have seen quite a few cases of this kind—one that was sent to the Mayo Clinic, and it was decided it was not operable—a young lady about seventeen years of age. By removing the tonsils it was found that was all that was necessary to be done. The goiter has gradually disappeared. These adolescent cases, I think, should not be operated on, but given medical treatment and complete rest.

There is another form of hyperthyroidism without goiter that we often see; in fact, any case of severe tachycardia and loss of weight, with nervousness, will bear investigation to see if it is not a case of hyperthyroidism. Most of these cases, if put to bed and given complete rest and dieted, will improve.

In regard to the boiling-water treatment, the Mayos do not recommend it. It was Porter, of Fort Wayne, Ind., who suggested it.

Dr. R. M. Penick, Shreveport: Has the essayist used the urea and quinin injection? I think I have seen where the Mayos are using it in practically inoperable cases. I have a case that is inoperable and am thinking of trying it. I have seen several cases of adolescent goiter lately, and one of the kind that I do not feel it would be safe to operate on. In one or two cases the tonsils were removed and they were helped, and in the case of one very young woman the teeth seemed to be causing the trouble, and removing the teeth reduced the size of the goiter very perceptibly.

Dr. Louis Levy (closing): Dr. Nix mentioned the anesthetic. Never use ether unless nitrous oxid cannot be obtained. I have used nitrous oxid for quite a while in this work. A great many operators are doing away with a general anesthetic and using a local. That is not the anoci idea. I do not use it because of the emotional part of it. I use nitrous oxid.

Adolescent goiters come under the head of the types that get well by rest and diet, and that is the type the fake goiter-cures live on. They cure them because they get well themselves, and they have the diversion of going to the doctor. I believe many adolescent goiters, if they are not under a physician's care, develop decided hyperthyroid symptoms and eventually have to be removed, and at that time, in a woman's life, she should be watched more closely than at any other time, because it may be the time to decide whether she must be operated or get well without an operation.

I was at the Mayo Clinic last August, but I did not hear much about quinin and urea injections. I did see a lot of this at the Crile Clinic four years ago. I think he has since abandoned it. He was using it in his picture-frame injections. He would put a frame around the gland in the tissue, and he claimed that blocked the nerves and that, when the supply to the gland was stopped, there was no pain for quite a few days after operation. In the use of quinin and urea it is well to recall Dr. Parham's paper on the use of quinin and urea, where it was followed by tetanus. He cited two cases. I do not know how it happened, but he explained it

by the fact that it got into the inflammatory field, where there might be some migration of the tetanus bacilli. But, with the safe technic of ligating the superior thyroid, the injection of boiling water, and rest, I think almost any goiter can be made operable. Crile has some cases where he went to the bedside and ligated the superior thyroid artery without moving the patient off the bed. I would suggest, not trying to find the superior thyroid, but to ligate around the outer pole of the gland, which can be done in a few minutes.

RADIUM THERAPY.*

By ERNEST CHARLES SAMUEL, M. D., Radio-Therapist,
Radium Institute, New Orleans.

When we look back a few years and think of the utter helplessness of some patients whom we are called upon to treat, and what little hope or encouragement could be offered in the way of a cure or relief for their ailments, we can only then begin to realize what a wonderful help radium therapy has offered.

The use of radium salts, or their emanations, is not a cure-all, as the Röntgen ray was heralded when first introduced into our therapeutic armamentarium. It has required at least fifteen years for the workers with this wonderful therapeutic agent to establish its place, so it must be with radium. Few of us realize the pioneer work that has been done along this line, especially in France, by the Curies, who discovered and placed radium on a firm physical basis; and Becquerel, who first used the salts of radium as a therapeutic agent. Abbe, in this country, was the first to apply it in the treatment of fibroid with such remarkable results.

Radium will not, in my judgment, ever replace surgery in the treatment of malignant conditions; but how many cases that are seen by the surgeon are still within the domain of the knife! Clark, in an article in the *Annals of Surgery*, of November, 1912, reports that, to fifty cases that were operable, 250 cases were turned away as inoperable, and this article only referred to carcinoma of the uterus, and of the operable cases, how many surgeons are prepared or are skillful enough to do the extensive dissection of Wertheim, or the vaginal operation of Schucharts, which had given a large percentage of ultimate cures at the time it was in vogue? There can be no middle-of-the-road policy in dealing with malignancy. either the surgeon is prepared to do an extensive operation, or he must leave the case to some safer procedure. We are not able to

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

accomplish the same results with Röntgen ray as we are with radium, especially in its ease of application. In carcinoma of the uterus, the salts or their emanations are placed in contact with the growth, and can remain so placed just as long as necessary. There is no skin reaction to fear, as we are able to filter out the irritating rays with brass and rubber, thereby eliminating the very troublesome secondary rays, that are really the fear of every Röntgen worker, because, with the X-ray, to get the desired penetration, we must have a tube backing up over six inches, and I think the universal opinion is that it is practically impossible to control our secondary rays when we push a tube higher than six inches.

Radium offers greater hope in malignancy of the uterus than it does in any other part of the body. Just what the explanation of this is no one has been able as yet to explain, but we must appreciate how wonderful it is when a patient is brought in the hospital almost exsanguinated from the loss of blood, a very irritating discharge, that is most foul, and an irritable, infected bladder. Most patients realize what a burden they are to others and to themselves. Quite a few of them, by this time, are taking some form of opium, and no one can blame them, as they need it for pain. What a transformation three radium treatments make! First, the hemorrhage has entirely stopped; very little, if any, discharge is present, and, in most instances, they are able to do without opiates. They come in smiling and tell you how well they feel; the hemoglobin has increased from 40 to 60 per cent; when you examine them the growth looks healthy, does not bleed when touched; the structures are returning to normal, but here let me sound just a little warning. If treatment is pushed too far and given at too frequent intervals the rectal and bladder tenesmus resulting, together with a breaking-down and sloughing of the growth, causes them to suffer more than with the original disease. At least six weeks should elapse before another series of treatments is attempted. Some patients do not stand as much radiation as others, therefore each case is an individual study, and, if any toxic symptoms intervene, short exposures should be given—screen heavier.

Here let me say a word about the introduction of radium. Just as much care must be taken in the preparation of the patient and of one's instruments as would be done if a vaginal operation were to be performed. Fifty milligrams of radium are put into a brass filter of three or four millimeters of brass; this is put into a rubber

finger-cot; a heavy piece of thread is used to tie the finger-cot over the brass filter; this is left long enough, then put into a solution of lysol for fifteen minutes; it is then taken out and wrapped in four turns of sterile gauze; the speculum is next introduced and the radium for the first exposure is placed directly in contact with the mass. The vagina is packed out with sterile gauze; the string that is attached to the radium is then fastened to the skin with a piece of adhesive plaster and the patient returned to bed. She is not allowed to get up, not even to void; a bedpan must be used, first on account of displacing the radium, and, second, to keep the radium from dropping out and being lost. The vaginal pack, on account of its size, interferes with the bladder. In some cases, when the patient complains of not being able to void, the catheter must be used. The radium is left in place usually for twelve hours; it is then removed and the patient given a very hot saline douche, and is instructed to repeat with a saline solution, as hot as can be tolerated, night and morning, as the saline solution seems to be less irritating after the radiation.

The patient is instructed to report in one week for the second exposure. About two layers of gauze are placed between the growth and the radium, to get the advantage of distance filtration; the second exposure usually lasts about ten hours. The patient is again instructed to report in one week. At the third exposure the thickness of the gauze between the radium and the growth is increased. This exposure again lasts for ten hours. The patient is urged to keep up the douches and to report one month from the last treatment for examination from the doctor by whom she was referred. Two more weeks are allowed to elapse, then the three exposures are again repeated. The patient rests for six weeks. The third series is given in this way and the patient told to report in three months. A large percentage of private cases especially show up, and about 75 per cent of the cases that looked hopeless are markedly benefited; most of them are able to resume their household duties; quite a few have remained clinically well for three years, the majority only lasting about fifteen months or two years, but just think of the comfort and the way life was prolonged. Quite a few cases have died cured of the local disease; metastasis, having taken them away, usually occurs in a place well removed from the uterus. All cases should be followed by intense therapy with the Coolidge tube by cross-firing through every available portal of entry, as deep therapy

certainly does control metastasis away from the site of the original disease. At least three courses of treatment should be given, using as high a tube as possible and giving a full dose each area.

Lymphosarcoma is markedly benefited by radium therapy. Of bone sarcoma I have very little to say, as I have seen no lasting results. Sarcoma of any other part of the body, with the exception of the recurrent nodules after breast amputation, does not offer a great deal in the way of a cure. In carcinoma of the tongue large amounts of the salts are buried directly into and around the growth, and it seems to help a great deal, but I have not seen a case that I call clinically well.

The most striking results with radium therapy are in fibroid, where three treatments stop the hemorrhage permanently, and in most instances the growth disappears, but all fibroids are not amenable to radium therapy. I hope at the next meeting of this Society to tell you of my experience along this line.

DISCUSSION OF DR. SAMUEL'S PAPER.

Dr. S. C. Barrow, Shreveport: I have always been very much interested in radium therapy, and whenever a case comes to me that I feel is suitable for therapy of that kind I quickly and conscientiously refer it to Dr. Samuel. In the treatment of just one condition I believe the radium therapists claim a little bit too much, however, and that is in fibroma and the climacteric and essential hemorrhages in women about the age of forty to fifty. The doctor wound up his paper by stating that the best results he got were in the treatment of this condition and that he would tell us more about it later. The very best results we get in X-ray therapy are in the treatment of fibroid tumors, the climacteric hemorrhages and the usually spoken of essential hemorrhages. In the last two or three years we have had about fifty or sixty women on our records who have come for relief from fibroids and the hemorrhages accompanying them, or without them, and some essential hemorrhages. Out of that number, if we will except two, we have 100 per cent symptomatic cures. One of them was a mistaken diagnosis; we found later it was a cyst—an ovarian cyst. We had one very interesting case, that Dr. Abramson is familiar with—a fibroid about the size of your head, extending up to the umbilicus, that was accompanied by the usual pressure symptoms. We found the fibroid impacted in the pelvis, and the question with us was, first, whether it was a fibroid tumor or a growth of another kind. We treated that patient in the usual way, with intensive X-rays, and after three series of treatments it was impossible to detect the tumor. She was incidentally relieved of the pressure symptoms. Some months later that tumor came back, and when she came to us again it was the same size as when we first saw it. We repeated the treatment, and it was marvellous the way it disappeared. She was relieved of all symptoms, but some months later it reappeared. Dr. Abramson removed the fibroid. I have never heard of a case doing like that. In this type of case I cannot see the advantage of radium treatment over the use of the X-ray.

The doctor uses an investment of about \$50,000 to \$75,000 to get identically the same results that we accomplished with an investment of possibly \$2,500. The doctor puts his patients through practically a surgical procedure. He introduces his radium into the uterus, and in the young case, that requires a general anesthetic, she is subjected to the dangers of a surgical operation. In the Röntgen therapy she is subjected to no procedure of that kind—the young girl—and we have had them from thirteen to sixty-five. She is placed on the table and rayed over the abdomen and back—no exposure, no dilatation of the cervix, no general anesthetic, no pain, and the same result is accomplished. That, I think, is sufficient argument for the use of the Röntgen ray in these cases, instead of radium. Now, when we get into malignancy involving the mucous membranes, they are particularly resistant to the X-ray, and when one comes to me I think of Samuels right away, and I have had the pleasure of seeing him accomplish some nice results that I could not with the ray. On the other hand, I have had three or four radium cures (?) of essential hemorrhages and fibroid hemorrhages come to me for cure by the X-ray. Of course, it is a wonderful thing—spectacular; but when we get such uniform results I do not feel like investing \$50,000 in equipment when I can get the same results for an investment of \$2,500, and get them safer and more satisfactorily.

Dr. Louis Levy, New Orleans: After hearing Dr. Barrow's discussion I can confirm in great measure all he has said about the ray. Dr. Pfahler, of Philadelphia, makes about the same statement, and accomplishes just about the same results with his X-ray that Dr. Barrow does; in fact, he goes further and says he can accomplish almost anything with the X-ray that he can with radium.

Having referred quite a few cases to the radium man, and having seen some of the after-results, Dr. Samuel's paper held quite an interest for me. Radium is a valuable assistant, especially in cases that are no longer in the surgical domain. Radium will probably help those cases, or make them comfortable until they die. Radium, however, is not to be neglected after operation for malignant disease. Again, radium must be used in expert hands. The surgeon cannot handle his own radium, because he does not know where it is going to stop. I saw one case in which radium was used, a fibroid that had broken down in the center, and when removal was attempted the broad ligaments were so friable that you could hardly put the ligatures in, and there was much bleeding. I have seen rectal applications of radium in which there was recto-vaginal fistula. I have seen a patient with fistula, on which I have since had to do a colostomy. This case is not improved, and she is miserable and would welcome death.

The thing I would like to stress in the use of radium is to have it in expert hands; otherwise the patient may be made very uncomfortable following the use.

Dr. W. Kohlmann, New Orleans: I am very glad to hear Dr. Samuels draw attention to the use of radium in cancerous diseases. It is true the X-ray was used for a great many years with much benefit, and yet I believe, since we have radium applications, they are much better. It is not a question of money, but I believe the application of radium is so much easier on the patient. With the X-ray, the patient is exposed for hours and hours, but with radium one or two treatments will stop the bleeding in most cases.

Years ago we thought we had to operate for cancer of the uterus. In 1913 I was present at the International Congress in London, and when

Doederlin declared that he had not operated for cancer of the uterus for some time, but used mesothorium from the beginning with extremely satisfactory results, I thought it could hardly be accomplished. Radium could not be gotten at that time, so I tried the X-ray for the improvement of carcinoma cases, but had no results, so I was glad when radium could be secured to help us out of our difficulty. I was a great enthusiast on the radical operation by the abdominal route. I never expected any permanent results, but I was satisfied if I could relieve the patient from the bloody discharge and give her a year or two of comparative comfort. I did these operations quite often—in fact, so much so that I was frequently criticized. Of course, you cannot do the radical operation under 20 per cent; still, if you have a relative number of cases that are relieved, I thought it worth while. Since, however, the advent of radium, I have not operated for years, and do not believe that I will ever do so again. I have a case in mind, of a woman who had three treatments of radium two years ago, and now the cervix is perfectly normal. Nevertheless, I would not like to rely on radium alone, for there are a number of advanced cases which do not improve under this treatment. In these instances I have recently instituted the procedure of opening the abdomen and tying the internal iliacs and ovarian arteries, and I believe the results are very satisfactory by this procedure. I am inclined to believe that it is better not to treat the cervix prior to radium application. I had a case recently in which you could hardly introduce the finger into the vagina, but after tying the arteries, and two radium applications in the vagina at one week's intervals, the growth had diminished to such an extent that an almost normal cervix could be felt. Every time you make an application of radium you should take out a piece of tissue for examination. I believe our results in the future would be better if the arteries, in suitable cases, were tied. The great trouble at present is to get the radium.

Dr. A. Nelken, New Orleans: I have had little experience with radium, but know of the work done with it. I want to emphasize one point made by Dr. Samuel, and that is that up to now we know very little about radium. Radium is not such a new therapeutic agent; it was introduced some ten or twelve years ago; then it was discontinued, and has been recently revived. The thing that puzzles me is the diversity of opinion you can get in any medical society on the question of the therapeutic value of radium. The probability is that we do not know the limitations of radium therapy. It seems to me it is a question of dosage. Kelly uses enormous quantities, and claims the best results, while others think they have been using too much. There must be some solution of this diversity of opinion. We who use radium must not lose sight of the fact that it is a very powerful agent, but it also may do harm and must be used with caution. We do not know how the harm occurs, but I recently saw a case that Dr. Samuel treated not long ago, a carcinoma involving the internal meatus, that flared up just as if you struck a match to a tinder-box. The woman was getting along pretty well until radium was used. She died in less than two months.

Dr. E. C. Samuel (closing): I want to thank you all for your very kind discussion. Dr. Barrow reports fifty-five or sixty patients, with two apparent failures and 100 per cent cures. Our results are not as good as Dr. Barrow's, and I want to congratulate him. I have given close to 2,000 exposures for fibroid of the uterus, and in only one instance did I

give an anesthetic. So that we can afford to throw into the discard, as far as anesthetic goes. We have had failures with radium, and we will continue to have them. I especially called your attention to the fact that we did not consider radium a cure-all, but it is doing more than any other agent, as far as malignancy goes, outside of the early use of surgery.

Dr. Levy spoke of bad cases of recto-vaginal fistula. I have given close to 3,000 exposures for cancer of the uterus, and in not one instance have I had to report a recto-vaginal fistula due to the radium. I have seen cases where there was infiltration of the recto-vaginal septum—advanced cases, that were broken down before they arrived—but I have not seen a case of recto-vaginal fistula as a result.

In regard to early malignancy, the man who uses radium when the case is still in the operable stage is a criminal. I called attention to the fact that radium will never replace surgery in the treatment of malignancy.

Dr. Nelken spoke of the patient that flared up after the application of radium. How many cases in your surgical practice have you operated on and seen the growth spread like wildfire? Do not condemn radium for this apparent increase in growth. It is not fair to the element. Just give it a show. Dr. Nelken said radium was used ten or twelve years ago, then thrown into the discard and gradually revived. Becquerel was the first one to use it twelve years ago, and he used it in very limited quantities, with no apparent results. The first man to use any amount of radium in this country was Abbe. He is the one really responsible for our results. But you have to give the men using radium a little time to find the proper basis for its application.

RACE DEGENERATION: WHAT CAN WE DO TO CHECK IT?*

By R. McG. CARRUTH, M. D., New Roads, La.

Before entering upon the discussion of this subject I beg to express in all humility a profound consciousness of my inability to do it even a modicum of justice, and to say that I hope barely to scratch the surface in limited areas of a vast field where deep plowing is needed to be done.

Never before in the history of the people have more and graver problems presented themselves than now confront the Caucasian race. Many times, in the centuries that are gone, fire and flood have swooped down upon limited sections of the land and left their monuments of wreck and ruin in mute attestation of the unbridled forces of nature. War and pestilence and famine have in turn all held their gruesome orgies, but when the cyclonic fury of these terrible visitations had in time spent its force there followed the calm, the peace, the rehabilitation.

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

But we of this generation are now face to face with a new problem, a yet more terrible danger. "New," do I say? Yes, *new*—new to us, but age-old in the history of other civilizations. For there is something worse than war—more awful to contemplate than death. What language can express the humiliation we should feel at seeing the race, physically, mentally and morally, slowly going to decay?—great nations dying at the top!—a race, proud of its lineage, boastful of its achievements, rich in its art and its literature, honored by its patriots, its statesmen, its philosophers, its men of science—reveling in wealth—and withal rotting at the root!

Yet these are facts. As a race, we are surely degenerating. There is dire need that something be done—and be done quickly.

The single item of infant mortality alone in this country is sufficient to arouse the solicitude and the alarm not only of the parent, but of the patriot and philanthropist as well. But when we think of the vast and yearly increasing numbers of those surviving the preventable diseases of childhood, only to show early signs of mental or physical or moral degeneracy, not only here, but throughout the civilized world, the case is truly appalling.

Yes, our babies are dying, our children are going blind, our young men and women are crowding our insane asylums and our penitentiaries. Surely the time has come when we must bend the energies of our greatest men and women toward devising ways and means of trying to remedy these evils, to check the downward trend of the race. Do we doubt these facts? Read the statistics, or, better, go into our insane asylums and see for ourselves the crowded conditions. The State—I do not speak specially of the State of Louisiana—seems not to be able to keep pace with the increasing demands for housing these unfortunates. We are not constructing buildings fast enough to accommodate the stream that is ever pouring in at the gates. Then go to our jails—I speak now specially of Louisiana—many of them are full to overflowing, not of criminals, I mean, but of the insane—cannot reasonably accept more; so that often these unfortunates, after being examined and condemned, have to be sent back to their homes, a menace to their families and to their communities.

But let us come quickly to the end of this horrible recital. As a Caucasian, as an American, as a Louisianian, I am ashamed to speak it, but these are facts that should be known. These people—*these insane people—these insane—are being permitted to marry*

among themselves; these morons, these imbeciles, these maniacs, are *procreating their kind*. No law, I am told, to prevent it—no law of church or State; no crystalized public opinion to prohibit such unholy, such unclean unions.

But my time is limited, and let us pass on to the common schools. Go visit these institutions of training. You do not need to be a psychiatrist, or other kind of specialist—just a plain general practitioner. See the deviations there from the normal, physical, mental and moral. I cannot leave this phase of the question without reminding you that not a great many years ago a noted sociologist and statistician calculated that the world, or a major part of its population, would become demented in something like two hundred years from that time. It has recently been stated that, on account of the steadily increasing ratio of the insane to the balance of the population, this period has been advanced one hundred years; in other words, that the next generation will be more than half demented. And yet we permit these poor degenerates to marry!

Just a few examples now of physical deterioration. I presume every one here knows of the steady decline in stature among both the men and women of most European countries. Prior to the Boer War, England had, three times, to reduce the physical standard as to stature for enlistment in her army in the space of thirty-nine years, and in the present war has been compelled to accept such diminutive men that they are classed together in regiments or battalions, and known as "shorties." Then, in the City of Manchester, one of her great industrial centers, they have had for many years to import their policemen, the laws requiring such a standard of measurement—weight, height, breadth of chest, etc.—as they are no longer able to breed, on account of the hard living conditions prevailing among the women and children.

In other parts of Europe deterioration in stature, combined with deformities of a more startling nature, suggest that the beginning of the end of procreation for some communities is in sight. I refer especially to the markedly deformed pelves of the women in certain great industrial centers. It is said that students and medical men interested in obstetrics visit their lying-in asylums to see *how it is possible for some of these women to bring forth their children at all!*

We have before us the history of past civilizations, their slow and steady rise, their varying periods of prosperity and greatness, and then the slow, but sure, decline and fall. The Babylonian, the

Egyptian, the Assyrian, the Phœnician, the Greek, the Roman, and others we wot not of, differed only in degree; they all in time went to the junk heap, and, would we be wise, we would profit by their example.

Now, the first step in the eradication of an evil is the recognition of the existence of that evil, and, since we cannot deny the fact, let us seek for the causes.

As was the case with these former civilizations, we are beginning to get very far away from nature. By long neglect we have either forgotten her laws or signally failed to regard them. But as in human, so in natural law, ignorance does not excuse, and so we suffer the consequences of our folly. Ignorance, then—ignorance of the laws of nature, or disregard of their importance—failure to apply these laws to our daily life, constituted the first act in the drama that has brought about these conditions. Then, as a result of ignorance, came poverty, especially among certain classes, and with it disease and vice and crime among all classes. But poverty is only relative. We are poor or rich just in proportion as we have less or more than our neighbor. And you cannot cure poverty by giving alms; indeed, there is a disease of so-called charity, the outgrowth of our abnormal community life. You must cure poverty by giving *knowledge*, just as you dissipate ignorance and error by letting be known the truth. As a lamp drives out the darkness, so will a knowledge of the truth drive out every form of vice.

This brings us to the question of eugenics, a very much misapprehended term among many who should know better—among a large professional class, among the clergy as well as among the intelligent masses of the people.

I have observed some difficulty, in “better baby” campaign talks, in explaining away the “breeding people like you breed cattle” idea. This is not the time nor the occasion for discussing the Mendelian law, or for going into the intricacies of the theories of “dominant” and “recessant” qualities. But I will give Sir Francis Galton’s definition of the word “eugenics,” coined by him some thirty-five years ago in his great work, “Inquiries into Human Faculty.” While the word, from its etymology, really does mean well-born, Galton explains that he does not mean by it *specific mating*. Hear his definition:

“Eugenics is the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage.”

There is no disregard of environmental influences here, but on the contrary, their strongest endorsement. And since Luther Burbank has demonstrated in the plant-world that heredity is but the sum of all past environment, the way is cleared of many difficulties for the teacher of eugenics, and the time is ripe to explain to the people, especially to the moulders of public opinion and the law-making class, the great need for the enactment of laws upon the subject. If we cannot enforce eugenics, by all means let us enact and enforce laws that will prevent the crime of the age—the crime of all the ages—the crime of *dysgenics*. Did time permit, I would like to cite a few examples from nature, from both the animal and the vegetable kingdom, that, *excepting only well-recognized infectious, transmissible diseases*, go very far towards proving that *environment*, more than *heredity*, is the power that moulds the character of the individual and shapes the destiny of the race. We cannot resurrect and change our ancestors, but we can guide the footsteps and control the acts of our children, and thus in time form the habits of our children's children. This generation is tottering to its fall, and aside, as just said, from certain infectious, transmissible diseases, environment is the only staff to lean upon. *Conditions must be changed*; the emergency is dire, the responsibility rests with us, the medical body of the land. We could not if we would, we would not if we could, shirk this responsibility.

Now, what have we to advise? This question opens up before us a field so vast, much of which is unexplored, that, however it may appear to others, I must candidly admit my mind is staggered with the magnitude of the problem we must solve. Oh! that we could discover by some miracle of thought-force a panacea for the ills that beset us, how we would lift up our voices to heaven and cry aloud in gratitude, "Eureka"! But we have not time to philosophize, to indulge in vague dreams. As a race we have been dreaming too long—dreaming away our birthright. We must awaken from our slumber, we must begin to do something, and, since we must begin, we had better begin at the beginning. Then let us go to the fountain of creation; let us call into council the intelligent motherhood of the race; let us do that which those past civilizations failed to do, and which, had they done, there might have been a different story to tell. The descendants of those who erected the hanging gardens of Babylon, of those who built the Pyramids of Egypt, of those who wrote the books in the great library at Alexandria, might be to-day

strong, virile, enlightened peoples—and what a wealth of wisdom might have been saved to the storehouse of the world!

The recognition, then, of our womanhood, of their intuitive perception, of their inspiration, of their power, and our solicitation of their active coöperation with us in the work, is, in my humble opinion, the first step to be taken. Under this head I would include a campaign of education among the people, for the enlightenment of the mothers and fathers of the land. This means the active prosecution throughout the State—and the nation, and the world—of, for instance, “better babies” campaigns, the organization of mothers’ culture clubs, and of *fathers’ culture clubs*. The fathers need to study the question and need to be talked to as well as the mothers.

As to the ravages caused by the abuse of alcohol and the blighting effects of drug addiction upon this generation, I would feel bound to discuss them at some length, as probably the most important factors in the causes of race degeneration, were it not that now most of the governments of the world recognize this fact and are taking steps to eradicate these evils.

Second. I would place next in importance in these suggestions—and some might place it first—a medical examination and certificate of health, physical and mental, as a prerequisite to the issuance of a marriage license. This medical examination should be conducted by a State board of examiners, or sub-committee of such board, and should be made by physicians of special skill and experience in such matters. I would suggest that this State board be appointed by the Governor upon the recommendation of the State Medical Society; that the president of the State Board of Health and the president of the State Medical Society be *ex-officio* members of the board, and also that upon this board there be appointed at least one woman physician.

Third. I would suggest a school-entrance examination for all children, physical and mental, and the classification and, if necessary, the segregation of the mentally and physically defective.

Fourth. There should be a State institution or institutions for the special care of *mentally defective girls*, their training, and, as much as may be, their education.

Fifth. There should be rigid enforcement of child-labor laws. I am glad to say in this connection that I believe Louisiana has upon its statute books about the best, if not indeed the best, child-labor law in this country.

Sixth. I would strongly advocate, as a wholly eugenic measure, pensions for indigent families of imprisoned husbands and fathers. Time forbids my discussing this point, but pathetic instances might be cited pointing to the urgent necessity for such a law.

Seventh. There should be State supervision of all orphan asylums and of all *lying-in asylums*. A woman physician should be a member of a board appointed by the Governor for this purpose, and all members of the board should be recommended by the State Medical Society.

Eighth. I would further recommend improvement and extension of our prison reform laws. This, too, is a purely eugenic measure.

Ninth. Laws for the complete suppression of the sale of secret nostrums for the treatment of disease.

Tenth. Pensions for indigent mothers.

Eleventh. I strongly suggest the serious consideration by us as a body of ethical, medical men, of the question of legitimate birth control. I am free to confess that, after a practice of nearly thirty-nine years, I have been forced by observation and experience to come to very definite conclusions on this subject. The question is up before the enlightened Christian world, and we, as a body of medical men, cannot shirk it. We cannot hide it away, nor can we hide from it. As much as we, as ethical men, abhor that *crime of crimes*, infanticide; as much as we are, I solemnly believe, the God-appointed guard of honor "to stand with drawn swords round the cradle," whether that cradle be that wooden or wicker thing—man's handwork—that couches the new-born babe, or that mystic other thing, that holds within its protoplasmic embrace in the mother's womb, the embryonic beginning of life—as much, I say, as I solemnly subscribe to this creed, just so much do I believe it to be our bounden, sacred duty, under certain circumstances, to teach in individual cases the legitimate prevention of conception. Woman has her sacred personal rights as well as man, and, since she is to be the bearer of the burden, she may refuse to allow him to make that burden too heavy. His superior physical strength may compel her to permit him to ravish her body, but she owes it to herself, she owes it to her other children, she owes it to humanity, to refuse passively to become a party with him to the crime of thrusting upon the world what she has reason to believe, what she has been told by her medical adviser, what she herself may have learned by sad ex-

perience, may be a gibbering idiot or a far worse human monstrosity. This, for strong humanitarian as well as for eugenic reasons.

Twelfth. And now, finally, the question as to how far we should go in the matter of dealing with the wholly and irremediably unfit naturally presents itself. We cannot pass it by; sooner or later we will be compelled to take action. Neither marriage laws nor medical advice control this unfortunate class; but society will find some means to protect itself against this menace. I can suggest no better way than sterilization.

Here I end this hurried and somewhat desultory synopsis of the things, it seems to me, most pressing to be done if we would save the race from the fall that surely threatens. I might add to the items in the list, but the time allotted forbids.

OBSERVATION OF THE DRUG ADDICT.*

By DR. OSCAR DOWLING.

When the Harrison Law went into effect March 1, 1915, it was thought there would be a marked decrease in the use of habit-forming drugs. There was, but not to the extent hoped for. The object of the Harrison Act was to gather information as to conditions, to provide machinery to repress and ultimately suppress the traffic in drugs in so far as it leads to drug addiction, and to control the commercialization of the (addict) drug supply.

The Revenue Act of 1918 (Sec. 1006) increases the efficiency of the original Act. It provides for taxation of those who handle narcotics and levies an internal revenue tax upon the drug product. Under this Act, the manufacturers and dealers in proprietary medicines containing compounds of narcotic drugs must register. Under the Narcotic Law, it was possible for dealers and users to buy in large quantities and it gave the illegal trafficker opportunity to multiply channels for smuggling until any one with money could obtain the drug of addiction and in any place. A short time ago it was stated that one neighboring city had handled \$300,000 worth of narcotics during the past year, that it was a distributing point for the peddlers for surrounding states. It "paid" to travel to and from the city even from places distant three or four hundred miles.

* Read at Meeting of Orleans Parish Medical Society, March 31, 1919. (Received for publication Sept. 10, 1919—Eds.)

The necessity for state legislation became apparent simultaneously with the enactment of the Federal Law and some states, among them New York, Pennsylvania, Colorado, Connecticut, Illinois and Tennessee enacted laws supplementary to the Harrison Act. The General Assembly of Louisiana in 1918 gave its approval of Act 252 modeled after the New York law. Since this Act went into effect 1,276 doctors, 336 dentists, 40 veterinarians, 46 hospitals and 539 apothecaries (manufacturers and others) have registered. The registration is still incomplete but the restrictions provided by Act 252 have driven into the open a large number of persons who, by fair means or otherwise, were getting a daily supply. It is evident that as the provisions of the law and the regulations of the State Board of Health become more widely applied it will become more difficult for the addict to obtain a supply of the drug of addiction, and the present problem will grow in complexity.

When Dr. C. E. Terry was health commissioner of Jacksonville, Florida, 1914-1915, as the result of enforcement of an ordinance requiring drug users to register, he reported that about 1.5 per cent of the total population of the city were habitual users. (By color and sex 43.74 per cent were males, 56.26 per cent females; of the total white 66.67 per cent, colored 30.33 per cent). Further analysis indicates that white people as compared with colored are more than twice as liable to become addicts; not true, however, of cocaine, as this is the negro's great temptation. In Tennessee, where the State Food Department enforced the State law the percentages were about the same as those of the Jacksonville report.

In a New York paper, there recently appeared the statement that the "U. S. Internal Revenue Service estimates 200,000 users of narcotics in New York City" and that "there are 1,000,000 known drug addicts in the United States", and probably "as many more secret drug users". 64,800 prescriptions for morphine and heroin were taken from one New York drug store by Internal Revenue Officers—(Cohen's Pharmacy, 16 Amsterdam Ave.) The raiders found \$10,000 worth of narcotics in the pharmacy. Three of the physicians whose prescriptions were among the number were arrested.

If we apply the figures of Doctor Terry's report 1.5 per cent to New Orleans (population 400,000) there are 600 addicts in

the city, and if to the state (population 1,800,000) there are 27,000 narcotic users. This percentage is further strengthened by a statement from a reliable source that after a complete investigation 650 addicts were located in New Orleans. We have on record the names of 302 who have received, or are now receiving, a daily supply.

As the difficulty of getting the drug in rural sections militates against its use, 9,000 would be a very conservative estimate of the number of addicts in the state.

Using these essential facts the situation briefly is that in common with other states we have a large number of addicts. For these the physician must prescribe and the druggist furnish, the underworld dealer controls the trade, the addict does without his supply, or the patient must be supplied, under restrictions, by a constituted authority. The individual and the public phases of the question are apparent. What is his necessity is the right of the individual, what the duty of the community or state toward him, and what the obligation of society toward itself? Whether or not we agree that almost every individual addict, to begin with, was "a neurasthenic, a neurotic, or worse", we *will* agree that he is a sick person; further, that it is a form of sickness which is prejudicial to society. It follows for its own preservation the state or community must provide for the amelioration of the suffering of these persons and summarily stop whatever practices obtain which tend toward the formation of habits of drug addiction.

It is unthinkable that these persons suffering untold agony should be left without medicine. Equally so, that they should be placed at the mercy of the drug peddler. In a letter received this morning from a man I know well, a good citizen, there is this statement: "Since the law has been so strict about buying it (morphine), I have had to devise all kinds of ways to procure it, going first to one state and then another, to get it without being bled by bootleggers and peddlers, having had to pay exorbitant prices for it. You know full well all we unfortunates have to suffer and also know that to keep on paying the prices demanded by those who have the stuff for sale, would ruin any one". Bonafide evidence of the mental agony endured because of the uncertainty of supply and the expense attached. It is not fair that the burden should be borne by the physician. Already many have

written the State Board appeals to be relieved of the writing of prescriptions for incurable addicts. Any physician is more than willing to write a prescription, if need be, every other day for patients with incurable diseases, but he does not want on his mind or in his visiting clientele the average users. The druggist, likewise, does not want the burden of constant watchfulness as to prescriptions and amount with clerical work and responsibility entailed.

In some states, physicians are officially appointed to write the prescriptions of addicts and certain drug stores named as supply stations. The abuse which can be made of these assignments and the difficulty of the system are apparent, but it presents a workable basis for control of the drug supply and the abolition of the sale by unscrupulous venders. In the limited experience we have had in supplying about one hundred or more patients daily for about two months, we have learned how easily the privileges and restrictions of a system of this kind could be abused, but we have also learned the low cost at which morphine can be purchased. If secured in wholesale quantities and prepared in solution, it can be sold at a very moderate rate yet with a minimum profit to those who do the work for overhead expense.

The statistics on this point summarized are:

Average grains previously used per week, per person	160.14
Average cost per week, per person.....	\$20.00
Average grains at present per person, per week....	59.09
Average cost at present per person, per week.....	\$3.55
Average weekly earnings per person.....	\$24.57
Per cent admittedly spending previously more for drugs than they earned.....	40%

I know that many physicians believe that every addict is fundamentally defective in his nervous system, hence permanent cure impossible in practically 90 per cent—perhaps 99 per cent—of these patients, and that opinions as to method of treatment are widely divergent. We have few reliable records as a guide, but I believe it would be wise and humane to establish state institutions for treatment and cure of this class of afflicted. Treatment would relieve and if placed under direction of competent physicians the experience would be a guide to further procedure. I do not see why these persons are not as much the wards of the state, whether

indigent or not, as other classes of unfortunates which are recognized as having the right to care and treatment. Institutional care undoubtedly will be finally the solution but until provided, emergency action is imperative and I hope that this feature of the situation may have your earnest consideration.

I have purposely confined this brief paper to a mere suggestion of the complexity of the problem, and it is clear a system should be evolved to meet the present emergency and plans put into effect for the future. Even with inforcement of the Federal Law and those of the several states (including new laws in states which have not yet acted) it will take a generation at least to cure the evil. This suggests correlative efforts which should be thought of. Prevention of the habit is one.

In the investigations in Jacksonville, the replies of 250 addicts to questionnaire as to how they started were compiled as follows:

Prescriptions by physicians.....	48.8
Through dissipation.	30.4
Advice of users.....	18.8
Chronic diseases.	2.0

Our own records give about the same percentages. They did not go "back of the returns", nor have we as yet—that is, how many in these statements cover their own shortcomings by putting the blame on the physician, how many had had prescriptions refilled indefinitely, how many had the patent medicine habit, is not known. If differentiated, these would cut the 48 per cent perhaps three-fourths, but be that as it may, it is the physician's imperative obligation to take more care than ever, to look out for nervous defectives who may easily become addicts.

It is important that the license of those who violate the law shall be revoked. Physicians and druggists with exceptions here and there have lived up to the requirements. It is due the honest doctors and druggists that offenders be brought to justice. If through cupidity they have violated either the spirit or letter of the law, they should bear the penalty; if through carelessness it should be known.

In conclusion, I should like to call attention to the recent decisions of the U. S. Supreme Court, Nos. 367 and 370. They relate to violations of the Harrison Narcotic Act. Appeal was made from decisions of the lower courts. 367 makes clear that

a physician may not "sell, dispense or distribute" a drug "for the purpose of gratifying the appetite of the habitual user". In 370, to the question whether a physician may provide "the user with morphine sufficient to keep him comfortable" the decision is, "to call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required."

The evil of drug addiction has been brought to public attention through enactment of Federal and State laws. To provide means by which these unfortunates may have at least a sufficient supply to maintain a drug balance is the only policy to consider. In doing this and in planning for the elimination of the evil, society is not only helping the individual but is acting for its own preservation and the further good of the state. For social advancement the co-operation of all is imperative and in this instance the help of the physician is all important. Attacks on the Harrison Act have not been effective. Supplemented by the Act of the Legislature of Louisiana it stands as a means of present control and as a bulwark of protection against the perpetuation of the evil.

USE AND ABUSE OF DRUGS IN TREATMENT OF ADDICTS.*

By DR. J. A. O'HARA.

For the past few years especially, the question of dealing humanely and correctly in the treatment of the drug addicts, has caused a great deal of discussion; a great deal has been written, but much more must be written and said before the ideal methods will be adopted for the care and treatment of these outcasts of society.

If the life habits of a morphine addict could be had from the pen of such writers as those of *Les Miserables*, it would furnish not only interesting, but instructive reading.

When the Harrison Act was first adopted and made part of the laws of the government, I went on record that such a law was not within the bounds of reason and proper enforcement, because when such an important and vital issue was so abruptly attacked, it should have carried with it some time allowance, for

* Read at Meeting of Orleans Parish Medical Society March 31, 1919. (Received for publication Sept. 19, 1919—Eds.)

the control of the situation, and above all a proviso for its treatment, for the cure of the addict.

The manufacturers, the prescribers, and dispensers, and even the addict should have been consulted, so that the whole important-situation could be properly discussed and scientifically thrashed out; a way could have been created that would have gradually worn its way successfully, and the law then would have been easy to enforce, and not have left loop holes and exits that would entice many good men to sacrifice their profession and before hypocrites. I feel, and I know, that the creator of the law had but one paramount idea in view when it was written, and that was the saving of the soul and body, and the protection of the future generation from the disgrace of the unfortunate hang nails of society.

They all agree that, when a method had to be adopted, the attack must be made suddenly, vigorously, and unrelentingly, and that the individual and his discomfort should be overlooked, and that physical and mental anguish could not be considered, and would have to be pushed aside, and that the final lesson and results, would be instrumental, in the stamping out of the addict and his associates, the peddler, unscrupulous doctor and profiteer.

But when any law is enacted that attacks the individual and his right to live, without giving him any exit or excuse for his existence, the law will be found apparently defective and awful hard to enforce, and assistance will have to be called for from all available sources. All laws, to be popular, must seek the points of least resistance, while they carry with them steadfast fore-runners of justice. When it is considered that our Government, for many years, has been collecting revenues, taxes, duties, etc., for the privilege of importing opium and its derivatives, and if the figures were available it would be found to be quite a valuable asset; such being the case, is it not a reasonable and logical deduction, that the addict, the unfortunate result of this importation, which was not properly guarded, should at least have been considered, and some proviso made for his care, maintenance, treatment and cure?

Did they realize that the minds of those, who had been under the controlling influence of the drug, and from its continued use would become a shipwreck to its body, and be tossed about upon a sea of turmoil, agony and distress, seeking and begging for assistance, and finally resulting in the creation of a being who

does not stop at any and all petty crimes, both moral and social? If they had, the final results written into this law would have been the establishment of sanitariums or hospitals, maintained and equipped by the Government for the future welfare of these people; for the drug addict is today a study of economics; he is a standing expense and drain to civilization, and will continue so until the proper methods are adopted.

We must not forget that morphine is a stimulating narcotic, which gives to the morphinist a progressive habit, whose feeling of ill-being, when not under its control, can be relieved, he believes, only by morphine; to him morphine is a firmly fixed delusion; there becomes established a morphine thirst, a morphine hunger, and from its absence we have morphio-mania and amorphinism. The victims of the morphine habit are not dominated by the desire to enjoy the morphine intoxicant, as they are, by their apparent need of relief of their distress from amorphinism, which to them has become an obsession and impulse, whose habits cannot be governed, only by the proper amount of morphine. (I want to stop here long enough to say that I have relieved cases of this kind by injection of water, using a good size needle, so as to make them feel the prick.)

There are many treatments published as being successful, but I do not believe that any one treatment can be successfully applied to all individuals, for every case is an independent one of itself. Idiosyncrasies, constitution, habits, environment, organic diseases, physical and mental neurosis and many other conditions have to be carefully considered before your subject can be relieved as cured. It is an easy proposition to relieve the desire for the thirst or hunger, but it is much easier for environment and habits to re-establish it again, and the subject go astray.

It being a fact that self-denial is something that no addict is keen for, ask them "do you want to be cured"—their answer will invariably be—yes, But—To me this *But* is only a subterfuge, an alibi or substitute for the word No. Because, as I before stated, it is not so much the intoxication as it is the idea, that the only relief for his supposed aggravated condition is morphine.

His whole constitutional make-up is but a mass of hyperesthesia and over stimulation, from his skin inwards. Mentally he is under the control of phobias, delusion and hallucination, both ocular and auditory, with an absence of judgment, will, reason

and perception, with his memories on a balancing power of either too much or too little of the drug. For these and many more reasons you have a subject whose whole treatment depends on how you approach him and begin. Firmness, kindness and authority must be blended uniformly before he can be whipped into line; he must be shown to his own satisfaction the road to his relief and cure, that he will not be made to suffer any more than possible, while at the same time it should be made known to him that, if not now, he must some day suffer some discomfort before he can be relieved of the effect of the drug.

First. Individuality.

Second. The abrupt method, which should not be attempted, only on those who are using but small doses, and are strong enough to withstand its sudden withdrawal, remembering that the morphinist will always lie, when he knows the amount is going to be curtailed.

Third. The slow method, which should not be adopted, only for the weak and those deep cachectic patients, as it allows for easy relapses.

Fourth. The rapid reduction, which should call for complete elimination in five to six days, when substitutes and other treatments must follow, as the treatment for the cure of the habit requires firmness, authority, self-denial, constant supervision, proper attendant who will not or cannot be bribed, and special stress must be laid on the latter requirement.

For these reasons the treatment cannot be attempted or successfully carried out except in well organized and specially equipped sanitariums, or in the hands of competent physicians, with proper protection and isolation.

Before closing this paper, I think it is my duty to ask every physician to take off his coat, roll up his sleeves, and pitch in and assist the Louisiana State Board of Health and its worthy President, Dr. Oscar Dowling, and his doughty Secretary, Marion Swords, to carry out successfully the gigantic uphill undertaking in eradicating the State of the Drug Addict.

DISCUSSION OF PAPERS OF DRs. DOWLING AND O'HARA.

Dr. M. W. Swords: In opening this discussion upon the important subject "drug addiction", I desire to state that the time allotted me, is entirely too short to cover every phase of this subject—a subject on which volumes could be written and then rewritten—so extensive is it in its various ramifications.

It is my purpose to-night to express to you my own opinions, based upon personal experiences and observations, of a limited time, with those unfortunates addicted to the use of habit forming drugs—more particularly opium and its derivatives. I am frank to confess that as a practitioner of medicine, my experience with drug addicts was extremely limited; that my opinions were vague and erratic and not well founded, and I might add that the little knowledge that I now possess came to me by chance.

During the absence of the President of the Louisiana State Board of Health, I, as Secretary in charge, was confronted with a most delicate and urgent problem to solve, i. e.—the handling of hundreds of drug addicts, due to the enforcement of a recently enacted State Law that prevented the addicts from obtaining the drug of their addiction from the usual sources. Had you been in my stead, and witnessed the heart-rending scenes I witnessed each morning—of poor, unfortunate, miserable, wretched human beings, appealing to you for mental and physical relief, look into the faces of those poor creatures and note there, the unmistakable horror, torture and agony that they were compelled to endure; you would understand, the basis of my opinions. This experience elicited, in my heart, a warmth and sympathetic feeling that no words of mine could possibly express.

In my 12 years of practice, I have naturally seen much human suffering, but I have never been called upon to witness a torture so profound and unrelenting (when one addicted is deprived of his accustomed drug) that beggars description in any language of human tongue.

I became at once possessed with the idea that some humane method must be devised in order to relieve this avalanche of human agony, suddenly occasioned by the enforcement of the "anti-narcotic law".

I consulted with U. S. Government officials and asked permission to administer to those applying, the drug of their accustomed addiction until such a time as ways and means could be devised to permanently care for these unfortunates; hence the establishment of a clinic by the Louisiana State Board of Health for the purpose.

The next step was to ascertain the source of supply, and the reasons for the enormous number of drug users. I found:

1st. That there exists all over this country a vicious drug traffic, the principal of which is commonly known as the "drug peddler"—(himself usually an addict)—who supplied, without restriction and at a fabulous cost, all those who applied.

2nd. The mercenary, unscrupulous, medical practitioner, writing freely, without restrictions or discrimination, prescriptions to be filled by as equally unprincipled, unscrupulous and mercenary pharmacists. Believing that wherever there was a demand, there would be a supply, legitimately or illegitimately, and since, at this time, the present anti-narcotic law prevented the legitimate supply, I realized that the illegitimate supply must flourish beyond description, and as this illegitimate supply was now safely placed in the hands of the irresponsible, it dawned upon me that some rational method must be placed in vogue to counteract the efforts and effect of the illegitimate peddlers. Knowing that vice and degeneration is mothered by secrecy, and beyond the pale of the law, and knowing that this secrecy placed in the hands of ghouls the very life blood of unfortunate victims, enabling them to more thoroughly victimize unhappy addicts momentarily, neces-

sitating the perpetration of crime in order to meet the unreasonable and exorbitant demands exacted to obtain this now "completely necessary" drug of their addiction. I determined to have the light of publicity thrown into this hell-black corner of human suffering! Hence the idea occurred to me that to carry out successfully this undertaking, there must be a legitimate source of supply; therefore, it was determined that the Louisiana State Board of Health should furnish the drug users, in a legitimate way, the necessary amount of drug to relieve their sufferings and maintain them in a potential normal state.

Realizing that the very first step towards eradicating this condition was to put the drug vendor out of business—or at least very much restrict his operations, the rational course to be pursued, to eliminate the vendor of drugs, in my opinion, was to supply the addicts with the drug at practically cost since the drug vendor will not take a chance of falling into the clutches of the law unless compensated by enormous profit for the drug he peddles. Following this idea, we administered, under supervision, to each applicant each day, a dose of the drug but soon found that a single daily administration did not produce the desired effect; therefore, it became necessary to devise ways and means to supply applicants with sufficient quantity of the drug to carry them for at least 24 hours. This was accomplished by placing the amount desired in solution, in homeopathic vials, properly and legally labeled, and the vial given the addict to use at his own discretion. The required amount, in our opinion, was an amount that we will call the patient's "drug balance"—i. e. the exact quantity of the drug sufficient to maintain the applicant's equilibrium. This drug balance was ascertained by gradually diminishing the dose, without the addicts knowledge until a little more or a little less of the drug produced effects perfectly perceptible to our observations. For example, consider a person using 20 grains of morphine daily. This amount was reduced consecutively, watching each step of the reduction, until the patient could continue, in an apparently normal condition, the pursuits of his usual occupation. This apparently was easy to accomplish. The coming on of the "habit", as it is termed by the drug addict, is easily perceptible since it gives certain physical, physiological and psychological evidences unmistakable to the medical man, accustomed to observe "drug habitues".

The basic status is now maintained at the Louisiana State Board of Health in its clinic, and I hope will so continue until a more rational mode of operation can be devised and put into effect. We have not attempted, and I wish it to be emphatically understood that we do not expect to treat or cure those addicted to the drug habit outside of well balanced and regulated institutions. I further wish to emphasize that the object of the Louisiana State Board of Health, at this time, by the operation of our drug clinic, is merely to relieve suffering unfortunates, and to protect property and society from consequences that must necessarily follow a victimized people who are unable to obtain, in a legitimate way, the drug that gives them life and mental quietude.

In the operation of the clinic mentioned, I have had occasion to carefully study and minutely question each individual that presented himself. The experience gained in this manner has served the purpose of changing entirely my opinion as regards drug addicts. This opinion, I assure you, is uninfluenced as I have purposely refrained from reading one word written regarding habit forming drugs, and the opinions

that I here express are original, and if erroneous, worthless and not well founded, it is because I have been deceived by my observations and deductions obtained by actual association with the addict himself.

The great question that presented itself "WHY so many drug addicts"? The reason why so many otherwise intelligent, honest and well meaning people should become a victim of such a vicious and unrelenting master, and when I say MASTER, I mean in the fullest sense of the word for my opinion is that the mastership of opium, or its derivatives, is so profound, physiologically so absolutely necessary that when the addiction is complete, it will thoroughly overwhelm the greatest of minds, the greatest of hearts, and well meant purposes of man. I firmly believe no matter what the station of man in life, when once thoroughly addicted to the use of opium, not because of the drug but due to the lack of it, to procure it he will go to any limit, sacrifice pride, principle, honor, and respect to any means possible in order to relieve the terrible suffering that is his portion when deprived of the drug of his addiction.

I believe, and I state this to you in the friendliest possible spirit, with no attempt to criticize the profession to which I am proud to belong, that the DOCTOR is the principal offender in the making of drug addicts, innocently, no doubt. The relief of pain is so necessary that oftimes he forgets that possibly in the relief of that pain, the remedy is worse than the disease, prescribes liberally a drug which too often is planted in a favorable soil wherein it grows to results we know. In the greatest number of addicts, the addiction can be traced to the fact that unintentionally the drug had been prescribed liberally at a time when it seemed necessary and proper. Therefore, I say to you gentlemen, that the doctor of medicine, knowing the physiological effect of habit forming drugs, both immediate and remote, should exercise the greatest caution when prescribing for his patients.

The second great cause for drug addiction is what you may term the "pleasure smoker". I mean by this, those individuals who are not select in their associations, environment playing the major role in their lives, who will, for experience or momentary pleasure, drink deep draughts of the fumes that come from the wily-goddess, born in the heart of a poppy, and like the lotus-eater, bask in the smiles of a convivial paramour, never for a moment dreaming that the momentary exhilaration stealing through their brain and lulling to sleep all ordinary caution, will eventually prove as hard and unyielding as the ties that held Prometheus bound.

Third cause of addiction: The spectacular and enchanting environment of the "tenderloin".

Fourthly, and saddest of all, are those poor creatures who originally graced stately mansions of their own, who were the satellites around whom groups of friends and admirers clustered, and who, through fate's inscrutable workings, have lost their all, loved ones, friends, worldly possessions and who, buffeted and sore from life's storm, turned, in a last despairing effort to gain forgetfulness and surcease from aching hearts and tortured nerves, to the soothing and quieting effect of opium, as their last resort and solace, with the ultimate result of becoming addicted and suffering a further storm of agony.

Before this very interesting occasion and spectacle presented itself to me for study and consideration, I held the opinion that addicted drug users were, as a class, of the lower type of individuals, criminals,

and, with but few exceptions, a degenerated class, addicts through choice. But subsequently my opinion underwent a radical change. I have learned to consider each individual drug user in his own particular class, and will state that experience teaches me that criminals are criminals, whether addicted to the use of drugs or not. I would even say 90 per cent are of a class far removed from criminal tendencies. Of approximately 500 drug addicts, from every part of the United States, whom I have had occasion to study, question and observe, not more than 2 per cent are actually criminals. I will admit that every drug user is a potential criminal if deprived of the drug to which he is addicted, particularly opium and its derivatives. In opium addiction, the drug becomes a physiological requirement. When once begun and thoroughly established, it is absolutely necessary for the proper functioning of every organ. An addict, deprived of the drug cannot think, cannot work, can but deplore his pitiable dilemma, and utilize every means to obtain the drug necessary to give him temporary relief. Give it to him, his mind is accurate, his physiology functionates properly, his movements alert, and his conclusions compare favorably with those not addicted. Refuse it to him and he becomes a pitiable object. Every organ in his body refuses to respond properly to the call of nature. He becomes an inanimate mass of agonized flesh. If any of you will visit me at the Louisiana State Board of Health Clinic, it will be my pleasure to deprive a number of these individuals of their accustomed drug a period of time in order that you may study them and observe for yourself that there is nothing psychic—their suffering is real, intense, true and unpretended. See them with torturous pains, secretions from their eyes, nose, mouth and intestines, see them vomiting blood, see great outburst of cold, clammy perspiration, hear their appeals in tremulous, inaudible tones, growing constantly weaker and in the end a typical collapse, with subnormal temperature, apparently nothing between them and eternity but a question of constitution. It may appear that I have exaggerated this scene, and perhaps were I in your stead I might likewise be of the same opinion, but facts are facts! I can offer you actual proof and will be pleased to do so at any time it may suit the convenience of a number of you gentlemen from this society so that you may observe. Unfortunately the principal users of habit forming drugs are of our best element of people, many of them conducting great business houses, many of them professional men of standing, men whose words are their bonds, and in their own particular world, monarchs of all they survey. Insofar as the laity is concerned, a drug user is correct and proper until his secret is known. At that time, it spells for his social and business suicide due to ignorance and intolerance which the world at large has displayed towards these unfortunates. It is my hope, at least that every medical man could have the occasion to study this phase of human frailty at close range in order that he may become an apostle of the truth, as regards this subject, and assist in enlightening the public as to the true status of what drug addiction means.

You ask "what is the remedy"? How can we combat this evil? It is for you medical men to help to decide. My opinions are definite and concrete. I believe that under the proper care and proper treatment, many of those afflicted with habitual use of drugs can be cured, re-establish themselves in a perfectly normal state amongst their fellow

men. This is their desire. I do not believe that any man or woman addicted to the use of drugs (of normal mind and not degenerated) would wilfully victimize themselves and remain in bondage for time indefinite if any sincere and logical hope could be held out to them for a rational solution of the problem.

I am not in sympathy with the usual methods of procedure to cure these people; I believe a more thorough study and understanding of this condition is necessary, far removed from mercenary considerations and always under the supervision of one who is in thorough accord and thorough understanding, with the means at hand to procure lasting results. I am aware of the fact that behind closed doors, in prison walls and similar institutions, any addict can be temporarily deprived of the drug of his addiction. This does not constitute a cure, does not even approximate a cure, nor is a cure all that is to be desired or necessary. Society must be taught to understand that individuals addicted are "sick" people, and in spite of their addiction, are human beings entitled to sympathy, care, protection and consideration just the same as the other unfortunates that suffer with leprosy, tuberculosis and other ailments. We must extricate these individuals from their former environment. We must send them to institutions for sufficient period of time to re-establish their physical health. Do not allow them to come back to their homes still characterized "dope fiends", unwelcomed by those who knew them formerly, victims of the law, victims of society, victims of everybody and everything, no place to procure an honest living, no friendly hand held out to them to firm up their drooping courage. Considering, there is small wonder that so many relapses have occurred. Their souls knew no hope, there was no incentive for reformation (if reformation be the word to apply to one who originally was innocent of and had no hand in the establishing of his addiction), no encouragement of any kind being held out to them and in the natural order of things that one human must associate and communicate with another, and in despair, they have been compelled to seek associations of their former environments, and with a saddened heart allow themselves to again seek sympathy extended to them by their fellow associates in misery.

I trust that if this paper has served no other purpose, that it will at least find a welcome response in the hearts of you medical men sufficient to cause you to investigate and study this deplorable condition. These people have souls, they have hearts, many of them are loving husbands, fathers, striving with desperation born of utter despair to keep their heads above water that their loved ones may remain free from the smirch and shame that must necessarily be their portion should his secret become known.

Medical men do not follow old ideas just because we held to them years ago; as fast as we learn we discard the old beliefs. Then, in the name of humanity, if we have been wrong in considering addicts as being unworthy of help, and now find we have made a grave mistake, then face the problem and let each of us take up our share of the burden to make life easier and less of a torture to these poor souls who have been dogged from pillar to post and damned to eternal suffering. The Harrison Law did not improve the situation; it really protected the illegitimate doctor by fencing him around with conditions that made him safe. The state law has cut off the former source of supply and the Louisiana State Board of Health is now providing that supply,

sufficient to keep them normal and in working shape. Is it not up to medical men to meet the situation squarely, face to face, and work out the solution and bring, for the first time in lives of drug users, a breath of hope, a ray of sunshine to their souls. Those of us more fortunate, should be our brother's keeper if we are to make a better, brighter and more humane world. I will not attempt to give you any statistical data which you have heard and no doubt have read.

If the present addicts were never cured, this would not be of the greatest importance. Suppose, for the sake of argument, that not one single individual can be or ever would be cured. Would it not be more advisable, reasonable, logical to attempt to minimize this vicious condition and to free the community of the unscrupulous trafficker, illegitimate doctor and apothecary to prevent future generations of our American boys and girls from meeting with like fate. And I admit that some cannot be cured, and others afflicted with malignant diseases, incurable maladies with possibly a short time only to live, should not be cured. But this is a mere matter of detail that can be worked out successfully if those who are informed will but take the necessary steps to accomplish this great purpose. Means can be devised by which the narco-maniac, the incurable and the afflicted can be cared for intelligently and humanly at a designated place, under supervision and restriction.

I would suggest that a committee of medical men be appointed to meet the officials of the Louisiana State Board of Health for the purpose of study and observation of the drug addicts at the drug clinic at the Board of Health in order that they can report back to this society their observations and recommendations.

I have imposed upon my limited time, but in conclusion I wish to state that if I were selected to write the epitaph of each and every drug addict in this beautiful world of ours, I would do so in one word that would speak volumes, and place on the headstone of each poor tortured devil to whom death undoubtedly brought the relief and mercy that he could not find on earth, the one pregnant word "VICTIM".

Dr. C. V. Unsworth: With regard to the statements of Dr. Swords about the clinic down at the State Board of Health, I had two occasions to go down to the clinic to look it over and found it a pathetic sight. Of course I did not find the high class people that Dr. Swords speaks of. I did see some degenerates. There were two women down there, each with a nursing baby. They were waiting their turn to get morphine. It is just a question in my mind as to just what good that clearing house for morphine is going to do, whether the addict restricts himself by getting it from the Board of Health or from the peddler.

With reference to Dr. Dowling's statistics that 70 per cent of the addicts are being cured, that is not my experience. An addict will do anything to get the drug; he lies, he steals. In my opinion, they are born addicts. They are psychopathically bad. You will find they are mostly bad from a point of heredity. Going back into the case that Dr. Dowling pointed out, where the father, mother and son are all addicts, I have had occasion to treat this same family and they are bad by heredity. I think the whole solution to the problems that the addicts should be taken care of by the United States Government, not by the different states. The average addict can be reduced in five days, but it is just as hard to get him off of 1-16 of a grain as it would be to take him off of 16 grains. I generally take his word for

what he says he is taking. I give him one-half that amount, and then one-quarter, until he is entirely off. When you take him off 1-16 of a grain you are going to have trouble. We generally keep them in the institution for one month and invariably they will go back to the drug.

During my visit to Dr. Swords' clinic, I saw a great many of my patients whom I thought had been cured. I think the only solution is for government control. There is no specific treatment for addicts. The only treatment is the institution. From the institution, he should be placed on a farm where he should have work and hypernutritious diet.

Dr. H. Daspit: I have had some experience with addicts, but they were mostly city patients, and they were always working under hard lines. However, I think the society ought to go on record endorsing the movement of the State Board of Health, and some provision should be made for the care of these addicts. Before leaving here to-night a resolution of this nature should be made.

ADDICT DIVISION.
Louisiana State Board of Health.

STATISTICAL REPORT.

Dr. M. W. Swords Secretary,

March 21, 1919.

Louisiana State Board of Health Office.

Dear Dr. Swords:

I beg to submit herewith statistical data collected as per your instructions, together with summary of statements made by visitors to this division. It is impossible to give you a fuller report at this time, owing to the large amount of work which must be done each day and the fact that we have only received our forms from the printers within the last two days.

Number of persons examined.....168

(Note: We have on an average of 214 patients who visit the clinic each day.)

Status.	Number Persons.	Per Cent.
Married.	80	40.76
Single.	88	59.24
Sex.		
Male.	120	71.8
Female.	48	28.2
Race.		
White.	134	79.77
Colored.	34	20.23
Ages.		
From 20 to 30 years.....	69	41.1
From 30 to 40 years.....	64	38.1
From 40 to 50 years.....	25	14.8
From 50 to 60 years.....	8	4.8
From 60 to 70 years.....	2	1.2
Period of time used (in years).		
From 1 to 5 years.....	11	6.64
From 5 to 10 years.....	61	35.70
From 10 to 20 years.....	37	20.83
From 20 to 30 years.....	16	9.82
From 30 to 40 years.....	8	4.61

AMOUNTS USED PER DAY PRIOR TO ESTABLISHMENT OF
THIS DIVISION.

In Grains.	Persons Using.	
From 1 to 10.....	9	5.36
From 10 to 20.....	91	54.10
From 20 to 30.....	27	16.16
From 30 to 40.....	37	22.04
Over 40.	4	2.34

AMOUNTS USED PER DAY SINCE ESTABLISHMENT OF
THIS DIVISION.

In Grains.	Persons Using.	
From 1 to 10.....	151	89.3
From 10 to 15.....	13	8.0
From 15 to 20.....	4	2.7

The reasons given for their addiction were as follows:

Diseases and Sickness.	Number.	Per Cent.
Asthma.	5	3.00
Abscess.	2	1.19
Appendicitis (Chronic)....	1	.60
Born addict.....	1	.60
Cancer.	1	.60
Child birth.....	1	.60
Dysentery.	1	.60
Female trouble.....	5	3.00
Genito urinary.....	2	1.19
Hemorrhoids.	1	.60
Heart trouble.....	1	.60
Injuries.	25	15.00
Lung troubles (T. B. etc.)	8	4.76
Laryngitis.	1	.60
Lead poisoning.....	1	.60
Meningitis.	1	.60
Muscular rheumatism.....	1	.60
Nervousness.	2	1.19
Arthritis.	1	.60
Peritonitis.	1	.60
Poliomyelitis.	1	.60
Stomach troubles.....	2	1.19
Surgical operations.....	7	4.16
Typhoid.	2	1.19
Tumors.	1	.60
Varicose veins.....	1	.60
Venereal diseases.....	57	33.33
Alcohol.	1	.60
Total.....	134	79.80
Voluntary for pleasure....	34	20.20
Grand Total.....	168	100.00

Comparative statement of grains now used per week with that used previously per week together with former cost and present cost; also giving weekly earnings, occupation, and race.

Black figures show those spending more for drugs than earnings.

Following taken from statements given by addicts:

Race.	Grains prev. used per week.	Prev. cost per week.	Present amount used per week.	Present cost per week.	Weekly earnings.	Occupation.
White. .	210	\$24.50	84	\$5.04	\$ 35.00	Salesman
White. .	210	24.50	56	3.36	27.00	Clerk
White. .	175	14.00	56	3.36	28.00	Laborer
Colored. .	84	8.75	56	3.36	7.00	Cook
Colored. .	84	8.75	56	3.36	14.00	Supported
Colored. .	52.5	6.12	42	2.52	18.20	Laborer
White. .	210	24.50	56	3.36	42.00	Prostitute
White. .	175	15.00	70	4.20	50.00	Prostitute
White. .	175	25.00	56	3.36	38.00	Prostitute
Colored. .	70	7.50	56	3.36	6.00	Washerwoman
White. .	175	24.50	56	3.36	27.00	Laborer
White. .	175	24.50	84	5.88	100.00	Showman
White. .	105	21.00	56	3.36	25.00	Baker
White. .	56	6.55	35	2.10	16.00	Cooking
Colored. .	140	28.00	56	3.36	25.00	Showman
White. .	63	7.37	35	2.10	6.00	Waitress
Colored. .	105	12.28	56	3.36	10.00	Waitress
Colored. .	175	20.47	56	3.36	12.00	Laborer
White. .	140	16.38	56	3.36	3.50	House work
Colored. .	196	29.40	70	4.20	38.00	Laborer
White. .	140	16.38	84	5.04	15.00	Seamstress
White. .	175	20.47	56	3.36	15.00	Cook
White. .	210	24.57	70	4.20	20.00	Hotel work
Colored. .	140	16.38	56	3.36	28.80	Laborer
White. .	105	12.28	56	3.36	12.00	Waiter
White. .	126	14.74	42	2.52	15.00	Waiter
White. .	126	14.74	42	2.52	24.00	Laborer
White. .	210	24.57	56	3.36	25.00	Chauffeur
White. .	175	20.47	70	4.20	12.00	Laborer
White. .	105	12.28	56	3.36	20.00	Barber
White. .	210	24.57	70	4.20	17.25	Laborer
White. .	140	16.38	70	4.20	25.00	Waiter
Colored. .	210	31.50	56	3.36	12.00	Porter
White. .	210	24.57	56	3.36	18.00	Laborer
White. .	210	24.57	70	4.20	15.75	Laborer
White. .	105	12.28	56	3.36	25.00	Salesman
White. .	175	42.00	70	4.20	35.00	Pastry cook
White. .	105	12.25	28	1.68	38.00	Auto mechanic
White. .	210	10.50	112	6.72	25.00	Bartender
White. .	210	35.00	70	4.20	10.00	Gardener
White. .	210	38.50	56	3.36	25.00	Waiter
Colored. .	210	24.50	56	3.36	10.00	Porter
White. .	175	20.37	56	3.36	18.00	Laborer
White. .	210	35.00	70	4.00	30.00	Waiter
Colored. .	105	12.25	56	3.36	17.00	Laborer
White. .	210	52.50	56	3.36	56.00	S. Laborer
Colored. .	210	24.50	56	3.36	10.00	Porter
White. .	140	16.31	56	3.36	12.00	Clerk
White. .	175	20.37	70	4.20	30.00	Horse Trainer
White. .	245	21.00	84	5.04	18.00	Baker
White. .	56	56.00	36	2.16	28.00	S. Laborer

Race.	Grains prev. used per week.	Prev. cost per week.	Present amount used per week.	Present cost per week.	Weekly earnings.	Occupation.
Colored.	140	16.31	56	3.36	12.00	Laborer
White.	210	28.00	84	5.04	31.50	S. Laborer
White.	140	34.95	70	4.20	12.00	Bartender
White.	140	16.31	56	3.36	25.00	Laborer
White.	175	28.00	84	5.04	18.00	Midwife
White.	140	18.64	84	5.04	14.00	Renting rooms
Colored.	210	24.50	42	2.52	8.00	Cook
White.	175	8.00	35	2.10	22.80	Laborer
White.	105	12.25	28	1.68	35.00	Taxi driver
White.	42	7.00	21	1.26	....	Married
White.	175	23.28	42	2.52	45.00	Musician
White.	175	20.37	56	3.36	23.31	Clerk
White.	175	20.37	42	2.52	12.00	Laborer
White.	210	24.50	70	4.20	30.00	Husband
White.	350	20.00	70	4.20	28.00	Foreman
White.	420	49.00	140	8.40	30.00	Gambler
White.	210	20.00	56	3.36	35.00	Butcher
White.	140	40.00	28	1.68	60.00	Saloon Prop.
White.	210	24.50	84	5.04	35.00	Newspaper
White.	140	35.00	56	3.36	39.00	Solicitor
White.	210	35.00	70	4.20	35.00	Income
White.	210	24.50	70	4.20	10.00	Prostitute
White.	210	21.00	70	4.20	25.00	Married
White.	245	28.00	84	5.04	24.00	Laborer
White.	245	28.00	70	4.20	24.00	Laborer
White.	245	20.00	56	3.36	25.00	Gambler
White.	175	18.00	70	4.20	14.00	Waiter
White.	140	34.95	56	3.36	38.00	Laborer
Colored.	84	15.00	42	2.52	12.00	Porter
Colored.	140	15.00	56	3.36	17.00	Actress (?)
Colored.	280	32.62	70	4.20	30.00	Laundryman
White.	105	12.25	56	3.36	25.00	Mechanic
White.	210	24.50	56	3.36	40.88	Clerk
White.	105	12.25	70	4.20	150.00	Manufacturer
White.	105	12.25	70	4.20	....	Supported
White.	70	8.10	70	4.20	25.00	Carpenter
Colored.	245	28.00	56	3.36	6.00	Beggar
White.	70	8.10	14	.84	35.00	Secret Service
White.	140	16.31	42	2.52	14.00	Saleslady
White.	105	12.25	42	2.52	....	Unemployed
White.	105	12.25	42	2.52	10.00	Manicurist
White.	105	12.25	56	3.36	24.50	Electrician
White.	105	12.25	56	3.36	33.60	Carpenter
White.	105	14.00	56	3.36	18.00	City driver
White.	105	12.25	70	4.20	15.00	Tailor
White.	35	8.75	28	1.68	26.11	Trained nurse
White.	245	28.00	42	2.52	14.00	Hospital orderly
White.	105	12.25	49	2.94	24.50	Cabinet maker
White.	105	12.25	70	4.20	35.00	Saloon Prop.
	16,014.5	\$2082.22	5909	\$355.18	\$2457.10	

White —81
Colored—19

Recapitulation.

Average grains per person used per week.....	160.14
Average cost per person per week previously.....	\$20.82
Average grains per person used at present per week....	59.09
Average cost per person per week at present.....	\$3.55
Average weekly earnings per person.....	\$24.57
Per cent. admittedly spending more for drugs than they earned prior to the establishment of this division..	40%

**SUMMARY OF STATEMENTS MADE BY SEVERAL VISITORS
TO THIS DIVISION.**

Mr. Evans (President, General Manager D. H. Holmes Co.): A most wonderful, humane, charitable work, one well calculated to educate the public and destroy the old belief that all narcotic addicts were low criminals, degenerates and unworthy of any assistance. I am intensely interested in this long-needed movement and shall send all of my floor-walkers from our store to observe the great work you are doing so that they may become propagandists in helping along the educational end of this work.

NOTE: Mr. Evans afterwards not only sent the floor-walkers from D. H. Holmes Co. to view and study this work, but himself came back again, bringing with him one of the best known newspaper men of New York City. We failed to catch the name of this latter gentleman, but he expressed himself as intensely interested in the work, thought it remarkable, and wonderfully efficient for so short a period of running.

Dr. Malard: This is something of which neither I, nor the world at large ever dreamed since naturally, in view of the mistaken idea that all addicts were in one class, and that class supposed to be criminal and degenerate, we could not have gained the correct view point. Since viewing your new venture, in full operation, I must say it is the most worthy undertaking I have ever viewed; since you are removing from the hands of unscrupulous doctors and traffickers a class of people who, by reason of their addiction, have been the most completely victimized class known. I hope the movement will continue and develop until the upper classes will have the utmost confidence in this work and give it their unhesitating support.

Two United States Narcotic Inspectors (one of whom has been in the service of the Government for 30 years): We were walking around the streets of New Orleans for the last two or three days, observing things in general, reading the daily papers, etc., and were remarking that for a city of approximately 400,000 people, and only a police force of around 300, New Orleans was remarkably free from crime waves, since other cities, with nearly the same population and even much larger police forces, had a much greater percentage of crime. However, since viewing this wonderful and humane work of yours, we have the answer to our question, due, undoubtedly to the fact that you have all addicts, high class as well as criminal, under central control, supplying them with restricted quantities of the drug of their addiction, without which they would suffer all the tortures of the damned, and supplying it at such a price that allows them to become, for the first time in years, free from traffickers and illegitimate doctors, to save money, to better support their families and dependents is the most rational manner

of handling this grave problem, and in addition you are restoring great numbers to better citizenship and raising them back to the plane of their own self-respect. Much luck to you in this great work and I certainly hope other states will follow your example. You are securing results which the Harrison Law did not accomplish.

Captain of Police, 3rd Precinct: Fine, great. Why, since you have started this work I have not had a single addict come before me charged with crime: you have eliminated at least 75 per cent larceny since the furnishing of this drug to addicts, at the cost price. You have given them the opportunity to escape from the clutches of traffickers and dope doctors who were charging them outrageous prices, and naturally they had to steal to get the money the traffickers demanded. I feel sure you have practically stamped out all peddling since there is mighty little, if any, going on now.

A representative of the Chicago Board of Health: A truly humane and wonderful wonderful piece of work. I am very gratified to have had the opportunity of viewing this work, and when I return home I shall do all in my power to influence our board to commence the same thing. You have the right idea, you evidently have the system and most undoubtedly the right men handling this work. Much success to you.

Condensed remarks of various visitors: Something new, but no one knows how this has been needed. Why, just because there are a few criminals that are drug addicts, this does not make all addicts criminals. The majority of these unfortunates whom I have been viewing this morning were not pulled down by morphine, but by the lack of it and the outrageous prices they were compelled to pay for it.

I cannot say since viewing this wonderful work and listening to the most interesting explanations of you gentlemen, that I blame any man, especially the one of high class, from hiding his infirmity from a hitherto intolerant world, because he knows it would be business and social suicide to expose his disease. I wish you the best luck in the world.

I never knew such a thing existed (and this gentleman broke down and shed tears). If there is anything that I can do to help along this wonderful work, or to assist your work in any manner, call on me and I will be proud to do my share.

Respectfully submitted,

ALEX. W. SWORDS,

Chief Clerk.

Checked by:

H. R. RAPHAEL,
Bookkeeper.
JEROME MEUME,
Cashier.

VENEREAL DISEASE: A NATIONAL PROBLEM.*

DR. WM. EDLER, Scientific Assistant, U. S. P. H. S.

One almost quakes when approaching the subject of venereal disease control with physicians, because it means denuding the whole subject from any emotional appeal, divorcing it from its moral phases and presenting it wholly in the light of hard, cold

* Read before Meeting of Orleans Parish Medical Society, March 31, 1919. (Received for publication Sept. 10, 1919—Eds.)

facts that pertain to the health of a nation. Yet health has so many factors intimately associated, so many problems of economic and sociologic import involved, that one cannot talk of venereal disease and its control without always keeping in view factors that basically and fundamentally produce the conditions that make venereal disease a national problem of public health as well as a national problem of economic conservation.

You as physicians, know well the ravages of venereal disease; no one sees man in his intimate nakedness more closely than you; and yet, strange to say, the medical profession until very recently, has along with the general public, quietly drifted in a complacent way, thoroughly in accord with the general sentiment and, "passing the buck" hoped that in some way the situation would solve itself. Personally, I want to be one of the first to say "mea culpa". No one appreciates the gravity of syphilis more than the neurologist. The bulk of his organic nervous disease practice comes under the luetic category and in an experience of some years in a prominent neurologist's office coupled with a modest neurologic practice and teaching experience of my own, I have personally concluded that venereal disease is actually vitally burrowing at our social structure.

In these days of international strife and competition no nation can long endure that is being vitiated by any infectious disease, and where that disease is attended by secrecy and insidiousness it proportionally becomes more dangerous. Epidemics of cholera, plague, typhoid, small pox, etc., while deplorable in their ravages, still in their very spectacular and acute manifestations lie their own limitations so far as prophylactic and general public health control is concerned.

With venereal disease we have just the opposite situation—an insidious, insignificant local manifestation of disease with the great majority of its victims traditionally taught that these manifestations are inconsequential. In addition to this is the protective psychologic reflex of secrecy, no person being willing to admit his exposure, until amongst medical men the proverbial extra-sexual infection of medical students, doctors and ministers has become a pun throughout the country.

To further multiply our difficulties is the peculiar psychology of most physicians in separating venereal disease from a diagnostic, therapeutic and prognostic standpoint from the other infectious

diseases. I may be mistaken, yet I have felt that the great majority of physicians has imbibed from the laity,—or, is perhaps the reverse true,—an antipathy to the venereally diseased person. Surely, the first revision to be made in this campaign is for all of us to feel that a person so afflicted is just as worthy of our care, our sympathy and our interest as is any other ill or ache to which human flesh is heir. If we have not been trained to properly take care of these cases, we can kindly and gently refer them to men who have, instead of brusquely making the patient feel that he is an unwelcome office visitor. So let us first revise our mental perspective of the whole situation and arrange our “complexes” to meet an innovation in the national control of venereal disease.

Our next problem on hand is to get some agreement, some formulated and organized notion as to the control of the source of infection. I think that we, as physicians, ought to first straighten out in our own minds the problem of sexual physiology and promulgate to the laity a definite policy to which we stand committed. Of course, we want the subject bared, stripped of prudery and shorn of hypocrisy. We will all agree that the sexual function is a physiological one, but I, for one, cannot help but feel that every one is using this self evident fact as a leverage to stimulate and pamper promiscuous sexual activity, until the whole relation has become paradoxically **physiopathologic**. **This is especially** true as pertains to the adolescent individual. There may be disagreement if I say that sexual relations between adolescent persons produce baneful effects in their physical and psychical make-up, but I believe I can safely say without controversion that sexual abstinence is compatible with good physical and mental health. In other words, I do not think we as physicians should for a minute commit ourselves to any policy of teaching the laity that because a man's seminal vesicles are distended, it is necessary to maintain himself in physical condition to have a sexual orgasm. Nature has her own way of taking care of internal secretions and the mere fact that man has by many devices and vices devised ways and means to stimulate and create abnormal sexual appetite is no reason why we, as physicians, should lend our prestige to such fallacious and sophisticated reasoning.

Again, there appears to be a great deal of doubt in the average physician's mind as to whether the prostitution problem should be handled by supervision, by restriction, or by suppression. The

war has settled that argument once and for all. Venereal disease contracted in the army was by far less than in any previous war. We didn't restrict prostitutes, we annihilated them. And, strange to say, the things city officials had been trying (?) to do for a century were accomplished practically over night by the army.

There is no more excuse for a red light district in any city, than there is for a typhoid infected water supply. Do not let the publicity agents of the tenderloin convince you otherwise; remember always that prostitution and politics have been synonymous and that the commercialized sale of women represents in every large city a matter of millions of dollars. The argument that the closing of a district "scatters" prostitution amongst the general residential districts is not true; no prostitute could ply her trade for a week to any extent next door to you or me and get by with it. This specious ratiocination always demands the closest inspection as to its source. Have you ever heard of the prostitutes and the pimps, the panderers and the procurers recommending the closing of a district? This is all mere press agent material. Perhaps it will amuse you when I tell you there is at present organized on the Western Coast a definite movement to prohibit health officers from examining prostitutes for venereal disease on the basis of offending the finer sensibilities of the prostitute. One would not have to look far for the source of such propaganda. There is no more need, gentlemen, for houses of prostitution in this city than there is for a certain theatre that has for its entertainment an exhibition that is rottenly putrid.

Prostitution can be suppressed in all its forms; it has been done in many communities. All that is necessary is the desire to do so. The war has proven that. Once having prostitution under control you have delivered your greatest blow at venereal disease.

Having eliminated your houses of prostitution, you must be prepared to take care of your prostitute. Chasing her from pillar to post will not eliminate venereal disease. She must next be isolated and made non-infectious. This implies a detention home with facilities for treatment. Having been made non-infectious—you notice I do not say cured—your next step is to take this woman and commit her to a reformatory for an indefinite period, firstly because between 50 and 60 per cent of these girls are mentally deficient and should be made self sustaining in permanent institutional life; the balance can be turned back into society on

parole. This is a program that does not smack of crusade hysteria and should be routinely and systematically carried out. If we, as physicians, can once grasp the idea that the whole problem is a scientific one and that it cannot be safely intrusted to politicians nor adventurous reformers, we will be a long way on the road to a scientific solution.

Again, gentlemen, venereal disease offers a unique problem of prophylaxis pertaining to the infected individual solely as distinguished from a prophylaxis applicable to society in general. Here we have a factor where EARLY observation and EARLY treatment offers an opportunity to arrest or actually prevent the invasion of the various anatomic units of the human infected. Especially is this true of syphilis; and more especially is this true in the prevention of syphilis of the nervous system. Recent observations have shown that in as many as 20 per cent of cases of early syphilis, i. e. in the secondary stages, pathologic findings are demonstrable in the spinal fluid in the way of Wassermann reaction and pleocytosis. Here is an opportunity for prophylaxis that offers an excellent chance to cut down the percentage in the years to come of cerebrospinal lues with its attendant paresis and tabes. Just as truly does this apply to all the specialities: the ophthalmologist, the dermatologist, the internist, etc. So that here, too, gentlemen a phase of the venereal problem is merely mentioned for your serious consideration.

To accomplish these very ends a certain amount of legal machinery is necessary. Fortunately, there is nothing lacking that is desirable in your state in the way of laws. But what we need more than laws, gentlemen, is your co-operation, good will and helpful energy. Your state laws require you to report every case of venereal disease by number or name. In the event of the source of infection being a prostitute, if you can, you should give her name and address on your report.

Shortly, the physicians in this city will receive from the local board of health a new report blank to be used. To date the reporting of venereal disease in this state has been badly neglected. You can judge how badly when I tell you that in the past five months less than 900 cases have been reported from city and state, when estimating roughly there ought to be between 25,000 and 30,000 cases listed. To stimulate your interest in this matter I want to tell you that all of this data is being carefully correlated

and in the near future reports will be published by the U. S. Public Health Service showing the relative standing of the various cities as pertains to numbers of cases of venereal disease, laxity of physicians in reporting, etc.

Your attention is also called to the law prohibiting druggists from selling nostrums of any kind to any one for the cure of venereal diseases. Today we are mailing out to every druggist in the state calling attention to this law. We shall then begin a vigorous prosecution of offenders. This law is a valuable one—it keeps the patient in touch with a physician, protecting both you and your patient, and above all, it militates directly against spreading the diseases, because self-medication, in the abatement of symptoms, leads to an erroneous notion of cure. Violations of this law coming under your observation should at once be reported.

Finally, gentlemen, allow me to congratulate you upon the exceeding disinterestedness with which you can go before the public in this campaign. Surely, no motive could be more altruistic, for every case of venereal disease you prevent will be a monetary loss to you. No one can impugn your activities. And yet, after all, medicine in its highest sense and the physician as a true scientist and artisan, both have always realized that their life's work was to teach and apply their art to KEEPING well rather than GETTING well; to PREVENT always, rather than CURE disease.

DISCUSSION.

Capt. Harold M. Wilson: I came down here about a month ago as fixed post representative of the Commission on Training Camp Activities. My work was to be confined to the City of New Orleans, to observe and report on conditions here; on the illicit sale of liquor to soldiers, and sailors, and also on vice conditions. The War Department has now turned this work over to the International Bureau of Social Hygiene and tomorrow this bureau takes over this work. As far as I can find out this bureau does not intend to spend any time just now on the liquor question, leaving that to the local authorities.

My work now remains as assistant director over this district, which includes States of Louisiana, Mississippi, Alabama, part of Tennessee, Arkansas and part of Florida. There will be a fixed post representative in this city who will work under my direction and I will still represent the War Department, but in the main representatives are to be men from the Bureau of Social Hygiene.

This sudden change has upset me a little bit, as to just exactly what the program was to be, so I wish you would regard me tonight as it were, as the tail to Dr. Edler's kite: I don't want to prematurely introduce Dr. Edler, but as he represents the U. S. Public Health, his work is along lines of the proper care, prevention, etc. of venereal

diseases, and my work concerns vice, are therefore dealing pretty much with the same subjects.

In the field in which I opened up only a month ago, I found that we were not only fighting the Hun, but that the United States had declared war against certain social diseases, liquor and vice. Not purely, and solely and wholly from the standpoint of morals, but from the standpoint of keeping soldiers clean and able to fight. I don't know how many men I talked to in the course of my regular duties on the question of promiscuous sexual intercourse. I have taken up with them the subject from a very physical standpoint. Being a man in sufficient years to know what he is talking about. It is not necessary from a physical standpoint for men to go out and seek women. I managed to impress this upon the soldiers but with some difficulty. We taught them the idea also that the soldier who ran the risk of not being able to do his full duty was "yellow." That argument had quite a considerable appeal with most of them. The men who come back are coming back with a better idea of things than when they went out—on the subject of sexual intercourse and also on the subject of drink.

Now what I want to get at is this. I have in my mind an idea which is not yet clearly defined and which I want to put before the people of this town, doctors, everyone, that is, that the war with Germany is over, but the other war that the United States is taking up is still on and I want to appeal to every one I can in this City, and in the district over which I have some supervisory authority, to take up the fight and go on with it individually in every possible way.

In speaking of the drug addicts, one of the doctors here tonight expressed the opinion that the proper thing was to place the responsibility upon someone or somebody. Perhaps in relation to that particular thing, it may be the best way, but the thing I do want to urge particularly is not to take that view on the subject of vice and its accompanying and most appalling evil of venereal disease. The control and cure of venereal disease is the business of every person in these United States. It is his personal, particular business.

As to doctors, I believe the care and treatment of patients coming to you is not your whole duty. I do not believe it is even a large part of your duty. I believe it is merely an incident. Every doctor, I am now talking to doctors, should make it his business to see that there is a campaign of education, that the people should know of these things, fathers, mothers, and follow it up. I believe it the business of every doctor to know the condition of this town. In this city I don't know how much you know about this old district today. I read in the papers that it is closed. I have only been here a month. I haven't gone over all the records yet in our office but I can take you personally to at least thirty-five or forty places that are running openly. That anybody can know about by going around and it won't cost you any money. It is in your closed district and it is all around and where you find it you will find disease.

I read in the paper sometime ago that some of the people of this town had organized a movement to clean up the town. That it was to be divided into sections, 1, 2, 3, 5, 10 were assigned to a section. They were going through to see the householders, store-keepers, etc. and make it their personal business to take care of different sections. Why not do the same with vice conditions?

Now I hope before my particular work gets through here, and by the time the Treaty of Peace is signed, that we will have gotten sufficient enthusiasm among the people in this city, so that some such organization as that for the purpose of cleaning up vice may be affected. So that every section of the city is covered not for a week or a month, this proposition here cannot be handled in that way. The people must go into this because they believe it is necessary and are going into it with enthusiasm and determination and a desire to seek and keep at it. Now, if we can get in the various districts, we will have a fairly good beginning.

I am going to talk to you further, if you will meet me again. I am going to talk to the leading citizens of this town. I want to talk to the ministers. I want to see if we cannot get a large, intelligent, earnest movement on foot on the part of the people who can and will endeavor to educate the general public. I believe that enlightenment and education is the real thing. No law that has not the force of public behind it is going to be of particular appeal and it is a splendid thing to have a law, and it is a much more splendid thing to follow up those laws with all the force you have. The law of this city requires that the doctors shall report every case of venereal disease. It is necessary that we have statistics. If we are going to control venereal disease it is one of the vital things and I ask all of you here to urge it upon any whom you may know who in any way neglects that particular law. We must try to see if we cannot stop the spread of vice, to do what we can to let the people know what conditions are and obtain some method of preventing the dangers of promiscuous sexual intercourse.

TENDENCIES OF THE TIMES, MEDICAL AND OTHERWISE.*

By LOUIS G. STIRLING, M. D., Baton Rouge, La.

For nearly three score years I have lived a native born American citizen, and during that time have seen our country grow great, rich and influential in worldly affairs, and develop a citizenship second to none, and whenever the necessity has arisen, an army has been furnished to relieve the oppressed, and all under the governmental theory that the least governed people, is the best governed people.

Having seen these great things come to pass under the old order, I can but view with alarm the marked changes that are recently overwhelming all our institutions. Every department of our Government, and every social and civic organization is taking on an autocratic, socialistic, sentimental and extravagant paternalism. Many of our clergy seem to have lost faith in sermons and prayers

* Read at the Regular Meeting of the East Baton Rouge Medical Society, July 9, 1919.

and are trying to enforce all the teachings of the church by legislation, and with the policeman's club.

There is a compulsory educational system being developed that is removing the youth further and further from the parents influence and authority, and seems to regard them wholly, as assets of the state, and as sources of future public revenues. Our taxing authorities beat the babbling brook and castoria combined, and numerous associations and some religious societies each has for its main purpose to be the brother's keeper, and most of them fashioned that some other brother must put up the price of his keep. But the reforms that concern the medical profession most, are the recent laws regulating the prescribing of narcotic and habit forming drugs and for the control of prostitution and venereal diseases. These laws have already reduced the ordinary physician till he is little more than a stool pigeon, a clerk for the health boards, and collaborating epidemiologists have invested him with more numbers than a second term convict, and require him to violate confidences that have existed between patient and physician since time began.

Only one more step in this same direction, and they will require priests to report what is told them in the confessional, for the public good. I cannot believe that any permanent good can come from all this suppression of Americanism, nor do I believe that the laws for the prevention of venereal diseases will accomplish any more than to increase the number of hasty and ill advised marriages, multiply seductions, and probably increase venereal diseases. By driving the prostitutes from well equipped houses where there are facilities for cleanliness, to the dark alleys and fence corners, for their calling had its inception when the first apple tree was quite young, and has defied the laws of God and man, and the edicts of society for six thousand years and shows every evidence of continuing as long as the world rolls around.

The National Anti-Narcotic law, so-called Harrison Act, has already proven a failure, the number of drug addicts have increased under its provisions, so it has been fortified by increasing the registration fees of all physicians, and having enacted by the State, a duplicate law, which requires that we buy more blanks from the health authorities, and it remains to be seen what good will be accomplished.

A combination of two methods is proposed for the eradication of venereal diseases, viz: 1st, Education, and 2nd, policing the

sick. The idea of controlling unlawful sexual relations by education and making such things matters of common knowledge with the youth, I believe is all wrong, and of no beneficial effect. Every practitioner has had patients who come back year after year with different infections. Certainly no amount of education can give the knowledge that comes with personal infection and no pictures shown can create the dread as one attack of chordee

The poet probably had this very subject in mind when he wrote

“Vice is a monster of so frightful mien
As, to be hated, needs but to be seen,
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.”

A few years ago we were being told that education would stop wars, with what truth, we have more recently seen, in fact many of the most brilliant triumphs of education in latter years, have been in devising and improving implements for destruction. The ignorant, heathen savage still sticks his enemy with a spear, or brains him with a club, while the educated, civilized christian gentleman drops a ton of explosives from the sky or turns loose a poison gas barrage, or fires a self propelling torpedo from beneath the sea.

Since sexuality is as instinctive in man as is fighting we would expect education to affect one as much as the other, and it seems to require at least sixty years of schooling to change the natural inclinations of each individual. The military doctors and a few others seem to think, as they have been able to lessen venereal diseases with the men under military discipline and with absolute control of the localities surrounding camps, and with the strong box of Uncle Sam to pay the expense, that the same can be accomplished in civil life, but if this ever proves to be true, it will be at the expense of having an official espionage that is repugnant to every tenet of our national faith, and will prove more harmful than the diseases they propose to eradicate. All the statistics on the effects of venereal diseases that I have ever seen, I have considered gross exaggerations. To say that 50% of the abdominal operations on women are made necessary by gonorrhoea is wide of the truth. I believe that 1% would be very much nearer. In 26 years experience in obstetric practice and about 700 cases attended I have seen, in my life, 2 cases of ophthalmia neonatorum

and neither went blind. I still believe that the greatest protection for women is innocence and modesty, and the best way to restrain men is to hold them to a strict accountability and let them bear the effects of their own evil deeds.

The idea of governmental wet nursing is socialistic rot of the most dangerous type, is destructive of the very fundamentals of liberty, and in my opinion has no just place in a free country.

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

THE SURGICAL TREATMENT OF TYPHOID CARRIERS.*

By H. J. NICHOLS, Lieut. Colonel, Medical Corps; J. S. SIMMONS, Major, Medical Corps;
C. O. STIMMEL, Captain, Sanitary Corps, U. S. Army.

In this paper the writers record the results of surgical treatment of six chronic typhoid carriers. One "urinary" carrier was cured by nephrectomy. Three "intestinal" carriers were cured by cholecystectomy. Two "intestinal" carriers were not cured by cholecystectomy. The diagnoses and conclusions in the "intestinal" carriers have been based entirely on the outcome of cultures of the duodenal contents, rather than on the outcome of cultures of the lower intestinal contents. Negative duodenal cultures are also recorded in a seventh carrier who had a cholecystectomy in 1913.¹ These results, while not perfect, are believed to be better than can be shown for any other kind of treatment available at present, and are certainly better than the results of no treatment at all.

The literature of the treatment of typhoid carriers contains the record of a number of apparent cures following cholecystectomy² and the use of X-ray,³ vaccines,⁴ lactic acid bacilli,³ and various drugs.³ These conclusions, however, are based almost altogether on the results of cultures of the feces. In view of our present knowledge of the pathology of typhoid carriers and of the differences between cultures of the bile and those of the feces, these ap-

*From the Laboratory Service, Walter Reed General Hospital, U. S. Army, Washington, D. C.

Publication authorized by Surgeon General's Office, U. S. Army.

parent cures are open to some question. On the other hand, a number of failures have been reported even with only feces cultures as a standard of cure. These cases are, of course, of definite negative value. Failures following cholecystectomy^{2, 5} will be referred to later. In general, it may be said that the future literature will be much more valuable than the past literature if workers will confine their reports to cases which have been examined by aid of the ureteral catheter and duodenal tube.

Shortly after the declaration of war the Surgeon General's office prepared directions for sanitation and for the control of communicable diseases, which were issued by the War Department as Special Regulations No. 28.² Paragraph 28, B and C, is as follows:

(b) "No man should be employed as cook or handler of food or water who is a carrier of *B. typhosus*, *B. paratyphosus*, A or B, or cysts of *Entamoeba histolytica*.

(c) "Stools of all cooks and food handlers (including handlers of water and drivers of water and ice wagons) will be examined for typhoid, paratyphoid A. and B, and dysentery bacilli, and for cysts of *Entamoeba histolytica*. In case of enlisted men, notation of positive findings should be made on the service record."

As a result of these regulations a large number of men were examined and a small number of typhoid carriers were found. Exact percentages of the carrier rate cannot be given, as not all carriers were reported and all the examinations were not satisfactory, but the number of men examined in the first six months was about 30,000. Routine examinations were also made of convalescent typhoid cases, and two carriers in this series were found in this way who were carrying typhoid bacilli five and six months after recovery from their fever. No paratyphoid carriers have come under observation to date. The disposition of these men was, naturally, more of a problem than the diagnosis. They were automatically relieved from duty as food handlers, and some were at first discharged from the service locally. On account of the unusual opportunity afforded to study the carrier problem, it was decided by Col. F. F. Russell, in charge of the Division of Infectious Diseases of the Surgeon General's office, to collect, as far as possible, all carriers at the Walter Reed Hospital, Washington, D. C., for observation and treatment. Surgical treatment was considered the most promising, in view of the pathology of the carrier state as seen experimentally in rabbits and on account of an earlier successful cholecystectomy, as well as of the results of various kinds of treatment recorded in

the literature on this subject. Some of these men consented willingly to operation when the condition was explained. Others at first refused, but when it was made clear to them that during the war they were subject to courtmartial if they refused an operation that might fit them for duty they also agreed to operation.

CASE RECORDS.

Case 1 (Record kindly furnished by Major A. Kemble, Washington, D. C., in charge of case). C. W. R., cook, 14th Balloon Co., age 21, white. Service four months. Station, Omaha, Neb.

Personal and Family History: Father died of cancer. Family history otherwise negative. Patient had the usual diseases of childhood, and typhoid fever in 1912-1913, lasting from October until January. Since May, 1916, has had eight typhoid inoculations, the last three being in January, 1918. Says he has never had any symptoms referable to the genito-urinary tract. Venereal history negative.

Present Condition: In course of routine stool and urine examination of food handlers was found to be a "urinary typhoid" carrier by Major Davis at Central Department Laboratory, Col. C. F. Craig in charge, March 20, 1918. On April 13 was admitted to Walter Reed General Hospital for observation and treatment.

Condition on Admission: A well-proportioned man, weighing 175 pounds and in generally good physical condition. Temperature normal. No unusual symptoms or physical signs present. A specimen of bile obtained through a duodenal tube was negative for typhoid bacilli. The left kidney was palpable, but only slightly enlarged. The urine was turbid in appearance, acid; specific gravity 1014, contained a heavy trace of albumin and numerous pus cells. Cultures showed a pure, rich culture of typhoid bacilli. The patient was transferred to the genito-urinary service. May 3, cystoscopy revealed a much congested bladder. Both ureteral orifices were normal and bladder was otherwise negative. The prostatic orifice was normal and no residual urine was present. The ureters were easily catheterized. The flow from the left was very free and continuous, and two large test-tubes of cloudy fluid were obtained. Normal flow and normal fluid obtained from right. On these specimens the laboratory reported the following:

From Left Kidney: Cloudy, with leucocytes, epithelial cells and threads of bacilli. Urea concentration—.005 in 1 c. c. The specimen contained a rich, pure culture of *B. typhosus*. From Right Kidney: Clear, Calcium oxalate crystals. Urea concentration—.031 in 1 c. c. Culture: A few colonies of *B. typhosus* (probably from bladder). A thorium pyelogram revealed a large hydronephrosis of the left kidney. May 15 the function (phenolsulphonephthalein) of each kidney was: Left, less than 1 per cent; right, 22½ per cent. May 28: Operation, nephrectomy, left, by Capt. D. Borden and Capt. Kemble. The pathological report on the kidney and on the gall-bladder in this series has kindly been made by Capt. M. W. Lyon, Jr.

"C. W. 15 s. W. R. G. H. Kidney, 130x70 mm.; weight 212 grams; It shows marked grade of hydronephrosis, the pelvis and calices are enormously dilated, the kidney being reduced to a shell, varying from

two to five mm. in thickness. Microscopic examination of one of the thin parts of the kidney shell shows an absence of kidney structure, the outer portion being a wall of new fibrous tissue and the inner a mass of infiltrating small, round mononuclear cells."

The contents of the pelvis was a thin, turbid fluid, containing leucocytes and a pure culture of typhoid bacilli. The wound was drained and the patient made an uninterrupted recovery. Cultures of the urine after operation for *Bacillus typhosus* were as follows. May 20, +; June 1, +; June 3, —; June 10, —; June 30, —. Since June 30 the urine has been constantly negative. A small fistula was present for five weeks after operation. A culture from this was negative for typhoid bacilli. July 6, cystoscopy showed a bladder mucous membrane, somewhat grayish in appearance, and a mild degree of trabeculation; otherwise normal. August 29, bladder normal.

The patient went to limited-service duty in good condition. This is a remarkable case of a typhoid carrier of six years' standing whose left kidney had become practically functionless, but who had never had any symptoms. He was a cook, and his urine was as rich in typhoid bacilli as a broth culture. Fortunately, such cases are comparatively rare, but a somewhat similar case was recently reported by Reudiger.⁷

Case 2. A. V. McD., private, Unassn. Tr. Det., Camp Lee, Va., age 27; home, Lynchburg, Va.

Typhoid fever, June, 1918. Typhoid vaccinations: One dose June 3, 1918; three doses 1917, before entering army (patient's statement). Diagnosis of "typhoid carrier" was made by the laboratory at Walter Reed General Hospital from cultures of duodenal contents August 27, 1918. Urine negative.

On November 19, 1918, the gall-bladder was removed by Major J. A. Hill. "McD., A. V. 98 s W. R. G. H. Gall-bladder: Rather small and contracted, measures about 60x20 mm. The vessels are rather conspicuously dilated. The mucosa is dull reddish brown in color, and under the surface the vessels are rather prominent. No stones are present." Contents of bladder showed a pure culture of typhoid bacilli.

Recovery was prompt and patient is now in good physical condition. Discharged as cured after two successive negative cultures of duodenal contents on March 4, 1919.

TABLE 1. RESULTS OF EXAMINATION FOR TYPHOID BACILLI, CASE 2.

	August		September			Oct.	Nov.	Dec.	January					Feb.				
	25,	27,	29	12,	19,	30	14,	19,	4	20,	22,	23,	26,	27,	30,	31.	10,	21
Urine....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feces....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bile....	+	+	+	+	+	+	(+)	+	—	—	—	—	—	—	—	—	—	—

(—) Refers to result of bile from gall-bladder at operation.

Case 3. W. O. L., private, 11th Cavalry, Fort Myer, Va., age 22. Typhoid fever, July, 1918. Typhoid vaccination, June, 1917. Patient was diagnosed as an intestinal carrier by Capt. Spruit at the Embarkation Laboratory, Newport News, during convalescence. He was sent to duty by mistake, but was traced and sent to Walter Reed General Hos-

pital, January 31, 1919. Diagnosis of carrier was confirmed by duodenal culture.

Cholecystectomy was performed on February 26, 1919, by Major E. M. Jones. L., W. O. 164 s W. R. G. H. Gall-bladder, 70x30 mm. Its walls appear slightly thickened, but in general the organ appears essentially normal. The mucosa shows a few hyperemic spots and varies in color from a dull pinkish gray to much larger areas, stained greenish brown by bile. A subspherical stone, almost black in color, is present, about eight mm. in diameter. It is roughened, resembling a mulberry."

The contents of the bladder showed a pure culture of typhoid bacilli. Recovery was prompt and the patient was sent to duty in good physical condition after three negative cultures of duodenal contents.

TABLE 2. CASE 3.

	February.					March		April.						
	3,	6,	9,	15,	26	22,	26	2,	8,	14,	17,	21,	22,	23
Urine.....														
Feces.....	—	—				—	—	—				—	—	—
Bile.....	+			+	(+)		+		+			—	—	—

Case 4. M. L. W., Army Nurse Corps, Camp Green, N. C., age 45. Home, Baltimore, Md. Typhoid fever, August, 1911. Triple typhoid vaccinations, February, 1918. Diagnosis of typhoid carrier made from cultures of feces at Camp Green, N. C., August 29, 1918. Admitted to Walter Reed General Hospital, October 18, 1918. Diagnosis was confirmed by cultures of duodenal contents. On November 12, 1918, the gall-bladder was removed by Major J. A. Hill.

"W., M. 95 s W. R. G. H. Gall-bladder, 60x30 mm. The walls are of normal thickness; the large blood vessels in it are conspicuously dilated. The mucosa is hyperemic and light in color, but otherwise appears normal. It contains a large ellipsoidal, blackish brown stone, about 12x7x7. In the wall of the bladder is an ill-defined impression, apparently caused by pressure of the stone."

The contents were golden brown and were positive for typhoid bacilli. Recovery was prompt and patient is now in good physical condition and is on duty again without restrictions.

TABLE 3. CASE 4.

	October.			November.		December.	January.		March
	20,	26,	30	12,	26	3	23,	27	31
Urine.....	—	—							
Feces.....	+	+			—				
Bile.....			+	(+)		—			—

Case 5. J. L., cook, 106th Field Artillery, Camp Wadsworth, S. C.; age 39. Home, Niagara Falls, N. Y. Typhoid fever, 1911. Typhoid vaccinations, nine in last three years. Diagnosis of typhoid carrier was made at the Army Medical School from cultures of feces made in routine examination of food handlers on December 25, 1917. Admitted to Walter Reed General Hospital, January 9, 1918. Diagnosis was confirmed by examination of duodenal contents on January 15, 1918. Medical treatment with sodium bicarbonate and other drugs was unsuccessful. On July 29 the patient's gall-bladder was removed by Major F. J. Cotton.

“L., J. 42 s W. R. G. H. Gall-bladder: Gall-bladder is much torn; the open organ measures about 50x35 mm. It shows marked engorgement of vessels, and the mucosa is pinkish to dark reddish in color. The organ appears small and the fundus contains five well-marked stones of very irregular shape and ranging in size from about ten to five or six mm. in the largest diameter. About ten or twelve much smaller stones are present, also of irregular shape. The stones appear to be fragments of a large stone and vary in color from a dull grayish to a pinkish and dark brownish. The stones appear to be confined to the fundic portion, and have left well-marked erosions on the mucosa. Around the neck of the bladder the mucosa appears more normal, though it is congested.” A pure culture of typhoid bacilli was recovered from the contents of the bladder.

This case was a surgical success, but a bacteriological failure, as thirteen successive duodenal contents cultures in eight months were positive. He was finally discharged, with consent of the Board of Health of the State to which he went.

TABLE 4. CASE 5.

	January, 1918.				February.	March.	April.	July.	August.												
	14,	16,	19,	31	15	2	20	22,	29	3,	5,	8,	9,	10,	11,	16,	19,	21,	23,	26	
Urine.....	—	+	—	+		+	+	+		—	—	—	—	—	—	—	—	—	+	—	
Feces.....	—	+	—	+		+	+	+	(+)	—	—	—	—	—	—	—	—	—	+	—	
Bile.....					+																
	Sept.		Oct.		Nov.		Dec.		Jan., 1919.		February.			March.			April.				
	1	2,	14	7,	24	15	5,	9	5,	12,	20,	26	7,	15,	25	1,	2,	3,	14,	17,	21
Urine.....									—	+	+	+	—	—	+	+		+	—	—	
Feces.....									—	+	+	+	—	—	+	+		+	—	—	
Bile.....	+	+	+	+	+	+		+						+	+			+		+	

Case 6. E. P., private, 327th Infantry, Camp Gordon, Ga.; age 26; home, Newberryport, Mass. Typhoid fever, 1900. Typhoid vaccination, course completed October 21, 1917. Diagnosis of typhoid carrier made by Department Laboratory, Southeastern Department, from cultures of feces made in routine examinations of food handlers, January 8, 1918. Admitted to Walter Reed General Hospital, March 28, 1918. Diagnosis was confirmed by examination of duodenal contents on April 22, 1918. Medical treatment with urotropin and vaccines had been unsuccessful, and on April 26, 1918, the gall-bladder was removed.

“E. P. 1 s W. R. G. H. Gall-bladder: It appears rather small, measuring about 50x50 mm. It appears slightly thickened, the mucosa is rather bright reddish and the outside of the bladder shows considerable congestion. It contains a single spheroidal stone, about 10x7 mm., varying in color from light to dark brownish. On removal of the stone a distinct impression is left in the mucosa and submucosa.”

The contents, which were colorless, contained a pure culture of typhoid bacilli. The bladder ruptured during removal and the operative area was infected and convalescence was somewhat slow, but the patient entirely recovered and is now in good physical condition. However, his duodenal contents are still positive for typhoid bacilli, indicating that there is a focus, probably in the bile passages of the liver. He has finally been discharged from the service, with the consent of the Board of Health of the State to which he went.

TABLE 5. CASE 6.

	March, 1818		April.			May.				June.				
	30	—	16, 22, 26	15, 19, 25, 27, 29, 30	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19	2, 4, 5, 8, 9, 13, 15, 19
Urine.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feces.....	—	—	+	+	+	+	+	+	+	+	+	+	+	+
Bile.....	—	—	+	(+)	+	+	+	+	+	+	+	+	+	+
	July.				August.				Oct.		Nov.	December.		
	20, 22, 26, 30, 31	2, 5, 6, 9, 15, 17, 19, 24	2, 5, 6, 9, 15, 17, 19, 24	2, 5, 6, 9, 15, 17, 19, 24	1, 16, 22	14, 23, 24, 30	1, 16, 22	14, 23, 24, 30	1, 16, 22	14, 23, 24, 30	1, 16, 22	14, 23, 24, 30	1, 16, 22	14, 23, 24, 30
Urine.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Feces.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bile.....	—	+	—	—	—	—	—	—	—	—	—	—	—	—
	February.				March.		April.		May, 1919.					
	5, 12, 17	12, 16	2, 5, 14, 17, 21	5, 12, 17	12, 16	2, 5, 14, 17, 21	5, 12, 17	12, 16	2, 5, 14, 17, 21	5, 12, 17				
Urine.....	—	—	—	—	—	—	—	—	—	—				
Feces.....	+	+	+	+	+	+	+	+	+	+				
Bile.....	—	—	—	—	—	—	—	—	—	—				

Case 7. (1) M. M., private, first class, Second Battalion Engineers; age 38. Typhoid fever, probably September, 1910, in Philippine Islands, "gastroenteritis with fever." Diagnosis as typhoid carrier made at Letterman General Hospital, San Francisco, Cal., from cultures of feces, November 20, 1910. Admitted to Walter Reed General Hospital, April 10, 1911.

Diagnosis of typhoid carrier was confirmed at this hospital in April, 1911. The patient was given the following medical treatments: Calomel, buttermilk, sodium sulphite, urotropin and salol, ipecac and vaccines, stock and autogenous, for four months, all of which proved to be unsuccessful. January 21, 1913, cholecystectomy was performed by Lieut. Leary and the gall-bladder was found to be enlarged and contained a stone. Examination of the contents showed a pure culture of typhoid bacilli. Recovery was prompt and the patient was discharged May 19, 1913, as cured.

Patient was examined in January, 1916, by Nichols, in El Paso, Texas. Physical condition was good and all cultures, including those of duodenal contents, were negative.

Re-examined May 7, 1919, at this hospital. Physical condition good and cultures of feces, urine and duodenal contents were negative.

TABLE 6. CASE 7.

	January, 1913.					February.				January, 1916.		May, 1919.	
	20, 21, 24, 25, 27, 29, 31	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8	3, 5, 7, 8
Urine.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Feces.....	+	+	+	+	+	+	+	+	+	+	+	+	+
Bile.....	(+)	—	—	—	—	—	—	—	—	—	—	—	—

The pictures presented by sections of the gall-bladder walls can be considered in one place, as it varied only in degree. The essential lesion is an infiltration of the submucosa with leucocytes of mononuclear type and a few eosinophiles. The epithelium is intact, and no abscesses are seen in the muscular fibrous coats. In the carriers of short duration the cells are confined to the submucosa; in the older cases a few cells are seen in the muscularis and fibrous coat, while the submucosa shows a chronic thickening.

In other words, the histological evidence supports the conception that the cholecystitis occurs through infection of the bile, rather than in the blood.⁸ The same picture has been seen in an instance of cholecystitis occurring during typhoid fever, which probably represents the start of the carrier condition.

TABLE 7. SUMMARY OF CASES.

No.	Initial.	Organization	Age.	Typhoid Fever.	Symptoms.	Operation.	Date.	Interval.	Condition Found.	Result and Remarks.
1	C. W. R. . . .	Cook, 16 Bal. Co.	21	October, 1912	None	Nephrectomy	May 28, 1918	6 years	Marked pyonephrosis	Cure. Cystitis resolved
2	A. V. Mc. . . .	Pvt. Tr. Det.	27	June, 1918	None	Cholecystectomy	Nov. 19, 1918	5 months	Cholecystitis	Cure.
3	W. O. L. . . .	Pvt. 11. Cav.	22	July, 1918	None	Cholecystectomy	Feb. 26, 1919	7 months	Stone	Cure.
4	M. L. W. . . .	Army Nurse . . Corps.	45	August, 1911	None	Cholecystectomy	Nov. 12, 1918	7 years	Dilated, stone	Cure.
5	J. L.	Cook 106 F. A.	39	August, 1911	None	Cholecystectomy	July 29, 1918	7 years	Cholecystitis with stone	Failure; cultures of duodenal contents still neg. positive.
6	M. P.	Cook, 327 Inf.	26	August, 1900	None	Cholecystectomy	April 26, 1918	18 years	Cholecystitis with stone	Failure; culture of duodenal contents still neg. positive.
7	M. M.	Pvt. 1 cl. 2nd Eng.	38	August, 1910	None	Cholecystectomy	Jan. 21, 1913	3 years	Cholecystitis with stone	Cure. Duodenal contents neg. in 1916 and 1919.

DISCUSSION.

The standard of cure in these cases has been three successive negative cultures of duodenal contents, and it is believed to be reliable, providing good specimens are obtained from the patient and providing they are properly handled in the laboratory. The specimen should be neutral or slightly alkaline in reaction to litmus paper and should show a golden yellow color and syrupy consistency characteristic of bile. The specimen should be cultured directly, and also should be incubated for twenty-four hours and recultured before a final report is made. Under these conditions we believe that a culture of duodenal contents is synonymous with culture of the bile. The point has been made that typhoid bacilli might reach the duodenum from the pancreas or from an infected diverticulum of the duodenum itself. There is no record in the literature of any such lesion of the pancreas, and experimentally it has been found impossible to make typhoid bacilli pass through a gland which resembles the pancreas, the salivary gland. On the other hand, there is ample experimental evidence⁸ that typhoid bacilli pass readily from the blood into the bile and in some cases establish themselves in the bile passages, especially in the gall-bladder. The writers believe that culture of the good specimen obtained through the duodenal tube is equivalent to a culture of the bile, and that this culture is the best evidence we can get on what is going on in the bile passages. Such cultures are, of course, much superior from this point of view of the feces,⁹ as may be seen from the failures reported above. Case 6 had eight successive negative feces cultures in one month, followed by a positive duodenal culture, and in several cases a negative feces culture and a positive bile culture occurred in the same day. We are of the opinion that in bile-passage carriers the bacilli are regularly excreted in the bile and that the term "intermittent" carrier should be dropped.

The principle underlying the surgical treatment of typhoid carriers is the excision of the focus of infection. The same principle applies to the now well-established surgical treatment of diphtheria, streptococcus and meningococcus carriers by tonsillectomy. The foci of infection in chronic typhoid carriers are in the two chief excreting organs, the kidneys and liver, or, more, specifically, in their ducts: (1) the hilum of the kidney, (2) the biliary passages, especially the gall-bladder. Pure "intestinal" carriers are not believed to occur any more than pure "urinary" carriers. (1)

From an infected hilum typhoid bacilli are fed into the urinary tract and appear in the urine. They may produce a secondary ureteritis and cystitis, but if only one kidney is involved and this is removed the secondary inflammation disappears and the patient is cured. (2) From the bile passages typhoid bacilli are fed into the intestine and appear in the intestinal contents only as long as the focus is present. There are three possibilities in regard to infection of the bile passages: (a) the gall-bladder alone may be infected; in this case cholecystectomy results in cure; (b) the gall-bladder and bile ducts in the liver may both be infected; in this case cholecystectomy does not cure the carrier condition. Cultures of duodenal contents are still positive. We have no way of determining in which of these two classes a given case falls except actual trial, but it is known that gall-bladder carriers are more common than bile duct carriers. There is a third possibility (c) in which the gall-bladder might be normal and the bile passages alone might be infected. In this case also cholecystectomy would not be curative, but from the evidence at hand such cases must be very rare, if indeed they occur at all.

The writers are not competent to discuss the strictly surgical aspects of these cases, but are, of course, interested in the outcome from an operative as well as from a bacteriological point of view. In operations such as these, which are done more for the good of the group than of the individual, it is necessary to insist on excellent surgical technic and judgment in order to avoid a tragedy, such as the following: A medical officer who had been taking care of meningitis cases expected to go home on leave to visit his wife and baby. Although his throat cultures were negative for meningococci, in order to be doubly sure that he was not a carrier he had his tonsils removed and died of hemorrhage.

*In the cases mentioned the operative results were good, although one case had what is called a stormy convalescence. The gall-bladder was removed from below in some cases and from above in others. The cystic duct was found normal in all. It is obvious that these cases should be worked out with full coöperation between the pathologist and the surgeon. Whether a new specialty of "carrier surgery" should be established to handle this growing field need not be discussed here, but there should be a full understanding about the situation. The laboratory man has taken the initiative in this field and has asked for assistance from the surgeon. The surgeon

should be in sympathy with and familiar with the problem. Most surgeons do not refuse an indicated operation, but apparently some surgeons do not agree that an individual should be operated on for the good of the group, in the absence of personal symptoms. Such surgeons can hardly be expected to do good carrier surgery. But, even with the personal point of view uppermost, these operations come under personal prophylactic surgery, as the organs are always chronically inflamed and the gall-bladders usually contain stones.

In cholera, the pathology of carriers is apparently identical with that in typhoid carriers, with the exception that there is some question as to the mechanism of gall-bladder infection, whether it is through the portal circulation and bile or whether it is an ascending or lymphatic infection. The same principles in surgical treatment should hold good in case of cholera, and the surgical treatment of carriers can be expected to be of even more value than in typhoid, as the disease has a more definite seasonal occurrence. In dysentery, the evidence is not sufficient to warrant definite statements, but by analogy the same situation may also obtain.

SUMMARY AND CONCLUSIONS.

1. So-called urinary typhoid carriers are really kidney carriers and can be cured by nephrectomy. An additional argument for operation is present if the infected kidney is functionless. One such case is recorded.

2. Intestinal carriers are really bile-passage carriers of two kinds: (a) In which the gall-bladder alone is infected; these can be cured by cholecystectomy; four such cases are recorded. (b) The gall-bladder and bile passages are both infected. In these cases cholecystectomy does not cure the carrier condition and the condition is incurable at present. Two such cases are recorded.

3. The surgical treatment of typhoid carriers, while not perfect, is the best available.

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NEWS AND COMMENT

PUBLIC HEALTH ASSOCIATION MEETING.—The annual meeting of the American Public Health Association meeting will be held in New Orleans, October 27-30, under the presidency of Dr. Lee K. Fraenkel, New York City. The central themes taken up will be southern health problems, including malaria, typhoid fever, hookworm, soil pollution, etc. The attitude of legislators towards public health, the securing of appropriations and cooperation of women's clubs, health organization and the organization of health centers will also be discussed. Two special programs on various phases of child hygiene and personal hygiene will be presented.

THE SOUTHERN MEDICAL ASSOCIATION will hold its annual meeting in Asheville, N. C., November 10-13. The programs of the various sections have been completed and promise to be of unusual merit. The Asheville physicians are making every effort to make the gathering in 1919 the most successful in the history of the association.

MEDICAL ASSOCIATION OF THE SOUTHWEST.—The fourteenth annual meeting of the Medical Association of the Southwest, comprising physicians from Missouri, Kansas, Oklahoma, Arkansas and Texas, will be held October 6-8 in Oklahoma City, Oklahoma.

VITAL STATISTICS.—There were 2,700,000 births in the United States in 1918, an increase of 27,000 over 1917. The death rate among New York City babies was 92 in 1,000 in 1918, only three points higher than the year before, despite war conditions, high food prices and influenza. San Francisco with a population in excess of 500,000 showed the lowest mortality among babies, the rate there being 57.2 per 1,000 for 1918. The average mortality rate for 45 cities of more than 100,000 population was 103.5. These statistics are taken from the annual review of the New York Milk Committee.

THE OSLER ANNIVERSARY VOLUME.—By October 1, the Osler Anniversary Volume, published in honor of Sir William Osler's seventieth birthday, which occurred on July 12, 1919, will be ready for distribution. Subscriptions are still being accepted and may be sent to the treasurer of the committee, Dr. Henry Barton Jacobs, 11 Mt. Vernon Place, Baltimore, Md. Paul B. Hoeber, 69 E.

59th St., N. Y., is the publisher of the volume and executive secretary of the committee. The book is being published for subscribers only, is not published for profit and is not to be advertised.

NARCOTICS BARRED IN BUENOS AIRES.—Drug addiction, which has become very common in Buenos Aires and has spread to all classes of society, has made it necessary for the municipal government of that city to enact stringent regulations restricting the sale of drugs. It is now prohibitive to sell narcotic drugs except upon presentation of a prescription prepared by a registered physician. Before this, drug stores were permitted to sell cocaine, morphine, opium and other drugs with the greatest freedom. The government has established dispensaries where those suffering from various diseases requiring the administration of narcotics may procure such narcotics.

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 Senator Alvarenga and amounting to \$250, will be made on July 14, 1920, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays may be on any subject in medicine not previously published, must be typewritten, should be accompanied by an English translation if written in any other language and must be received by the Secretary of the College on or before May 1, 1920. No signature, but a motto should be written on the essay, and a sealed envelope having on its outside the motto of the paper and within the name and address of the author, should accompany the essay. No Alvarenga Prize for 1919 was awarded.

CHOLERA IN FORMOSA.—A recent despatch from Tokio states that Japan has declared a quarantine against the Island of Formosa due to the fact that more than two-hundred cases of cholera are said to have been found there.

DISCHARGE OF MEDICAL CORPS OFFICERS.—The Secretary of War issued an order stating that all temporary officers of the medical corps of the army, as well as other corps, must be discharged by September 30, 1919. Announcement was made that this was a blanket order and not subject to exception. It includes all officers whose commissions were for the recent emergency.

AGAINST HEROIN.—The American Association of Pharmaceutical Chemists, at its annual meeting held in Atlantic City, June 2, 1919, adopted the following resolution to correct an erroneous impression regarding heroin:

“Resolved, That the American Association of Pharmaceutical Chemists reiterates its resolution adopted two years ago that the narcotic drug heroin be eliminated from all medical preparations and that legislation (Federal and State) be enacted to require such elimination.”

A NEW SANITARIUM.—The Belvedere Private Sanitarium, recently established in the city of New Orleans and situated directly on the banks of the Mississippi River, is being conducted as a modern and scientific institution. It is one of the best equipped of its kind in the South, with spacious halls, high ceilings, wide outside galleries, laboratories, examining, operating and treatment rooms, therapeutic baths and diet kitchen. The sanitarium has a capacity of fifty private rooms, single or en suite; it has an efficient medical and nursing corps.

SEA VIEW HOSPITAL RETAINED FOR THE TUBERCULAR.—After much discussion and a threatened suit by the people of Staten Island, Sea View Hospital, long in use as a hospital for tubercular patients, has been retained for their use. Commissioner Copeland of New York City desired the hospital for the use of drug addicts, but it was protested by the Staten Islanders and Dr. Copeland was forced to abandon his plan to treat drug addicts there.

A NEW JOURNAL OF INDUSTRIAL HYGIENE.—Activities in the field of industrial hygiene has led to the establishment of a special journal, under the editorship of David L. Edsall, for the United States, and A. F. Stanley Kent, for Great Britain. The *Journal of Industrial Hygiene* is to be published monthly, the subscription price being five dollars a year for the United States and Canada, twenty-one shillings in Great Britain, and six dollars for foreign countries. Three numbers have already been published and contain interesting matter relative to development of work in this field.

LONGEVITY IN NEW ORLEANS.—Figures compiled by the City Board of Health for the eight months ending September 1 shows three persons over the age of 100 died during that period. There

were 44 deaths from persons from 90-100 years; 222 from 80-90 years; 451 from 70-80 years. In all there were 720 persons over the age of 70 who died the first eight months of the year. Divided with reference to color and sex the records show the three deaths of persons above the age of 100 were negro women. Between the ages of 90 and 100 years there were 4 white males; 23 white females; 7 negro males; 10 negro females. From 80-90 years the deaths included 67 white males, 114 white females, 17 negro males and 24 negro females. Between the ages of 70-80 there were 143 white males who died, 202 white females, 52 negro males and 54 negro females.

FOR AGED AND INFIRM PHYSICIANS OF FRANCE.—An institution called the *Maison du Médecin*, which was founded in 1908 as a medical social gathering place has been listed by the state and granted a subsidy. The social seat is on the rue d'Astorg, Paris, but there is a country home connected with it, a large modern chateau at Valenton, with twenty-five rooms and large grounds, where aged and infirm physicians are given a home at low rates (800 to 1,500 francs—\$150-\$300 a year). The prevailing prices have rendered necessary an appeal for more funds.

UNIVERSAL LICENSES TO PRACTICE.—A bill granting licenses to permit physicians to practice in any State in the Union was recently introduced in Congress by Representative Mason, of New York. The bill provides that any person who has taken a full four-year course in a recognized medical school and who has been granted a State license, or any person who has practiced medicine for at least five years, may obtain a license to practice in any State on the payment of \$10 to the Secretary of the Interior.

THE INTERNATIONAL CONFERENCE OF WOMEN PHYSICIANS opened its sessions at 600 Lexington Avenue, New York City, September 15, to be continued through October 26, 1919. Subjects relative to the important physical, mental and moral questions of the day are being discussed by prominent men and women of this country and of Europe.

THE UNITED STATES CIVIL SERVICE COMMISSION has announced examinations for the following positions: Chief of division for scientific research, \$3,500 to \$4,500 a year; chief of division for

educational research and development, \$3,500 to \$4,500 a year; educational assistant, \$2,800 to \$3,600 a year; chief of division of relations with States, \$3,500 to \$4,500 a year; chief of division of records, information and planning, \$3,500 to \$4,500 a year; supervising assistant and inspector, \$2,800 to \$3,600 a year; field agent, \$1,800 to \$3,000 a year. All positions are open to both men and women.

Applicants for these positions will not be given scholastic tests in an examination room but will be rated upon their education, experience, and writings. Published writings of which the applicant is the author will be submitted with the application. For most of the positions a thesis on one of a number of given subjects will be accepted in lieu of published writings. The receipt of applications will close on November 4. Detailed information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the United States Civil Service Board at the post office or custom-house.

PERSONALS.—Among the doctors of New Orleans who have returned home from their vacation and resumed practice are: Drs. Wm. G. Troescher, R. C. Lynch, Chas. Chassignac, Eugene L. Fortier, L. L. Rabouin, Emile A. Bertucci, Wm. M. Johnson, J. Barnett, L. M. Provosty, Geo. Tusson, R. M. Blakely, E. D. Friedrichs, E. C. Thornhill, Isidore Cohn, J. L. Lewis, Chas. A. Borey, E. L. Leckert, Louis J. Dubos, W. H. Reilley, G. King Logan and Solon G. Wilson.

Among the Louisiana physicians who have returned from service since our last list are the following: Drs. Wm. O'Donnell Jones, J. M. Perret, E. E. Algeyer, D. D. Adiger, F. Chetta, N. K. Edrington, E. L. Leckert, M. F. Meyer, R. M. Blakely, F. T. Brown, S. R. Humphries, L. H. Levy, G. A. Mayer, H. T. Nicolle, P. E. Werlein, W. H. Wynn, L. V. J. Lopez, H. Wolf, J. C. McSween and W. C. Royals, New Orleans; P. W. Prudhomme, G. A. Ramsey, W. B. Hunter, J. E. Slicer, T. Ragan, Shreveport; W. B. Chamberlain and T. C. Paulsen, Baton Rouge; C. B. Law, Marthasville; H. G. F. Edwards, Abbeville; P. W. Callihan, Carson; M. W. Talbot, Fullerton; E. W. Reeves, Kenner; A. S. Cooper, Mansfield; J. M. Gorton, Waterproof; G. J. Smith, Amite; M. M. Collins, Hosston; J. M. Adams, Locust Ridge; J. F. Cazayaux, New Roads.

REMOVALS.—Dr. Clyde G. Guthrie, from Johns Hopkins Hospital, Baltimore, to Indiana, Pa.

DIED.—On September 5, 1919, Dr. J. Townsend Wolfe, of this city, aged 42 years.

On August 13, 1919, at Hammond, La., Dr. Edward L. McGehee, of Wilkinson Co., Mississippi, a prominent figure in the medical profession in Louisiana for the past thirty-five years, 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 Control of Hookworm Disease by the Intensive Method. By H. H. Howard. Publication No. 8, The Rockefeller Foundation. International Health Board, New York City.

Experience in hookworm work throughout the world during the past several years has gradually developed the intensive method of control of hookworm disease and has established it as the method of choice. Dr. Howard has brought up to date in this publication the intensive method, and presents it in such detail as would be needed by those undertaking hookworm control in this way.

Chapter I is a brief discussion of the importance of the problem. Neither this author nor any other is able, in my judgment, to impress the magnitude of this problem and the importance of the disease to civilization.

The second chapter is a brief relation of the development of the intensive method in the West Indies.

Chapter VIII lays down very definitely the method of treatment employed in the work in the West Indies. Thymol is preferred. Treatment with oil of chenopodium is also presented in a clear-cut way.

In the Appendix are to be found facsimiles of all the different blanks used by Dr. Howard.

This constitutes No. 8 of a valuable series of publications by the International Health Board and it may be had upon request, from the International Health Board, 61 Broadway, New York.

C. C. BASS.

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Naval Medical Bulletin. Published for the information of the Medical Department of the Service. July, 1919.

Service and Regulatory Announcements. Supplement. U. S. Department of Agriculture, Bureau of Chemistry.

The Rat. Arguments for its Elimination and Methods for its Destruction.

Venereal Disease Ordinances. V. D. Bulletin No. 39.

MISCELLANEOUS:

Memorias do Instituto de Butantan. 1918. Tomo 1, Fasciculo 1.

REPRINTS.

Panicum Lineare, Linn. By Oliver A. Farwell.

Hypothesis on Influenza Pneumonitis, by E. O. Houda, M. D.

Group Study, A Necessity in Ophthalmic Research, by E. Park Lewis, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the
of New Orleans, for August, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	4	5	9
Intermittent Fever (Malarial Cachexia).....			
Smallpox			
Measles	1		1
Scarlet Fever			
Whooping Cough.....	1	1	2
Diphtheria and Croup.....		1	1
Influenza		2	2
Cholera Nostras		1	1
Pyemia and Septicemia	2		2
Tuberculosis	28	31	59
Cancer.....	34	15	49
Rheumatism and Gout.....			
Diabetes	8	1	9
Alcoholism.....			
Encephalitis and Meningitis.....	1	1	2
Locomotor Ataxia.....	2		2
Congestion, Hemorrhage and Softening of Brain.....	15	14	29
Paralysis	2	1	3
Convulsions of Infancy			
Other Diseases of Infancy.....	12	10	22
Tetanus.....		3	3
Other Nervous Diseases	5		5
Heart Diseases	50	35	85
Bronchitis	2		2
Pneumonia and Broncho-Pneumonia	13	16	29
Other Respiratory Diseases	2	2	4
Ulcer of Stomach	2		2
Other Diseases of the Stomach			
Diarrhea, Dysentery and Enteritis	25	20	45
Hernia, Intestinal Obstruction.....	2	3	5
Cirrhosis of Liver.....	4	1	5
Other Diseases of the Liver	3	2	5
Simple Peritonitis.....			
Appendicitis	8		8
Bright's Disease.....	19	9	28
Other Genito-Urinary Diseases.....	10	11	21
Puerperal Diseases	5	3	8
Senile Debility.....	5	3	8
Suicide	3	1	4
Injuries.....	20	13	33
All Other Causes	25	19	44
TOTAL	313	224	537

Still-born Children—White, 29; colored, 36; total, 65.

Population of City (estimated)—White, 283,000; colored, 106,000;
total, 389,000.

Death Rate per 100 per annum for Month—White, 13.27; colored,
25.36; total 16.57. Non-residents excluded, 14.25.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure.....	30.02
Mean temperature.....	83
Total precipitation.....	7.38 inches
Prevailing direction of wind, southwest.	



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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ISADORE DYER, M. D.

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Vol. 72

NOVEMBER, 1919

No. 5

EDITORIAL

THE STANDARDIZATION OF HOSPITALS.

Already two preliminary surveys of hospitals in the United States have been made by the American Medical Association, and the third is under way. The present effort aims at being more complete than the early attempts, which depended largely upon information derived thru questionnaires sent to the hospitals themselves.

Each state has a committee from its Medical Society, with the object of a personal and careful inspection along certain definite lines. Some of the states have already shown progress in the object aimed at; so far as we know, the Louisiana Committee has not started.

There is much involved in the matter of hospital standardization. With the exception of certain municipal or largely endowed hospitals, the institutions in this country have generally been run haphazard and exigentially. Some reform has come with the dearth of interns and with the realization that efficiency depends upon organization. The American College of Surgeons has helped some thru the widespread membership in this body and because the frequent Congress of Surgeons has brought out the deficiencies of most of the hospitals in this country, accentuated to those local surgeons who have brought back with them the urgent need of reform in local institutions.

The intern situation has had some influence, too. Fewer graduates have made the hospital demand for interns greater and where formerly the intern sought the position, now the hospital is seeking the intern. The intern is therefore discriminating. A number of state examining and licensing boards is now requiring a proper intern service for full licensure and in some of these states the service of such intern is specified. The intern, therefore, is not satisfied to accept service in any but a first grade hospital.

The public is chiefly concerned, after all, and the maintenance of a first class community hospital means not only efficiency in its organization, but it means the best service to the public itself.

There is no selfish motive behind the move for hospital standardization; quite the contrary, for, the more efficient hospitals become, the less the work for the physician.

Louisiana is not above the need of reform in its hospitals—so far as first class standards are concerned. It is all the more important then, that the Hospital Committee of the Louisiana State Medical Society should get busy and aid in the national effort to make hospitals efficient and worth while to the profession and to the sick whom the profession serves.

ASHEVILLE MEETING OF THE SOUTHERN MEDICAL ASSOCIATION.

The Southern Medical Association will hold its Thirteenth Annual Meeting at Asheville, November 10 to 13. The absence of a meeting in 1918 should assure a large attendance. The scientific and social features of this organization are always sufficient to stimulate the members to come, and usually about twenty-five per cent are present.

The exceptional location, at Asheville, this year should make the meeting all the more attractive.

The preliminary outline published in the Bulletin of the Association promises four full days of interest and enjoyment.

Reduced rates on the regular Asheville round trip excursion basis will give some reduction, but what does the cost of the trip mean to anyone who has been to a Southern Medical Meeting in the last few years.

Special through sleepers to Asheville will leave New Orleans over the Louisville and Nashville at 8:20 a. m., November 9th and 10th, arriving in Asheville on the morning of the tenth and eleventh respectively, provided a sufficient number of berths are engaged.

Members of the State Society wishing reservations will please address the Secretary of Orleans Parish Medical Society, 141 Elk Place.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

CESAREAN SECTION.*

By JAS. T. NIX, Jr., B. S., M. D., M. A.,

Professor of Surgery, Loyola University; Surgical Consultant, Loyola University, Diagnostic Unit, New Orleans, La.

Cesarean (Cæsarian, Cæsarian) section is the delivery of a fetus through an incision in the uterus.

ETYMOLOGY.

Cæsar is a proper name—Greek, kaiser; German, kaiser; Russian, tsari; Polish, czar—all meaning emperor, king.

Cesarean, whether the term has any particular reference to any of the Cæsars or whether it simply represents a derivation of the Latin *cædo*, *cædere*, *ceci*, *cæsus*—to cut—is still an unsettled question.

The highly imaginative public expects, and most readily attributes, miraculous birth or other supernatural characteristics to the lives of great men. We have the universally accepted, though historically equally unfounded belief, that the great Julius Cæsar was born by an abdominal section, and thence the operation derives its name. This, however, we know positively to be not true, but, no matter how definitely we might determine the origin of the term, no matter how accurately we might fix the nomenclature for the public, the decision has been made long ago. Blindly, without interrogation, believing all things possible of Cæsar, it has eagerly accepted as a truth this unfounded myth, despite the fact that history proves the contrary.

To substantiate this erroneous belief, Dorland's Medical Dictionary, 1906, describes the name as coming from the "Latin, *sectio cæsarea*, named from Julius Cæsar, who is said to have been thus born."

O'Malley and Walsh, *Essays in Pastoral Medicine*, 1906, state, "The operation, according to one opinion, takes its name from Caius Julius Cæsar, who it is said was brought into the world in this manner; this, however is a myth." No other opinion as to the etymology is given in this work.

At the time of Cæsar many of these operations were performed, but always on the dead mother, and we know from the best authori-

*Read at the Fortieth Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

ties that Aurelia, the mother of the great warrior, lived until her son had reached the height of his career.

If there is any virtue in the belief that the name of the operation comes from the Cæsars it could not apply to Julius Cæsar, but to one of the others.

Froude, "A Sketch of Cæsar," 1881, says:

"Roman etymologists could arrive at no conclusion as to the origin of the name. Some derived it from an exploit on an elephant hunt in Africa, Cæsar meaning elephant in Moorish; some to the entrance into the world of the first eminent Cæsar by the aid of a surgeon's knife, *cæsus ab utero matris*, literally, cut from the womb of a mother."

From Charles Anthon's Classical Dictionary of Proper Names of the Greeks and Romans, 1857, we are told, according to Pliny, "The first Cæsar was so called, *quod cæso mortuæ matris utero natus fuerit*, because he was born from the cut wound of a dead mother." There are many other theories advanced for the origin of the name, but the author believes that Pliny's fits best.

Therefore if Cæsarean, as applied to the operation, owes its origin to the abnormal birth of a Cæsar, it refers to the first eminent Cæsar, Caius Julius, grandfather of the great Julius, for which, however, we cannot find authority. It has no reference to the younger Julius Cæsar, as is so generally believed.

According to De Lees, Hirst and the standard text-books on obstetrics, the operation rightfully derives its name from the Latin *cædo*, to cut, and Cæsarean simply means delivery by cutting. If this is true, then Cæsarean section is tautology for section, from the Latin *seco*; *secare* means also to cut, and both words of the name convey the same meaning.

From this evidence the writer believes that Cæsarean section owes its name to the Latin verb from which it is derived and has no reference to the Cæsars. A better nomenclature would be the Cæsarean operation.

HISTORY.

Far back in the days of weird mythology we are told that Jupiter enamoured the beautiful Semele. Juno, inflamed with jealousy, resorted to a cunning piece of trickery and had the greatest of the gods appear before his sweetheart in all his radiant splendor, at her own request, and as he was wont to visit Juno. Immediately Semele was consumed in the flames, but Jupiter delivered from her six-months' pregnant womb the tender babe and sewed it in his thigh

until it was maturely born. So runs the story of the first Cesarean birth, Bacchus, the God of Wine.

Over 2,500 years ago our early Roman forefathers, under the leadership of Numa Pompilius, 715 B. C., had enacted into law a statute requiring the emptying of the gravid uterus before burying the dead mother. Present-day civilization very profitably could take lessons from this most modern law. Such an edict at present is unknown, though far more necessary than at the time of Pompilius.

Guy de Chauliac, 1363 A. D., physician for the Earl of Savoy, advised that the operation should be performed at once on the mother, who had suddenly died.

Shakespeare, keeping abreast of the times, describes the character, Macduff, as coming "from his mother's womb untimely ripped."

For idealism to-day, the world has made unlimited human sacrifice; therefore, slightly to offset this enormous loss, let us extend the strictest economy to this most important phase of the conservation of life—the saving of infants, unfettering of souls, the release of the living child from the womb of its dead mother. Cannot every successful doctor recall, from hospital or other experience, the death of at least one pregnant mother, where better judgment, prompter action, more relentless effort might have averted the dual calamity, one of the lives might have been spared?

In *ante-mortem* Cesarean sections the first was performed by Nufer, 1500 A. D., when he is said to have delivered his wife, after one dozen midwives and several barbers had failed.

In 1581, Rousset published ten successful cases.

Trautman, of Wittenburg, is accredited with having performed the first authentic case in 1610.

At this time the operation was not restricted to the doctors. It was very often performed by the priests and scholars, and not infrequently many of the lower classes were highly skilled in the art. In 1769, a negro slave performed the operation on herself and recovered, while a few years later a quadroon, fourteen years old, delivered herself successfully of twin babies, without mortality. In 1879, an Austrian woman, after being in labor for three days, delivered her baby by abdominal section with a razor. The womb and abdomen were sewed by neighbors, both mother and child getting perfectly well. During the same year, Felden saw the Cesarean operation performed by a native of Uganda, Africa, the technic being as follows: Hands of operator were washed with banana wine

and the patient made to drink of the same beverage—a form of anesthesia. A quick incision opened the womb and the woman was raised so as to empty the abdomen of escaped amniotic fluid. Cervix was now dilated from above and the incision sutured. The wound was then dressed with a paste of crushed herbs. Temperature never went above 101° F., and the wound healed by first intention in eleven days. (History of Medicine, Garrison, 1914.)

The best modern description of the operation is by Sanger, 1882. The technic suggested represents very good surgery today. Absorbent material is used on the uterus and three tiers of sutures are inserted in the uterine wall. A low median abdominal incision, extending to and above the umbilicus, is preferred.

The first successful cases in the United States are reported by Prévost, of Donaldsonville, La., 1830. Four Cesareans are cited, three terminating favorably for both mothers and children. William Gibson, 1835-1838, Boston, performed the operation twice successfully on the same patient.

In 1844, Kayser, of Copenhagen, reports that, prior to this date, of all recorded cases, there was a maternal mortality of 62 per cent, which was very low, considering the times. Tarnier, however, reports that there was not one successful case in Paris prior to 1881. For this reason, in all probability, the high-traction forceps of Tarnier became so popular. Spaeth, 1877, made the same statement concerning Vienna.

RECENT SURGERY OF CESAREAN SECTION.

Literature of the past decade is replete, surcharged, overflowing with articles in every nationality, treating the subject from all approaches. Some are meritorious, many are not, yet they all give testimony to the progress, rapidly increasing popularity and priority of this procedure in the treatment of the most complicated cases of labor.

Let us briefly review prevailing opinion.

Franklin S. Newill, *Journal of the A. M. A.*, February 24, 1917: "In some country districts a successful Cesarean operation has never been performed. Those occurring in the small hospitals around Boston show a mortality of 60 to 75 per cent."

He believes that one Cesarean operation should necessitate a second on the same mother.

Davis, *Southern Gynecology and Obstetrics*, Vol. 23, 1916: Two hundred and eleven cases are reported, with a gross mortality of 8 per cent. Of 151 selected cases, there was only one death, or six-tenths of one per cent. He insists that the case should be carefully studied before labor, and, when indicated, the operation should be one of election.

J. T. Williams, *Boston Medical and Surgical Journal*, March, 1916: Two thousand nine hundred and thirty-six cases of high forceps are analyzed. They were all taken from the most reputable maternity clinics, where they were handled by the best obstetricians. The maternal mortality is 1.2 per cent, the fetal 17.2 per cent. What appalling proportions would these figures assume in the hands of less competent men! From this the writer very justly concludes that the indications should include late primiparity, difficult breech, transverse, and face presentations, together with the numerous other conditions generally accepted. "The medieval superstition that 95 per cent of cases terminate spontaneously and that the most difficult high forceps applications, with its large infant mortality, are without injury to the mother, represent obsolete traditions." The ideal sought is 100 per cent maternal, with 100 per cent infant recoveries, and Cesarean more nearly approaches this perfection than any other form of abnormal delivery.

J. R. Young, *Journal of the South Carolina Medical Association*, December, 1916: Concerning the indications and technic, he cites the work of Nicholson, who reports 500 cases, with 1.3 per cent maternal mortality. The technic advised is practically that of Sanger, the low median abdominal incision passing to the left of the umbilicus. Brief mention is made of the high incision of Davis above the umbilicus. The following very clearly expresses the writer's opinion:

"In short, any obstetric situation that may confront us, whether it be a problem of mechanics, as an impacted shoulder presentation or urgent pathology, as toxemia, hemorrhage or poorly compensating heart lesion, should be an indication for Cesarean section, if it appears that the operation offers the best chance of life to mother and child."

Again: "When Cesarean section is absolutely indicated it should be done early, before the test of labor. It should be started with labor."

From this we see that the doctor considers it the operation of election and not compulsion. The mortality given by Young, viz., 23 per cent for the State of South Carolina and 20 per cent for the Lying-In Hospital of New York and Hirsch's clinic in Philadelphia, is discouragingly high.

Finally, William Mortimer Brown, *American Journal of Obstetrics*, Vol. 70, 1915, in his concluding lines summarizes the entire article: "We have only to look about us at the invalid women and defective children to be made to feel that, if the pelvic route was at first the ideal highway into the world, then some very serious errors have been made in the maintenance of that highway." And again: "Under proper conditions, the mortality from delivery by the abdominal route will be as low as from the simplest laparotomy, and the morbidity far less than from pelvic deliveries; infant mortality and morbidity resulting from the operation should be nothing."

It is obvious, therefore, that the Cesarean operation is no longer the hazardous life-or-death procedure that so recently it had been considered, but, according to the mortality, should be placed side by side with other major abdominal operations. We should no longer wait until the mother has almost expired, with possibly a dead fetus in utero, before resorting to this technic, but remember that uterotomy assures us 100 per cent saving of infants, with 95 to

100 per cent maternal recovery as well. Morbidity is *nil*. It is our solemn, binding duty, when the tent of death is pitched so near, to offer the greatest protection to both mother and child by giving them, before the appearance of dangerous complications, the choice of Cesarean section.

The records of the Charity Hospital of New Orleans from January 1, 1916, to June 30, 1918, inclusive, show:

Total confinements.	1,718
Cesarean sections.	23
Maternal deaths.	7—30.6%
No infant mortality as a result of operation.	

The ridiculously small number of Cesarean sections, together with the large number of maternal deaths, shows that the operation was only adopted as a last-resort procedure.

Unquestionably, had Cesarean section been practiced more liberally as elective instead of last-resort treatment, the death rate would have been far lower.

The Records of Hotel Dieu, of New Orleans, covering the same period of time, present:

Total confinements.	318
Cesarean sections.	57
Maternal mortality.	7—14.0%
Infant mortality from operation.	0

The mortality from Cesarean section is less than half that of the Charity Hospital, though still it is entirely too high. High forceps show a deplorably high infant mortality—66 per cent at the Charity Hospital and 51.6 per cent at the Hotel Dieu—branding it as unfair to the child.

In neither institution is there any record of the *post-mortem* delivery of a living child, except the one case to be reported later in this paper.

The number of *post-mortem* Cesarean operations on record in the entire United States during the past ten years is extremely small, probably less than ten.

Judging from the foregoing statistics, it is very plain that the lines of asepsis should be tightly drawn, all possible avenues of infection should be eliminated, decision should be prompt, and the operation performed as rapidly as possible, decreasing shock, if the mortality is reduced to where it belongs—1 to 5 per cent—the same as for other abdominal operations.

REPORT OF CASES.

Name.	Age.	INDICATIONS.	When Cesarean Operation Given.	RESULT. Mat.	Fet.	Days in Institution.	DATE.	Sub-Normal Labor.
ANTE-MORTEM CESAREAN SECTIONS.								
A. S.	20.	Primipara. Contracted pelvis; sac ruptured 48 hours; no progress; inertia uteri.	Last resort	Cure	Cure	12	6/1/15	0
M. W.	34.	Primipara. Ruptured bag 48 hours; baby in utero, almost dead; mother exhausted.	Last resort	Cure	Cure	10	2/23/15	1
M. P.	30.	Impacted shoulder; baby already dead; easiest route for mother.	Last resort	Cure	Cure	9	8/22/16	0
S. J.	34.	Primipara. Undilatable cervix; immense baby (12 pounds).	Election	Cure	Cure	9	11/27/16	0
J. S.	35.	Contracted pelvis; primipara; inertia uteri; 72 hours labor.	Last resort	Cure	Cure	9	12/5/16	0
J. M.	25.	Placenta previa; patient almost exsanguinated.	Last resort	Cure	Cure	9	4/2/15	0
M. D.	22.	Impacted breech; three attempts at instrumental delivery.	Last resort	Cure	Cure	9	12/26/16	1
J. M.	32.	Primipara. Rupture of bag one week; no progress.	Last resort	Cure	Cure	9	2/2/17	1
M. M.	20.	Underdeveloped pelvis; large baby.	Election	Cure	Cure	9	3/28/17	0
M. M.	34.	Primipara. Rigid cervix; tubercular mother.	Election	Cure	Cure	9	9/20/17	0
M. N.	32.	Primipara. Shoulder presentation; no progress after 48 hours' labor.	Last resort	Cure	Cure	9	11/7/17	0
N. J.	30.	Impacted breech; 48 hours' labor.	Last resort	Cure	Cure	9	12/20/17	0
L. S.	20.	Primipara. Forty-eight hours in labor; no progress; rigid parts.	Last resort	Cure	Cure	9	11/29/17	0
M. C.	34.	Face presentation; labor 48 hours; no progress.	Election	Cure	Cure	9	1/30/17	0
A. M.	17.	Underdeveloped primipara. Inertia uteri; exhausted mother.	Last resort	Cure	Cure	9	1/22/18	0
R. S.	24.	Face presentation; 36 hours' labor; no progress.	Last resort	Cure	Cure	9	3/20/18	0
F. M.	32.	Primipara. Seventy-two hours' labor; no progress; early rupture of bag.	Last resort	Cure	Cure	17	1/5/15	0
A. C.	20.	Placenta previa.	Election	Cure	Cure	10	2/1/15	0
J. R.	38.	Hand presentation. Seventy-two hours' labor; no progress.	Last resort	Cure	Cure	9	10/2/18	0
F. R.	35.	Hand presentation. Seventy-two hours' labor; no progress.	Last resort	Cure	Cure	9	2/5/19	0
R. M.	34.	Primipara. Contracted Pelvis; inertia uteri; 72 hours' labor.	Last resort	Cure	Cure	9	2/10/19	0
POST-MORTEM CESAREAN SECTIONS.								
M. P.	38.	Mother died from eclampsia; dead five minutes; baby still lives.		Cure	Cure		3/1/15	
M. W.	30.	Mother in complete coma; septicemia, septic emboli; 7 1/2 months' gestation; fetus viable and still alive.		Cure	Cure		2/23/16	

CESAREAN SECTION ON MORIBUND MOTHER.

Reviewing briefly the series here reported, one notes of the *ante-mortem* operations there is a maternal and fetal recovery of 100 per cent. One baby was dead in utero before the operation was begun, but in this instance uterotomy was considered the easiest route for the mother. One mother had already died and a *post-mortem* Cesarean saved the baby.

Sixteen of the twenty-one cases were referred cases. They had been repeatedly, unscrupulously examined, and, in eight of the sixteen, forceps had been unsuccessfully applied one or many times before a consultation was requested. All sixteen, therefore, might be considered infected from the very start, and the operation one of compulsion in place of election.

Three have subsequently become pregnant, labor terminating by spontaneous delivery without there being the slightest danger at any time of rupture of the uterus. This disproves the statement that one operation of this sort requires another for every subsequent pregnancy.

Union in all but two cases was by first intention, and the stay in the institution the same as for normal delivery—ten days. It is believed that the good results here obtained, under adverse conditions, were due to the special technic employed.

The moribund mother was only seven months pregnant, and was dying as a result of septic emboli; temperature 104° , pulse 150, in deep coma. The baby when born weighed only three and one-half pounds, but thrived and developed very rapidly. In all such conditions, whenever death of the mother is definitely certain, the child should be delivered promptly, as very often, especially in septic or toxic conditions, the fetus will die before the mother expires.

Concerning the *post-mortem* Cesarean section, the mother was dead five minutes when the section was made and a living child brought forth. In all such instances, where the mother is positively dead, never wait for local preparation of patient nor her removal to an institution, but deliver immediately in the bedroom or wherever she may be, using for a scalpel, razor, pocket-knife or other sharp instrument. Time is precious, for fetal death, when it does not precede or is not synchronous with, always follows very closely the death of the mother.

INDICATIONS.

Briefly, any complication in the course of normal pregnancy or labor where the life of mother or child or both is threatened, and

cannot be given an equal chance by other methods, constitutes an indication for Cesarean section. Whether it be placenta praevia, impacted breech, transverse presentation, late primipara, eclampsia, disproportions of mother and child, obstructing tumors, pelvic deformity, ill-health of mother where full-time pregnancy with difficult labor would seriously endanger her life or that of the child, as a grave heart lesion, pulmonary tuberculosis, or acute nephritis, any abnormal presentation which cannot be safely reduced to normal and blocks spontaneous delivery, singly or combined, one and all may represent just cause for the Cesarean operation. In all of these conditions, however, do not be too hasty for normal delivery is possible.

PREFERRED TECHNIC.

The method considered best is the Sanger plus the following modifications:

1. The cervix uteri is completely dilated, so as to insure post-operative vaginal drainage.
2. A longitudinal median incision is made extending from the pubes upward to the left of the umbilicus, sufficiently long to deliver the uterus from the abdominal cavity.
3. Uterus is now delivered thru incision extraperitoneal, outside of the containing abdominal cavity. A special rubber sheet is stretched tightly around the uterus and as close as possible to cervix so that when the uterine cavity is opened the contents will be entirely dammed off from the highly sensitive peritoneum. Over this a second similar sheet is stretched so as to insure additional protection.

The protector consists of a large piece of rubber sheeting about two feet square in the center of which is sewed a small rectangular section of rubber dam. At the mid-point of this highly elastic tissue a small round opening is cut so that when stretching the opening the rubber protector may be made to fit snugly around the attached and smallest diameter of the womb, thereby completely excluding the uterus from the abdominal cavity.

4. A longitudinal incision four inches long, beginning at top of fundus and extending downward toward the cervix, is now made and the child delivered. The uterus is completely emptied of all membranes, clots, and possible fragments of placenta, and three tiers of continuous sutures are inserted in the mucous mem-

brane, muscle, and peritoneum, respectively. The sutures of each tier include a small part of the adjoining layer simply to give additional support.

5. Normal horse serum, 10cc., and pituitrin, 1cc., are given hypodermatically so as to favor coagulation and stimulate uterine contraction, thereby closing the large blood sinuses and preventing hemorrhage.

6. Abdominal incision is now closed in layer, either by separate continuous sutures in peritoneum, muscle, fascia, and skin respectively, or, whenever the utmost speed is required for the safety of the patient, the three lower layers are closed collectively by one continuous compound suture of strong chromicized cat gut, which is inserted thru all layers at one time, approximates each one in turn.

7. As soon as the patient recovers from the anesthetic the sitting position in bed is adopted, in this manner insuring free drainage, complete emptying of the uterus, thereby preventing tension on the suture line, and, if infection does creep in, there will result a pelvic and not a general peritonitis.

8. Union by first intention invariably results and the case is treated as one of normal labor, being permitted to leave the institution on the tenth day.

By adopting the technic here described, the protecting screen is almost a guarantee for asepsis, even in the presence of a pre-existing infection; the compound abdominal suture insures safety and speed, the maximum time for the operation being twenty minutes, the minimum, sixteen minutes; every step in the operation is clearly visualized so that imperfect suturing, secondary hemorrhage, and other complications are entirely avoidable; the sitting position with anti-coagulants and oxytocics establishes drainage and prevents hemorrhage; the perfect tier suturing of uterus is an absolute safe-guard against uterine rupture in subsequent pregnancies, and, on the contrary, they are encouraged; maternal morbidity and infant mortality are nil, maternal mortality is less than two per cent.

Many children could be saved who, at the present time die; many mothers could be spared a long and tedious convalescence with resultant hopeless invalidism, if not an early grave.

The mortality should be the same as for other laparotomies and the operation one of election, priority, or choice.

MORAL LAWS.

From the most primitive times our early Pagan forefathers had the greatest respect for the pregnant mother and considered it a grievous sin to interfere in the course of normal pregnancy. In offering human sacrifice at the altar of the Gods, if the woman was with child she was always spared until the production of her fruit. The early Pompilian law "*Lex Regalia*" required emptying of the gravid uterus before burying the dead mother. The Augustinian Code absolutely prohibits punishment to be executed on the pregnant while one of the early sects of Hebrews, Talmudists, demanded the delivery of the child from its dead maternal parent to permit of baptism.

Many children could be saved who, at the present time die; many religions demand infant baptism for its own eternal salvation, when the mother dies before parturition, and in the early days Cesarean section was the only solution. Embryotomy, craniotomy, and any form of infant destruction are never justifiable, "Thou shall not kill", but are mere synonyms of the less acceptable Feticidè, murder.

To this unflinching opposition for any form of human destruction, to the insistent demand on the rights of the child, and to the requirement, infant baptism, does humanity owe a debt which the combined effort of all future generations never could repay.

Only until recent years, in many instances, contemporaneous medical opinion considered the demands unjustifiable, far-fetched, and based on wrong or no scientific principles. Time, however, has bridged the gap and to-day medical and religious teachings are practically the same.

The thousands of healthy Cesarean babies to-day, as they grow into robust manhood, let them reflect occasionally on the manner of their birth, and be told, if they do not know, that only a few years back their skulls might have been crushed or their bodies torn asunder, in the frantic efforts of man to save the mothers' lives. Let the aged mothers also recall, as they review the happy years of their extended lives, that, but for the Cesarean operation, these happy profitable years might have been lost in early graves.

But for moral influences, surgery in all probability would have lagged behind and not have perfected so rapidly the technic which stands to-day almost without mortality. These same robust men would have been slain as infants "in utero", if not buried in their maternal caskets,—unborn.

"Thou shall not kill". In the very first chapter of the first book of record, the Holy Scripture, we read "at the hand of every man will I require the life of man", and in the New Testament, "Thou shall not kill". The child, if an aggressor, is an innocent one and cannot be sacrificed. Life is a Divine gift, the property of all, and no man's right to barter. In chronological order, Pagan, Hebrew, and Christian have stressed these teachings in unmistakable terms. It is the creed of no one sect but the religion of all.

RECAPITULATION.

From the foregoing we conclude:

Cesarean section derives its name from the Latin, *caedo*, *caedere*, *cecidi*, *caesus*, to cut, and not from Julius Cæsar as is so generally believed.

It is one of the most ancient surgical operations, at first performed only on the dead mother by scholars, priests, barbers, and, occasionally, the natives themselves; but synchronously with the development of medicine and aseptic surgery, the procedure has taken first place among major operations of the present day. By exercising good judgment and exquisite refinement of technic the mortality is reduced to that of the simplest laparotomy; the operation is one of priority, or election, and not of last resort.

The attitude of the church, condemning embryotomy and craniotomy, and demanding infant baptism with equal rights for mother and child, has been the one most prominent factor in so rapidly perfecting the technic employed to-day.

Cesarean section should not be decried a hazardous procedure and placed in the category of **dangerous, unwarranted risks**, but, when properly performed, should vie in low mortality with other abdominal operations and be labeled—**Method of Choice**. For the child it means life, for the mother—health, for the church—right, and for the doctor—the pleasure of having faithfully performed his most sacred duty.

DISCUSSION OF DR. NIX'S PAPER.

Dr. A. P. Crain, (Shreveport): I want to say that I do not know of any operation that is simpler and easier done, as the doctor has said,

than Cesarian section. It is certainly preferable to high forceps delivery where we know the chances of mortality as far as the child is concerned is high and extremely so to the mother. This operation is as simple as any in abdominal cavity. My experience has been along the line the doctor has brought out. Out of ten or twelve the mortality was one, and that was a woman who had been in eclampsia four days. In toxic conditions, in cases of contracted pelvis, cases of eclampsia, Cesarian section should be adopted. The mortality is small and I do not know of any operation that will give you a greater reputation. The laity generally look on this operation as very serious and if you do this in a small town they look upon it as a wonderful piece of surgery. It is a good piece of surgery, but it is simple. I remember once I was trying to break in a community where I was raised and could not do it. Finally a woman down there, with a contracted pelvis, had been in labor forty-eight hours, so they sent for one of our surgeons and he could not go and sent me. When I got down there I decided to do a Cesarian section. We boiled the instruments on the kitchen stove, used the dining room table for operating table. I saved the mother and baby and both did well. In that case there was no sanitarium there, but I do not say that the home is the best place to operate these cases. In this case I had to do it.

Dr. Levy: I am very much interested in the history of Cesarian section. The historical part is of importance, because most of us thought that Julius Cesar was brought into the world by section.

In eclampsia, placenta previa and deformed pelvis there is no doubt that Cesarian section is the best way of delivery. In deformed pelvis there is no argument—Cesarian section is the route of election. However, a paper on Cesarian section brings up the point, have we not been doing too many Cesarian sections? Take Dr. Crain's case, is it not possible the next baby this woman has that there will give a ruptured uterus? That is one of the objections to Cesarian. Even though it is a frequent danger I know of cases that Dr. Nix has delivered since the Cesarian section by the normal route. Cases of placenta previa in which Cesarian operation is done, can be safely delivered by the normal route afterwards if the patient is well made for normal delivery. I see no reason these patients should be delivered by Cesarian, but they will have to be closely watched. I recently saw a case of ruptured uterus in which the patient was waiting for delivery—it was not my case—the diagnosis was made of dead fetus, the patient was delivered by Cesarian section and when the abdomen was opened the uterus was ruptured and had been so for about five days. The patient was delivered by a hap-hazard Cesarian, and operation done for the ruptured uterus. The uterus was sutured to the abdominal wall, and drainage was instituted. This patient got well.

Dr. Nix uses in everyone of his cases horse serum to prevent bleeding. I spoke to him about that yesterday, and I am afraid that some day he may have anaphylaxis. For that reason I would not use it, especially when it is such an ordinary surgical operation and when hemorrhage can be so easily controlled with hemostats.

Dr. W. Kohlman: I am delighted to hear the gentlemen here so favorably inclined to this operation, although I think we ought to steer clear of it as long as we can. It is used in many cases of eclampsia, and of course there the mortality is high. Why should you use it in eclampsia unless you know the child will probably live? I think it

takes a great deal of careful selection in these cases. I believe we should be able to perform a Caesarian without any mortality except some emergency, but I am afraid that in a general way we are going too far. In some cases the operation will be necessary, but I am afraid the general trend will be to make obstetrics too surgical. I do not want to be understood as not favoring Caesarian section in some cases, but in other cases I think we are going too far.

Regarding rupture of the uterus, I think that is not important. I think the rupture is only to be considered in a case where there is a narrow pelvis. I have seen a number of cases where women who had been delivered by a Caesarian were again confined by the natural route, but in most cases she will have to undergo the Caesarian again.

Dr. J. T. Nix (closing): I never heard of a Caesarian section being performed at home before, but I think that unquestionably the country doctors should consider a post-mortem in the home. I have no doubt that a number of babies could be delivered from dead mothers. A baby often lives five to fifteen minutes after the mother is dead, and if a Caesarian were performed immediately in many instances the baby could be saved.

The Caesarian operation is very spectacular, but it should not be done too quickly. Of the cases I have reported—21—three were my own cases and the rest were referred to me. In every case we tried other methods of delivery and it was impossible. The Caesarian operation was not a first resort procedure, but in a great majority it was the last resort.

As far as one Caesarian meaning a second, I do not think that is true. If you have a case of contracted pelvis that is all very good, but even in those cases very often if you have a small baby or deliver prematurely it will come through the natural route without any trouble. If we have rupture of the uterus following a Caesarian it is a reflection on the doctor. His technique is bad. The scar of Cesarean section should hold there as well as any place else. I think the life of the baby should be considered in all cases. There is no danger for the baby, therefore, if you have a mother who probably will not become pregnant again, it means a great deal to have the baby born alive. In those cases I think Caesarian section should be the operation of election.

A PLEA FOR THE MORE CAREFUL EXAMINATION OF GENITAL LESIONS.*

By DR. F. J. CHALARON, New Orleans.

The nation wide movement in the United States for the control and suppression of venereal diseases was given added impetus by the declaration of war. The National Government aware that in all armies venereal disease has always been the most prevalent disability affecting the individual soldier, and knowing that the highest military efficiency depends as much on good health as on

* Read at the 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

proper training, set about to guard the soldiers' health. The war department, along with the hygienic measures to that end, launched an energetic campaign directed towards the control and suppression of the venereal evil. The measures taken were both repressive and educational.

It is not necessary to enter deeply into details concerning these measures since they are known to most of you, either from personal experience in the service, or from the prominence accorded them in both the lay and medical journals. This preamble reciting briefly the paternal action of the national government for the protection of its fighting men, brings us to our position in the fight being waged against the same evil by many municipal and state boards of health. As physicians, we are guardians of the public health, and as such should cooperate fully in any fight against disease. To my mind, education is the only method which promises a realizable measure of success in the attack against venereal disease. Ignorance and secrecy have been the foster parents of the venereal triad. If to general education in sexual hygiene there be added the establishment of free clinics and proper hospitalization for the treatment of those diseases, the success is almost certain. Admitting for the sake of argument that education of the mass offers the best means to this end, there arises the question, who will do the educating. Who does the educating in all matters medical?—The family doctor.

It is in furtherance of this educational crusade that a plea is made for the more careful examination of genital lesions. We know from statistics gathered in many hospitals and sanitariums that syphilis, in its various forms, is the original disabling factor in from 15 per cent to 20 per cent of all admissions. We also know that invasion of the nervous system by the *Treponema pallida* in many instances occurs at as early a period as one corresponding to the appearance of the Wassermann reaction, or to be plainer, at the time of the general invasion of the circulation by the parasite. This colonization of the nervous system may remain latent for years before the appearance of symptoms of neuro-syphilis are manifested. Neuro-syphilis is chosen to emphasize the necessity of closer scrutiny and early diagnosis, because while other forms of syphilis may be present without a clear history of former infection, it is among the neuro-syphilitic that we find the greatest number with a negative past. Further, because of its disabling

power and long duration it becomes an economic factor of the greatest importance to any community. Remember, this is only one of the many disabling forms of the protean disease. The possibility for the radical cure of syphilis in the primary stage is an established fact, if the disease is treated before the Wassermann reaction appears.

Hence, early diagnosis is imperative and this can only be obtained by the prompt detection of the *Treponema pallida*. To reach this objective all genital lesions should be carefully examined for the specific organism and no patient with such a lesion, no matter how apparently insignificant, be dismissed until a thorough microscopic examination has shown the absence of this organism. If the lesion is seen before it has been treated by the application of mercurial antiseptics, or by cauterization, a small drop of the serous exudate, examined by either the india ink, Tribondeau Fontana, or any other good method, will show many *Treponema P.* On the other hand, if treatment has already been instituted, especially if calomel or other mercurial has been used, the spirochete may not be found even after repeated examinations. In many instances, both the physician and the patient are misled into false security by the negative findings, and the foundation for a later neuro-syphilis is laid.

There are certain features which should always arouse our suspicion about a genital lesion. An erosion of the genitals in a patient whose last exposure was twelve or more days previous. Recurrence in a healed chaneroid (mixed infections are quite common). Finally, ulceration of the meatus and fossa navicularis—these lesions are almost uniformly syphilitic. I am not speaking of the typical primary lesion with its induration, inguinal adenitis where the diagnosis imposes itself, I am speaking of this same lesion before it presents those symptoms, or when it is still in the pre-chancere stage. While more stress is laid on the examination of the genitals because of the relative frequency of that region as a site of infection, we should not overlook the possibility of a similar infection in other regions, *i. e.*, lips, mouth, fingers, etc.

In conclusion, I urge all physicians to examine, or to have all genital lesions examined microscopically, and never to consider such a lesion as of insufficient importance to warrant a rigid examination. Early diagnosis and vigorous treatment, not only remove from the community an active source of infection, but guard against the later malignant syphilis.

DISCUSSION OF DR. CHALARON'S PAPER.

Dr. H. W. E. Walther: The more the urologist sees of any genital lesion the more pessimistic he becomes. Many doubt whether there is such a thing as a chaneroid. I do not say that there is not such an identical sore infected with the Ducrey bacillus, but I do say that unless we adopt the dictum of scraping every lesion that comes to us we will fall down hard in many instances. The old dictum we were taught at school that a soft lesion was chaneroid and a hard lesion was syphilis must be relegated to the junk heap. There is no fixed rule about the feel, look, odor or taste of the lesion. You must scrape them all, and if you do not you will fall into error.

One point the essayist did not have time to bring out is the idea of the urethral lesion, which does bear directly on the subject. Many of you have no idea how many times we meet chancres of the urethra, especially the male, and unless we examine these cases or refer them to a competent laboratory worker we will make mistakes. Urethral chancres are not as rare as the text-books would lead you to believe. Another thing is that after the lesions have been practically destroyed we still have involvement of the inguinal glands in many cases. By aspirating these glands sometimes a drop of the secretion will be found streaming with spirochete pallida.

Dr. William Edler: I believe the doctor's paper brought out something that he did not intend to bring out and has not thought of. I believe all of the older men who have been doing genito-urinary work will remember that we used to be taught that all syphilitics were liars. It got into our literature, into our text-books, and it was due to the fact that, just as the doctor has stated in his paper, a diagnosis of syphilis had never been made. The individual had had some trivial, inconsequential lesion and his doctor told him it amounted to nothing, and he went away. The lesion disappeared and he carried his disease with him until finally syphilis entered into the picture maybe twenty or thirty years further on. We used to ask this neurologic case "Have you ever had syphilis," and he said "No," and we thought what a liar he was.

Another factor the doctor brought out is that we have in the treatment of syphilis a prophylactic factor that has not been discussed in this country. We can stop the spread of syphilis in an individual already infected. I mean we can stop the invasion of syphilis into his various anatomic units. We have learned in the last six or seven months that there is, even in the secondary stage of syphilis, as much as twenty per cent. involvement of the central nervous system, as shown by the cerebrospinal fluid in the way of pleocytosis. If you can catch the individual in his incipient stage and actually feed him with mercury or salvarsan or both and thereby stop the infection of his central nervous system you have accomplished a great deal.

In regard to the doctor's statement that laboratories should be established all over the country, I want to say that you will not probably be successful in establishing such laboratories where the members of this profession are not sufficiently interested to report their venereal cases, and you can only expect limited cooperation until the members of your profession will meet the government half-way. We will establish the laboratories whenever we can have your cooperation, I assure you.

Dr. C. M. Petty (Bonami): I am neither a laboratory man nor a genito-urinary specialist, but I want to say a few things from the standpoint of an ordinary practitioner. We were taught a good many years ago, before the days of the Wassermann, certain more or less fast rules in regard to the differentiation between syphilitic chancre and an ordinary chancroid. But it is not necessary to do these things so far as the diagnosis is concerned. Any physician of fair ability can make a diagnosis in practically every case of syphilis in a few minutes. It is only necessary to make a scraping from a chancre that has not been treated. It requires only a moderate amount of ability and paraphernalia, and the diagnosis could be made in practically every instance just as we would be able to arrive at a diagnosis in gonorrhea.

Dr. A. Nelken: I want to touch on the subject of the education of the physician. In the question of the prophylaxis of venereal disease the important thing is education. One who runs a large service as I have been doing for some years sees the importance of the instruction of the doctor on the subject of venereal infection. The cases we run into day after day are pathetic as a revelation of the lack of education of physicians on this subject. It is all very well to say the doctor ought to have a microscope and make his own examinations, but without intending criticism I would say that the average practitioner is not in position to make these examinations satisfactorily, even if he has the apparatus. A gram stain of the urethral discharge sounds very simple, but those who are in a position to know appreciate that very frequently even trained men make mistakes in their reports on pus slides. If we are to accomplish anything at all in this work we must educate the doctor. I have seen cases of tuberculosis and leprosy treated for syphilis. On the other hand, we commonly see syphilis treated for anything else before it occurs to the doctor that it might be syphilis. Doctors are not only careless with their patients, but with themselves. I remember not long ago a physician of considerable ability came to me with a rash all over his body. He had had a sore finger for six weeks and had had all sorts of explanations why it did not get well—he struck it on his automobile, he hit it on his desk, etc. The real nature of the lesion did not occur to him until he developed the general macular eruption. Even when the primary lesion of syphilis is in the classic location the doctor not uncommonly falls into error.

When I first studied medicine we were taught that you should never treat a patient for syphilis until you were sure of the diagnosis. That was before the introduction of salvarsan therapy. Today I think the rule should be reversed—that the patient should be given the benefit of the doubt and treated for syphilis. It is fairly well understood that the time to treat syphilis is in its incipency. The Wassermann becomes positive as a rule only after the fourth to sixth week. That means the saturation of the system with the virus. The time to treat is before that saturation has occurred, because when the Wassermann is positive we must look for all the serious complications we get in syphilis. It ought to be the rule that if we are unable to make a diagnosis, if everything points to syphilis, the patient should be given the benefit of the doubt and treated for syphilis, because the danger from the treatment is incomparably less than the danger from the disease. Granted that the average doctor is not competent to make a diagnosis of syphilis or gonorrhea except in a very clear case, then if we are going to ac-

complete anything he should have access to laboratories where diagnosis could be made for him, and these laboratories should be run so they are at the disposal of the poorest as well as of the richest patient.

Dr. P. J. Gelpi: In considering the differential diagnosis between a syphilitic and a chancroidal sore, I think the point we ought to emphasize more particularly is the incubation period. We know that the incubation period of the chancroid is very short, only a few days. We know, on the other hand, that the incubation period of the syphilitic sore has been placed from ten to thirty-six days. Consequently if we get a sore in its early stage, in the first days of its appearance, and the sore is a soft one with all the ear-marks of the ordinary chancroidal sore, and we make scrapings, we will probably not find the spirochetes even if we have a mixed infection. In other words, it is possible that we will miss them. So we should lay stress on this possibility and not rest satisfied that the patient has not a mixed infection. Recently I had a number of cases which to all appearances were not luetic but eventually developed into a hard sore. My experience is that in cases of that kind we have some induration.

The point that has been dwelt upon is early diagnosis so as to institute early treatment; but the point I want to also emphasize is that whether this diagnosis is indicated or not, these patients may go on without a general eruption, without external signs, and still have throat and mouth symptoms of such mild character as hardly to attract attention, and it may be that only later will they find they have had syphilis. I believe these cases should be followed for a longer time than just one or two weeks, so as to make absolutely sure they are not infected with syphilis.

Dr. William Harris: I have had occasion at several previous meetings to go into this subject. I never hesitate to rise each time this is brought up for the reason that each time I have discussed it I have subsequently been impressed in the laboratory with the fact that men do not take advantage of the facilities for the microscopic examination of these lesions. Aside from the fact that they do not examine them, they put them in such a state that they are not capable of being examined. It is not infrequent that men are referred to us where the doctor has cauterized the lesion so that there is practically no vestige of syphilitic tissue to be found, and in addition they have shot them full of salvarsan and other treatments so that the possibility of determining anything by a Wassermann reaction is more or less interfered with. We may, of course, still try the lymphatic glands. I do not know of anything more distressing than to be consulted by a patient who has been so handled by the physician that he is practically incapable of being cleared up as regards the question of diagnosis until months have elapsed. It is almost criminal not to take advantage of the facilities and determine at an early stage whether the individual has syphilis or has not. It is distinctly within our power to arrive at a conclusion within the first few days or a week of that infection. I do not say that a man should simply be examined and if no *treponema pallida* are found he be turned loose, but he should be carefully examined again and again, and certainly in the course of time we can say that the lesion is or is not syphilis. Nothing is more desirable than the early diagnosis of syphilis, for we know that the invasion of the organism into the blood begins early. It is possible to examine the blood in the first week or so and find the organisms are circulating, as shown by Hartwell

through inoculation of the rabbit testis, still we do not have the organisms imbedded deeply into the tissues, we do not have invasion of the genital glands, of the viscera, vascular or nervous systems. I simply want to make a plea that aside from examining these men carefully, you do not put them in such condition that they are incapable of being examined further.

Dr. Frank Chalaron (closing): I want to thank the gentlemen for their thorough discussion. I made this point and still insist on it, that prompt diagnosis is imperative if we are to do anything in the campaign for the eradication of venereal disease. We physicians should educate ourselves first if we are to educate someone else—educate ourselves to the fact that any genital lesion should receive careful attention and an accurate diagnosis.

As to the question of all syphilitics being liars, we can readily understand, now that we have found these lesions in the pre-chanceral stage, that they may last a few days and disappear and still the patient be syphilitic. How could we expect a lesion of that kind to make any impression on the mind of the patient. Fournier has said that the strange thing about neurosyphilis is that the patient has never had syphilis, and in sanatoria where neurosyphilitics have been examined the percentage giving a history of former syphilis is ridiculously low, between twelve and fifteen per cent.

REPORT OF CASE OF HYPOPITUITARISM.*

By ALLAN EUSTIS, M. D., New Orleans.

This is a case that has come under my observation since Dr. Englebach's demonstration before the Society and I bring it here simply to remind the members of the Society, that, as Dr. Englebach stated, the condition of hypopituitarism is often overlooked. This case I would never have recognized prior to his demonstration. I know very little about hypopituitarism and present the case in hopes that some member can throw some light on the condition.

Case Report:—Man 27 years of age, clerk in retail merchandise store.

Symptoms:—Loss of weight (30 pounds in 6 months), vertigo, soreness in epigastrium, acid regurgitation, coated tongue and nausea, foul breath. Appetite poor, sleeps well, urine frequent.

Family History:—Father alive at 70, in good health, mother 57, in good health. Only child. As a child he was subject to gastro-intestinal troubles and was reared by a wet nurse and on artificial food. Had measles, scarlatina and mild attack of "Flu" last fall followed by coated tongue and all above symptoms. Herniotomy by Dr. Allen five years ago. Stomach symptoms for past two months and getting progressively worse. Took calomel in March and ever since symptoms much worse. Has never had an erection of penis. Negative venereal, alcoholic and tobacco history.

Physical Examination:—He weighed 121½ pounds. Slender, hypertrophied and prominent forehead. Skin hangs loosely over hips and

* Read at Meeting of Orleans Parish Medical Society, June 16th, 1919. (Received for publication Sept. 10, 1919—Eds.)

pubic region. Mentality that of a boy 15 years of age. Deposits of fat over dorso-cervical region and over fore-arms. Tongue coated, teeth O. K. Lungs O. K. Negative d'Espine sign. Heart rapid and marked tachycardia, but no murmurs. B. P. 90- 60— 30. Liver, G. B., spleen, appendix and both kidneys O. K. Patellar reflexes exaggerated. Tonsils O. K. Testicles O. K. but penis rudimentary. Pubic hair O. K. Axillary hair O. K.

Clinical Laboratory Reports:—Urine, slightly acid in reaction, specific gravity 1020. Negative, albumin, sugar, diacetic acid and bile pigments. Urobilinogen present, excess of indican, trace of acetone. Microscopical, few hyaline casts, occasional pus cell, mucus, bladder epithelium.

Blood:—White blood cells, 9,552. Red blood cells, 5,260,000. Hemoglobin 70- 0.6%. Neutrophiles, 54. Small mono. 43. Transitional 3. No malarial plasmodium found.

This case was sent to Dr. Dimitry for examination of the eye backgrounds, and I will ask him to discuss this phase.

Wassermann reaction on blood made at Touro was negative. The skiagraph of the head taken by Drs. Samuel and Bowie shows a marked flattening and enlargement of the turcica.

The most interesting point in this case is that except for an initial purgative, the only medication he received was two grains of pituitary gland substance in tablet form three times daily, with a remarkable improvement in his symptoms in three days, and complete relief of all symptoms in ten days, while his mental aptitude has improved greatly and blood pressure has risen to 120.

DISCUSSION OF DR. EUSTIS' PAPER.

Dr. Ficklen. I would like to comment on this very interesting case. A few years ago I took a good many pictures of skulls and had occasion to study the X-ray appearance of the sella turcica. It is enlarged to an extraordinary degree in this instance. Since the patient shows deficient pituitary secretion it is evident that the gland is replaced by a growth. Dr. Dimitry remarked that the skull appeared hydrocephalic. This can be explained on the ground that any growth increases intracerebral pressure to a certain extent, and in this case the open sutures and anterior fontanel are not necessarily due to hydrocephalus, but may be caused by pressure increase from a large tumor.

Dr. Dimitry. The subject of the endocrines is chaotic, and there are few who know very much about these glands. Great research work and systematic studies will have to be made before we shall be near an appreciation of this complex problem.

The importance of the subject has so appealed to me that I at one time tried to stimulate more interest in it by proposing to the O. P. M. S. that we invite the members to read and discuss papers on the endocrines and allied subjects. The study was to have been systematically handled. Men were to have been selected from the different specialties to contribute on the subject, and these papers were to have been published jointly in book form and sold for the benefit of the domicile fund

of the society. I was told that such a scheme would have no success, for none of the members had any knowledge on the subject. I argued that the same was equally true throughout the world—and I still so argue—but that such a plan would stimulate research and that we would soon be leaders on the subject.

Dr. Eustis's paper is exceedingly interesting, and the case described is undoubtedly one of hypopituitarism. He has studied his case with his usual thoroughness, yet, like the studies of the surgeon of the thyroid gland, he looks no further back than the gland itself to account for the syndrome.

My query is "why is this pituitary gland hypofunctioning?" "Did it come about *de novo*; and if not, what caused it?"

I believe this case to be a syphilitic hydrocephalic hypopituitarism, and would like to ask Dr. Eustis if he had a Wassermann made.

We should always keep in mind that the endocrines are under the control of the vegetative nervous system, or that the reverse is the case, and that careful neurological studies are always in order, as well as the possibility of mechanical pressure, here undoubtedly present, occasioned by the luetic condition.

I wish to thank Dr. Eustis for permitting me to examine the case from an ophthalmological standpoint, and wish to state that the only feature of interest was a contracted field of vision in each eye.

Dr. Eustis (closing). I agree with everything Dr. Dimitry says. One of my hopes is to get at the cause. I do not know what is the cause. It is not a rare condition. Von Pirquet reaction was negative, so I do not know what was the cause. One interesting observation by Dr. Allen was that his head is increased markedly in size since he operated on him five years ago. His head circumference at present measures 38.

I presented this case, not with an idea that I know anything about it, but in the hope that by close study we may be able to learn some more about it.

TRANSDUODENAL LAVAGE.*

By A. L. LEVIN, M. D., New Orleans, La.

The subject which I am to bring before you to-night still has but a few admirers in the field of medicine; it is still in its infancy, unknown to many of us, and has not so far attracted the attention of the internist and surgeon, in spite of the fact that this method of treatment for various afflictions pertaining to the intestinal tract, is very simple in its application, based on good logic and promises to bring relief to the sufferer quicker than by any other methods we have used heretofore. The guilt of our sluggishness in grasping the good principles of a bowel flush from above when indicated for diagnostic or therapeutic purposes, can probably be

* Read at Meeting of Orleans Parish Medical Society, June 16th, 1919. (Received for publication Sept. 10, 1919—Eds.)

laid at the door of the world's war which has carried the attention of the medical profession mostly into the field of medical military organization. Now with the war as a horrible drama of the past, and the medical men once more at their peaceful stations in life, it is time to turn our attention in that direction whence a voice from the pen of our gastro-intestinal leaders such as, Bassler, Rehfuss, Aaron and others, is reminding us of something good, something useful which has been advocated by Jutte of New York at various times since 1912.

In the past several months, familiarizing myself with the meager reports available in the literature on the subject, and applying in practice the method of transduodenal lavage, the good results obtained by me in several cases justify the announcement of this preliminary report.

The literature on the subject is still very limited; only about half a dozen articles have appeared since 1911. This method of treatment was first advocated by Gross in an article in the *N. Y. Medical Journal* (Jan. 28, 1911) under the title of "Direct lavage of the Duodenum." He then spoke of duodenal lavage, meaning extension of gastric lavage to the duodenum, that is, he injected water and recovered it by syphonage, and in some cases allowed it to remain in situ, where it became subject to absorption. In 1912, Jutte of New York conceived the Gross idea, but applied it in the form of a flush or enema through the upper end of the intestinal tract. Irrigation of the colon in the treatment of various disorders was and is considered valuable and is well known to us; a method of irrigating the small bowel, he considers will be welcome. To irrigate the small bowel, it is necessary to introduce a tube into the duodenum. The Einhorn and Rehfuss buckets, and the Szlapka's modification of the Einhorn could all be used with advantage for such purpose; but there are disadvantages; namely, there is usually some difficulty as the capsule reaches the level of the cricoid cartilage, the long time required for the slipping of the bucket into the duodenum and the method by which we determine our position in the bowel is not practical, as will be explained further in this paper. At the time of Jutte's first experiment, Bullinger and Von Oefele of New York were carrying on investigations with regard to the physiology of enteric secretions. They used a simple instrument which consisted of a 1/16 inch soft rubber tube 4 or more feet long, one end of which was weighted down by

a metal ball and about half inch above that, a number of openings were made; the other end of the tube was connected with a flask with two opposite openings. The efferent opening is connected with a suction pump fastened to a faucet. The *modus operandi* was as follows: after swallowing the tube, the patient lies down on his right side and drinks about 100 cc of water. The heavy end of the tube is soon brought near the pylorus; while the water is propelled onward by the peristalsis of the stomach, it carries along with it the end of the tube. To determine the position of the tube, the drawn up fluid was tested with litmus paper for its reaction. Jutte then used a 1:1000 medicated soap solution also hypertonic salt solutions. These observations then led him to believe that such treatment would be of decided benefit in obscure chronic cases where toxins are produced in the alimentary tract in the course of fermentation and putrefaction, such as biliousness, toxic albuminuria, chronic constipation, bronchial asthma, etc. He carried on his investigations along that line of treatment and reported again favorable results in a number of cases (Feb., 1913, *Jnl. A. M. A.*). He modified his technique and improved on the tube which now is known as the Jutte duodenal tube. The advantages claimed for the Jutte tube are as follows: Being filled with a stylet, it can be manually introduced like a stomach tube; it can be done in a doctor's office; the time required is only a question of minutes, not hours as with other types; the small size and light weight of the sinker permits it to slip into the bowel within a few minutes; no retention of the tube is necessary when it is used for duodenal feeding; it can be readily introduced for each feeding; the openings being in the soft rubber, injury to drawn up mucous membrane is minimized; large quantities of duodenal contents can be easily obtained in a short time; there is no discomfort to the patient. The litmus paper test has been discontinued for the reason that regurgitation of duodenal contents into the stomach will give a bluish tinge to the paper, and the red paper not have turned blue because an acid reaction in the upper part of the small bowel is not infrequent, especially if hyperchlorhydria exists. He points out that the stomach content is watery, the duodenal is syrupy, tenacious and stringy. This alone is a sufficient guide as to the position of the tube. In gastric catarrh or in case duodenal fluid regurgitated into the stomach, he draws off first all the fluid possible and instructs the patient to drink water again. Then with the appearance of

syrupey fluid, we know we are in the duodenum. It is done on an empty stomach, the pylorus is patulous, and tube in a few minutes or the most 15, slips into the duodenum; a fountain syringe is then connected and the Jutte solution at a temperature of 100 or 105 F. is then introduced; from 1000 to 1250 cc is allowed to run in. The patient is turned on his back, light abdominal massage is practiced and a rest is given every now and then, not to cause too sudden distension of the small bowel. The flow is regulated so that it should take about 10 minutes for the quantity to flow in. To bring about the closure of the pylorus at that moment and thus prevent regurgitation of the fluid into the stomach, a small quantity of ice-cold milk with crushed crackers in it can be given. The nature of the case will determine the kind of fluid to be used. When it is the desire to cleanse the bowels thoroughly, a saline of 9 gr. to 1000 cc at body temperature is given. To flush out the kidneys, plain distilled water is used. In icterus and when digestion is impaired, 0.5 gr. of pure castile soap to 1000 cc of saline is beneficial; astringents can be added in catarrhal enteritis, quinine and ipecac in solution probably in amebic dysentery. The fluid should enter the bowel at body temperature, and increase in fluid temperature will cause a corresponding increase in pulse and tension. The good effects of such a flush is the thorough removal of intestinal toxemias. Catharsis cannot do the work of such a lavage which reaches and cleanses every part of the small intestines.

In May, 1917, Jutte wrote an article in *Am. Jnl. of Med. Sc.* on "Auto-intoxication and its treatment by transduodenal lavage." As we know auto-intoxication occurs in two forms, the hystogenic and enterogenic. The hystogenic form is caused by the abnormal function of the antitoxic glands and the tissues; and the enterogenic—by the abnormal action of the digestive enzymes or bacteria upon the food. The result is the absorption of the toxins into the blood. In both forms, the gastrointestinal tract is the principal channel of elimination. The Metchnikoff and the elimination treatments are the most generally employed. The Metchnikoff method of introducing the *Bacillus bulgaricus* into the intestinal tract can only be applied in alkaline putrefaction; it is contra-indicated when volatile fatty acids or their derivatives are at fault. Colon irrigation and purgation is our salvation; but colonic irrigation does not reach the small intestines, nor can we wash clean a filthy convoluted tube 22 feet long in 4 to 6 ounces of a purgative fluid; a quart of a purga-

tive non-absorbable fluid without causing any discomfort to the patient will certainly wash well the entire alimentary tract. The transduodenal lavage is then the ideal method for such cases. The solution must be non-absorbable and the original Jutte solution has given best results in the cases reported by Bassler. It consists of 9 grammes each of sod. chloride and sod. sulphate, 4 cc of a 7 or 10% alcoholic solution of phenolphthalein, a teaspoonful of sod. bicar. is added if acidosis is suspected, and 1000 cc of water.

C. D. Aaron (*Med. Rec.*, Aug. 17, 1918) in the treatment of intestinal stasis by duodenal lavage, uses 30 grammes of mag. sulphate and 60 grammes of sod. sulph. in a litre of water. The lavage is given daily for 10 days as a first series of application; then on alternate for another 10 days, and the third series follows at intervals of 3 days. Continue with one lavage a week until recovery is fully established. There are no unpleasant by-effects and patients tolerate the treatment very well. Aaron claims that there has not been a single failure in any of his cases of intestinal stasis and incidentally, also of constipation, in spite of the existence of kinks and adhesions. He draws the following conclusions:

1. That kinks and bends are not necessarily the cause of intestinal stasis and consequently their surgical removal will not cure stasis.
2. That any other pathologic condition really caused by intestinal stasis should disappear after successful duodenal lavage treatment.

If they do not disappear, the condition was not due to intestinal stasis. He advises to adopt this method on a wide scale in order to investigate the above conclusions, which are left open for criticism.

In July, 1917, Jutte in another article dwells on his technique for office practice with or without oxygen insufflation. In Nov., 1918, Rehfuss in an article in the *Med. Clinic of N. A.* discussing the pathology and treatment of biliary affections, advocates strongly the study of duodenal contents from chemical and bacteriological standpoints, and recommends highly the method of direct lavage of the duodenum in addition to the autogenous vaccine treatment. Bassler (Jan., 1919, *Southern Medical Journal*), praises this method of treatment in ulcerative colitis, some forms of parasitic infections of the colon and postoperative ileus. He reports a number of very interesting cases with complete recovery when other methods of treatment have previously failed. His conviction

in the superiority of this method conveys a message to the surgeons that in the distressing cases of postoperative ileus, this mode of procedure will bring them much happiness, for the adynamic state of the bowels or an existing reverse peristalsis, will be quickly corrected by a duodenal flush. To this brief review of the literature on the subject, I wish to add my preliminary report on the following cases:

Case 1. V. Y. 52, carpenter, consulted me on March 3, 1919, giving the following history:—Past 6 months stomach trouble, began with very sharp pain in epigastrium, not always dependent on food, but aggravated by exertion. Recumbent position would give some relief. Of late, pain constant. When trouble first began, there was nausea and vomiting of mucus, no blood, off and on during the day, worse in the morning; never vomited food. At time of consultation, there was no vomiting, but the principal complaint was constant sharp pain in the epigastrium. Bowels were constipated; insomnia was present; appetite good, but afraid to eat. Lost 5 pounds in weight; normal weight being 124. Exam.—H. & L. neg. Mechanical teeth; pain on pressure in upper right abdominal quadrant, epigastrium very tender and rigid. Conjugativae somewhat yellow, temp. 99, urine neg. Test breakfast suggests hypermotility; quantity obtained after one hour very small, HCL strongly present; microscopical of contents neg. X-ray—stomach high up, pylorus and duodenum pulled over in the region of gall-bladder, marked irritability, extreme degree of hypermotility through the stomach and small bowel suggesting very strongly gall-bladder trouble; evidence of colonic stasis. Wassermann test was not made, no suspicion of any venereal disease. Occult blood test—neg. Diagnosis—very suggestive of a chronic cholecystitis, with adhesions of gall-bladder. Transduodenal lavage with original Jutte's hypertonic solution was instituted every other day; 10 irrigations were given with remarkable improvement. There is no epigastric rigidity, there is no pain, he is on full diet and enjoys his meals, he sleeps all night without awakening and his bowels are well regulated. He still gets one irrigation a week and he has returned to work after a period of 9 months illness.

Case 2. L. C. C. 40, physician. From early childhood was a sufferer from gastro-intestinal irritation caused evidently by oxyuris vermicularis; at times the irritations would be so strong that it would almost cause spasms; he would suffer from a burning and itching sensation in the rectum. Later on in life, those irritations seemed to disturb him very little up till 2 years ago, when he had a sudden pain in the left lower abdomen; it was so severe that volvulus was suspected at that time; later on the pain shifted to the right side of the abdomen. From that time on, he began to suffer from periodic attacks of severe pain, located in the right lower abdominal quadrant, radiating to the back and along the right thigh, at times accompanied by severe abdominal cramps followed by diarrhea, with a quantity of mucus in the stools; on several occasions, oxyuris was found in the stool; each attack would bring on tachycardia, extreme nervousness, burning and itching sensation in the lower bowel, with other symptoms suggestive of a spasmodic contraction of the descending colon. Examination revealed nothing of great importance except a slight degree anemia; specimens of stool

examined several times did not show oxyuris ova. X-ray plates are somewhat suggestive of a chronic appendicitis.

A very annoying feature in this case was the accumulation of large quantities of gas in the intestines, retention of which would give rise to severe cramps. He had to be extremely careful in his diet. Diagnosis—Doubtful; probably chronic intestinal parasitic disease (oxyuris), causing spasmodic contractions of the colon and the possibility of a chronic appendicitis should be borne in mind. The patient has been relieved considerably by transduodenal lavage, there is no abdominal distension, he is not annoyed by passing of flatus, he can select a more liberal diet without any disturbance, has gained 5 pounds in weight in the last 2 months, and there is an improvement in the percentage of hemaglobin. A point of interest is the fact that after 2 such irrigations, pin worms were found in the stools.

Case 3. Mrs. M. M. 58, housewife. Admitted to hospital on May 14, 1919. Has had gastric disturbance since her girlhood at irregular intervals; never been jaundiced; mental strain would bring on gastric disturbances; nervous off and on for the past 12 years. Attack of nervous breakdown in February, 1919; heart beat at times, 168 per minute; the main features of her stomach disturbances were frequent belching and regurgitation of small amounts of bitter yellow fluid resembling bile; it would wake her up from her sleep and she would regurgitate that fluid. She also suffered from a peculiar pressure in the epigastrium; very uncomfortable several hours after meals and she claimed that she could not digest any fat, as it would appear in the stools. Examination—L. neg.—H. somewhat rapid, first sound not clear, abdomen relaxed, no palpable tumor, reflexes somewhat exaggerated, general appearance pale and somewhat anemic. Test breakfast—fractional analysis—absence of HCL; examination of stools—excess of fat. Diagnosis—Achyilia Pancreatica, with reverse peristalsis. Daily transduodenal lavage was instituted in connection with doses of HCL and pancreatin. Patient is improving rapidly, there is no regurgitation of bile, the reverse peristalsis has been evidently corrected. It is not necessary to administer any drugs for correction of her constipation which existed before.

Two other cases, one of mucous colitis and another of nausea nervosa were also greatly benefited by this method of treatment. I do not mention their histories in detail for lack of time. These few cases should impress us with the value of such treatment in a selected group of cases, bearing in mind the simplicity of procedure. I am carrying on investigations along this line of treatment in a number of cases and will report results in the future. The slight modification I have introduced consists of withdrawing the stylet as soon as the tube passes the level of the cricoid cartilage and the tube easily slips down by advising the patient to take small sips of water; beginning with the second or third irrigation, the patient is trained in to swallow the tube without the stylet. The position of the patient during the irrigation can remain the same, on the right side, without any bad effects.

DISCUSSION OF DR. LEVIN'S PAPERS.

Dr. Allan Eustis: I have been very much interested in Dr. Levin's discussion for more than one reason. I have been using a Jutte duodenal tube for the past four years, similar to the one described by Dr. Levin. They are much easier to swallow than the larger stomach tubes and I have discarded the latter in favor of Jutte's, in all gastric cases for some time, but I have to use the stylet, at times in introducing it.

As far as transduodenal lavage is concerned, I have tried it on several cases with excellent results temporarily. I have been particularly interested in Jutte's work in cases of asthma, which bears out my original contention that this condition is due to toxemia. However, I have not found it necessary to resort to transduodenal lavage in such cases, as they usually yield to dietetic measures. Also in mucous colitis, transduodenal lavage is simply a palliative measure and for a cure the cause must be removed. In certain cases of pyloric stenosis it may be very difficult to get the tube into the duodenum, also in cases with marked gastric atony. In such cases after the position of the stomach has been determined by scratching auscultation, the tube is swallowed only so far as the the lesser curvature of the stomach, when the patient is instructed to lie on the right side and continue the swallowing of the tube. The tip will fall into the pylorus. In certain cases the duodenal contents can be obtained in ten minutes, but in others it may take twenty-four hours.

Instead of a bottle as shown by Dr. Levin, I use an ordinary glass syringe with asbestos plunger in withdrawing gastric contents. The other day at the office we withdrew 335 cubic centimeters of gastric contents just through this little tube and with an ordinary one ounce glass "Triumph Aseptic" syringe. There is rarely any retching while withdrawing contents.

The main point I wish to emphasize is that instead of using transduodenal lavage in the treatment of asthma, mucous colitis or intestinal toxemia due to some mechanical obstruction, it is far more rational to determine and remove the cause of the condition than to attempt to simply relieve one symptom.

Dr. B. Guthrie: I have had no experience with the particular tube that Dr. Levin is now using. I agree that the smaller tube is a preferable type of stomach tube for extracting contents for analysis. It is an instrument that is much more easily borne by the patient, than the larger tubes we formerly used.

PROCEEDINGS OF THE AMERICAN SOCIETY
OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

A BRIEF ACCOUNT OF YELLOW FEVER IN GUAYAQUIL.*

By WENCESLAO PAREJA, M. D., Guayaquil.

GEOGRAPHY.

Guayaquil, the capital of the province of Guayas, is situated on the left bank of the Guayas River, 42 kilometers above its mouth. It is the principal port of the Republic, as through it passes the larger part of the country's exported products.

The drainage system of the Guayas River is formed by a number of affluents which, rising on the western slope of the Andean cordillera, run more or less parallel to each other and also to the cordillera itself for a distance of approximately 150 kilometers, ending in two large tributaries,—the Grande River and the Daule River, which unite at Guayaquil, forming the Guayas. Of all the numerous tributaries of these two rivers, only one flows from east to west, the Yaguachi; the others flowing more or less regularly from north to south and uniting a number of times between each other, forming large islands or peninsulas of fertile bottom land as a result of the alluvial deposits of these rivers.

Upon the banks of the rivers of this system are situated towns of considerable importance in the two provinces of Los Rios and Guayas,—such as Babahoyo, which is the capital of the Province of Los Rios; Vinces, Catarama, Caracol, Ventanas, Baba and Quevedo, on the tributaries of the River Grande; Daule, Colimes and Balzar, on the River Daule; Yaguachi, Milagro and Naranjito, on the River Yaguachi and its branches.

All the lands of this extensive valley are very low; occasionally low hills, some of which are of granite, break up the horizon. The islands and peninsulas thus formed by this deposit of rich alluvial mud are generally somewhat higher on their banks than at the center—a difference of but a few feet, but sufficient difference so that nearly all of these large areas are more or less at sea level. So there exist between these rivers two zones of different levels;—the zone along the river banks being high, fertile, and frequently cultivated, the products being cacao, coffee, and other

* Read by title.

tropical fruits,—while in the central lowland zone it is impossible to carry on any permanent cultivation. In some places this central zone is adapted to rice growing, but the greater part of this area consists of uncultivated lands covered with shrubs, bushes and vines which during the four or five months of the rainy season are flooded. These areas then virtually become lagoons which communicate with the rivers by natural channels.

On approaching the cordillera of the Andes, toward the north and east, the ground rises somewhat and the vegetation becomes more dense, finally being virgin forest, rich in woods adapted to construction purposes, and where are found rubber trees and all the rare plants indigenous to such a dense floral region. As you ascend higher, you arrive at the foothills of the Andean cordillera, where the vegetation is less dense. Here the rivers are no longer navigable, being simply torrents rushing down through steep and rocky channels. The insects disappear, and in a few kilometers you pass from a torrid zone to a temperate and agreeable climate.

Below Guayaquil, as far as the mouth of the River Guayas (Mondragón Island), all the land is uniformly low, covered by a dense growth of mangle (*Rhizophora Mangle*). The high tides constantly inundate these large areas, and no towns exist along the banks.

CLIMATE.

Situated, as is this drainage system of the River Guayas, between the first and third degrees of south latitude, and at sea level, its climate is absolutely tropical. The influence of the sea breezes is felt but little, so that the temperature is more or less uniform, in the cool season being about 10° C., and in the warm season about 33° C. This occurs exactly in the rainy months of December to April,—by the inhabitants called winter (astronomically summer). The rainfall, however, varies throughout the region, for there are zones in the vicinity of the cordillera, covered by dense forests, where it rains the whole year. On the other hand, in the coastal littoral it rains but little, and some years not at all.

RACES.

It would be difficult to describe exactly the ethnological type of the inhabitants of Ecuador, for, the races which have had

their origin there being so varied, there exists a great mixture of diverse tints—the indigenous race, however, predominating. This indigenous American race shows evident signs of degeneration,—small size, weak constitution, sad expression, slow, monotonous speech, simple customs, lack of ambition, frequency of body deformities, such as: dwarfishness, microcephalia, badly formed ears, ogival palate, etc., etc., which might serve as a theme for an interesting anthropological study, but which only make themselves noticed here by the evidently little resistance shown by the race against the more common diseases. Happily, these characteristics are modified after a few generations by mixture and education.

The indigenous race which I have just mentioned lives principally in the inter-Andean region of Ecuador. Now, in this region neither yellow fever nor tropical diseases exist, but these inhabitants of the mountains are the ones that provide the principal laborers and soldiers who come to Guayaquil and are here attacked by the tropical fevers.

PREDOMINATING DISEASES.

Although, as I have said, this region of the Guayas is absolutely tropical,—for at no time of the year does one fail to see the green fields, and while the means of spreading of nearly all tropical diseases are present,—many tropical diseases are not found there, nor even the most fearful of them.

Malaria is a pandemic which reappears every year during the last months of the rainy season, when the *Anopheles* multiply abundantly in the country and in the cities. Besides, there exist zones which I have mentioned in which it rains throughout the year and in which malaria is never lacking; it is also in those zones where are found the severe forms produced by the *Plasmodium falciparum*, and by the association of the *Plasmodium falciparum* and the *Plasmodium vivax*. It is much more rare to find the *Plasmodium malariae*, agent of the quartan, of which some cases are seen in Guayaquil during the dry season.

The uncinariasis is, with malaria, the most frequent disease of the region; and it is so abundant that it constitutes 60%, more or less, of the contingent of sick of the Hospitals of Guayaquil.

Other intestinal worms are also frequent, as tenias, ascárides, tricocephalus. However, no distomas nor bilharzia are found.

Entamebiasis is very frequent, having many dysenteric manifestations and complications, as hepatic, even pulmonary, and others.

The other protozoa of the intestines, such as the tricomonas, lamblias and balantidiums, are not rare.

The bacillary dysenteries appear in some years, when, for some special reason, such as big harvests or movements of troops, large numbers of people are crowded together under bad conditions in small towns or places.

Bubonic Plague made its appearance in Guayaquil in the year 1908, when there were some hundreds of cases, but has been diminishing gradually until at the present time one can say that it no longer exists,—thanks to the constant campaign which has been carried and continues to be carried on against it.

Typhoid fever, often found in the inter-Andean region, can be said not to exist in Guayaquil, for, though in some years numerous cases of this sickness have been reported, it was due to special conditions the discussion of which would take up a great deal of time,—but it is my impression that the typhoidal infection is no more frequent in Guayaquil than in any other salubrious country.

Other sicknesses peculiar to the tropics of other countries are absolutely unknown in Ecuador. Thus, filariasis, which has been investigated at various times by professional men of the country and by foreigners, has not been found. The same can be said of the leishmanioses, internal as well as external. Yaws and other similar infections have been impossible of demonstration.

Up to the present time no human trypanosomiasis has been reported. However, with respect to Chagas disease, sufficient investigations have not yet been made to positively deny its presence, for there exist in all the region, various species of *Conorinus* resembling the *magistus*, and even the same triatoma has been shown me by a native entomologist. It would not then be impossible, perhaps, to find this anemia which seems so difficult to find during the life of the patient, for its clinical changes are very similar to uncinariasis and malaria. At all events, if it has been suspected at any time, it has not been publicly announced.

Up to this point I have referred succinctly to the gravest affections of the tropics, for it would be tedious to enumerate the light affections such as cutaneous diseases and the ectoparasites, which,

if not rare, are not more numerous than in any other country in the same latitude.

Of the great pan-human scourges,—tuberculosis and syphilis,—the first has increased in recent years in a manner truly alarming, to the extent of constituting a topic of intense preoccupation on the part of the authorities and of the press of the country. Syphilis, although not very frequent, constitutes no less a menace, for the present sanitary organization has not yet established an efficient prophylaxis against this terrible disease.

I will note, in this brief statement, that smallpox is very rare in Ecuador, and that the exanthematic typhus is almost unknown. This also may be said to be true of scarlet fever and diphtheria.

YELLOW FEVER.

Yellow fever appeared in Ecuador, according to official data, in the year 1842, causing at that time a mortality more or less unbelievable if one relies upon lay historians. Previous to that time there is no precise description of it, nor even any tradition causing it to be suspected. Perhaps in pre-Colombian times the disease came to this West Coast, but there is nothing to prove it. The historic fact is that on arriving in this city in 1842 it found the entire population non-immune, and thus produced the ravages which remind us of the medieval descriptions, and which have been repeated always whenever this infection has reached a country not immune and rich in *Aedes calopus*.

It is possible that from that time yellow fever may not have completely disappeared from the country, even though many people believe that such has been the case during long periods of time; but this is hard to prove because there have been no statistics whatever until the year 1909, at which time the Public Sanitary Service was created and ordered the isolation of all cases.

SANITARY ORGANIZATION.

The Public Sanitary Service consists of a Director elected by the Congress of the Republic, resident in Guayaquil and subordinate to the Minister of the Interior. This Director has jurisdiction throughout the Republic, and there are or may be Sub-Directors in Quito and in the capitals of the provinces wherever same may be necessary.

The law authorizes the Director to formulate special regulations

against the propagation of epidemic diseases; it gives him authority to inspect dwellings, to close public establishments, and to take extraordinary measures, such as obligatory vaccination. Also, the law orders that the civil and military authorities shall give their aid,—even that of the public forces, if it should be necessary,—to the Sanitary Service.

The regulations issued by the Public Sanitary Service prevail over any municipal provision which may be contrary thereto. The special sections are in charge of Inspectors controlled by the Assistants of the Director's office, or by the Director personally. Until now only two sections have operated regularly in Guayaquil,—that of the yellow fever and that of the bubonic plague.

Unfortunately the revenues upon which the Sanitary Service depends are so small that the service has not yet been able to do thoroughly efficient work in all the branches of its activities; but little by little the official element, and the people as well, are becoming enlightened as to the transcendental importance of this service and giving it their aid to the extent of the means in the public exchequer.

EFFORTS TOWARD SANITATION.

In the year 1913 the Government, duly authorized by Congress, requested the Sanitary Service of the Canal Zone to send a commission to study local conditions at Guayaquil and formulate plans to improve them. This commission, presided over by the then Colonel William C. Gorgas, came to this city and presented an important report relative thereto.

After this the Government of Ecuador made a contract with the firm of J. G. White and Company for increasing the supply of potable water, constructing a sewerage system, and providing for the paving of the city. The political changes and, principally, the world war have prevented the execution of this work with the rapidity desired, although the contract continues and work is being done very slowly,—not due to lack of attention, nor to neglect on the part of the Ecuadorean Government, but on account of the scarcity of customs receipts, from which come the funds appropriated for this work.

ACTION OF THE ROCKEFELLER FOUNDATION.

On the other hand, in the year 1915 the Rockefeller Foundation, taking into consideration the proposition approved by the Pan-

American Scientific Congress in Washington,—which proposition was made by General Gorgas, and in which the American Governments were urged to eradicate yellow fever from the face of the earth in the same way that man has caused useful and inoffensive animal species to be extinguished; taking into account therefore this desire, the Beneficent Foundation sent a commission composed of General Wm. C. Gorgas, Drs. Guiteras and Carter, Majors Lyster and Whitmore, and Mr. Wrightson, who covered all the zones of the continent where the disease might possibly exist,—the conclusion being reached that its most important source was Guayaquil, although perhaps there existed others of less importance.

In the year 1917 America entered the war, and the sanitary efforts relative to Guayaquil remained in a quiescent state, so that yellow fever increased by some hundreds of cases, due to causes easily explained, as is shown by the following table:

Months.	Years.		
	1917	1918	1919
January.....	7	2	85
February.....	8	1	43
March.....	11	7	17
April.....	10	9	3
May.....	14	22	1
June.....	8	16	0
July.....	4	9	0
August.....	2	15	0
September.....	1	27	0
October.....	0	41	0
November.....	2	43	0
December.....	0	46	0
Total.....	67	238	149

In the year 1918 General Gorgas sent to Ecuador another commission representing the Yellow Fever Commission of the Rockefeller Foundation. Dr. Charles G. Elliott, of Northwestern University, made a profound clinical study, and the eminent investigator Hideyo Noguchi, of the Rockefeller Institute, carried out an important bacteriological investigation which enabled him to discover an organism whose properties accredit it as the truly pathological cause of yellow fever, and he prepared an immunizing vaccine.

PROPHYLACTIC WORK CARRIED ON BY THE FOUNDATION.

At the end of 1918 Dr. Michael E. Connor was sent to Guaya-

quill by General Gorgas as an expert sanitary officer to assist the sanitary authorities of Ecuador in the extirpation of yellow fever along lines decided upon by the Yellow Fever Commission in 1916 as being considered most likely to succeed.

The results of this co-operation are shown by the following data:

Month.	Year 1919. Deaths.
January.	85
February.	43
March.	17
April.	3
May.	1

The time is yet too short since the last cases developed to state that the disease has definitely disappeared; but considering the special conditions that have existed in Guayaquil, there could not be a more auspicious outlook.

The city extends along the river bank forming a half moon three kilometers long by one and a half broad. The streets are broad and straight; those in the center of the town are paved,—but in the suburbs the ground is low, and marshy during the rainy season. This does not at first glance appear of great importance in the spread of yellow fever, since the marshes are not suitable for the development of the larvæ of *Aedes calopus*; but it is a fact that the water is deposited not only in the streets, forming deep puddles, but it is held under the houses, which are of cane or wood. The houses constructed of wood in the greater number of cases have the floor raised from the surface of the ground, furnishing a dark and sheltered space suitable to the life of *Aedes calopus*. The rain water deposited there forms excellent breeding places for these mosquitoes. It is not only in these places the *Aedes calopus* develops, but also, as the water supply for the city is insufficient, the inhabitants are obliged to provide for their needs during the three or four hours when the water is running in the pipe lines, storing it in tanks, barrels and other similar containers,—so that, whether due to ignorance, carelessness or lack of resources, the people do not (or better said, did not) keep these water containers properly covered, and they furnish magnificent and commodious breeding places for the larvæ of *Aedes calopus*.

Another thing favorable to the development of yellow fever is the fact that the houses of the suburbs have walls of bamboo

which have cracks wide enough to permit the passage of the adult *Aedes calopus* from one house to another. Nevertheless it is not in this outer zone that cases of yellow fever are most frequently found, because as a general thing the non-immune subjects, strangers and mountain people live in the central districts,—so that it is in the neighborhood of the cheap hotels, boarding houses, or around the barracks and markets, where the most cases are generally found. It is necessary to know that the greater number of troops are from the highlands, and consequently are not immune to yellow fever. Also, many of the food peddlers are hill people, since it is from the mountain districts that the most of the food-stuffs come. This explains the formation of primitive sources in the vicinity of such places.

The epidemic increase does not, in my opinion, depend so much upon the rains and the greater or lesser atmospheric humidity, but, first, upon the number of infected or infectable *Stegomyia* existing in the district; second, on the number of non-immune persons living there, and; third, upon the surrounding temperature, as the variations in temperature occur within very limited areas. Thus we have the greatest epidemics not only in the rainy season, when they are, of course, most frequent, but may have them also in the months of June and July, as happened in 1916, and in October and November, as in 1918.

We have seen, too, that as soon as the number of breeding places diminishes (uncovered containers of clear water) the epidemic also diminishes rapidly, even during the rainy months with the city surrounded by marshes, as at the present time (May, 1919).

The problem of the prophylaxis of yellow fever is, therefore, a question of an anti-larval fight,—that is to say, to get rid of all the containers of clear uncovered water. I emphasize this point for the reason that there are those who still believe that yellow fever comes from lack of cleanliness and sanitation in the city. A short time ago, when Dr. Connor took charge of the yellow fever section of the Sanitary Service and began to order the covering of all the tanks, there were those who said: "What we need is sanitation, as we cannot believe that merely by covering the tanks the yellow fever will disappear." Well, the answer has been one of categorical fact,—that by covering the containers of clean water, and by the fact alone, the disease has diminished

to such extent that it may be considered completely under control before the carrying out of any sanitary work.

A very interesting fact should be noted in this connection which speaks very well for our city and also very highly for the wisdom of our chiefs. It is that in the past campaigns against yellow fever in Cuba, as well as in Panama and even in Brazil, the sanitary methods were backed by show of force on the part of the authorities, who insisted upon compliance with their orders,—while in Gayaquil it has been a work of co-operation in which the inhabitants have given their support, and against which no difficulty has arisen,—but, on the contrary, everything has been applause and approval. An unusual fact is that if there has been any reticence or veiled criticism as to the sanitary work, this criticism has not been made publicly.

From the foregoing is understood the facility and brilliant rapidity with which such good results have been obtained. The plan has been very simple:

1st. The isolation of all suspicious cases behind metallic screening. For this purpose there is an isolation ward in the general hospital, in which are placed patients showing any doubt as to their diagnosis. As soon as the case is considered positive yellow fever it is moved to a special isolation hospital. If not a case, it passes to the medical service to which it belongs.

2nd. The division of the city into districts of such size as to permit a methodical inspection, house to house, within the period of a week. The inspectors take notice of all water containers, in each house, which might serve as breeding places, and of anything else of interest to their work; they then report all these details to their chief so that he may give any necessary orders. A strict control assures the success of this work, as these inspectors are watched over by supervisors, and by the chief personally.

Advance notice was given to the inhabitants so that they might conveniently cover their water containers within the period of fifteen days to the entire satisfaction of the chief of the office. In case the house owner did not so do, the Director ordered it done at the expense of the said owner.

In this manner the coefficient of *Aedes* has been reduced to a practically inoffensive point, since, the greater number of the inhabitants being immune to yellow fever, the few *Aedes* which have remained infected have disappeared or should disappear before

reaching a non-immune subject to whom she can transmit the disease.

ETIOLOGY AND CLINICAL.

Etiology. In this paragraph I consider it available to state the very important investigations made by Dr. Hideyo Noguchi, in our small isolation hospital at Guayaquil, resulting in the discovery of an organism which can now with assurance be considered the specific cause of yellow fever.

I had the good fortune of being in charge of the yellow fever isolation hospital when Noguchi arrived to complete his investigations.

It might be thought indiscreet to give these details, were it not that they have already been made public, at least his general conclusions, since Noguchi himself published a short article on this subject in the *Journal of the American Medical Association*; for this reason I feel it permissible to tell the congress some of the details of these interesting investigations.

Noguchi arrived at Guayaquil July 15, 1918, having been sent by General Gorgas to carry out some yellow fever research work as a member of a yellow fever commission. On the morning of the 16th he commenced his experimental work, inoculating infected blood from four cases of yellow fever into the peritoneum of several Guinea pigs. These cases of yellow fever were at different stages of the disease; an attempt was made to select only those cases which showed the most characteristic symptoms of yellow fever, for which we took into consideration pyrexia, bradycardia, oliguria, albuminuria, icterus, and hemorrhages. If the patient died, I performed personally the autopsy, in the presence of Dr. Noguchi; we demonstrated the typical lesions (hemorrhages, mucosal, intestinal, acute parenchymatous degenerations) so as not to leave any doubt about the accuracy of the diagnosis. Specimens were taken from various organs to study histologically. Each case was most thoroughly worked out.

Noguchi daily injected infected blood from these cases of yellow fever intraperitoneally; both from slightly as well as strongly suspicious cases, injections were made into various laboratory animals, especially Guinea pigs.

On the morning of July 25 an autopsy was performed on Asunción Arias, a robust Indian from Latacunga, seventeen years of age, a typical case of yellow fever with albuminuria, intense

icterus, marked hemorrhages; the stomach contained dark contents, liver showing typical degeneration. I went up to Dr. Noguchi's laboratory, where he showed me what he had on a slide under the microscope. I saw what might be considered spirilla, but under intense ultra light appeared as a rosary of luminous points, extraordinarily active and flexible. It proved to be *Leptospira* from the cultivated blood of Asunción Arias.

It is not possible for me to tell the intense emotion produced in me by viewing this self-same organism, because of the extremely careful technique and the competency of Noguchi, the microorganism under view could not be other than the mysterious causal agent of yellow fever.

Many authors, from Marchoux to actual South American workers, had suspected that the cause of yellow fever might be a spirillum, or at least a protozoon similar to tripanosomes or treponemata. The most weighty reason for this belief is negative, that is to say that previous bacteriological investigations had always failed; consequently it is almost sure that it is not a bacterium but a protozoon. Noguchi thinks it is an intermediate type, because it has some of the bacteriological properties of bacteria, being at the same time, for other reasons, near to protozoa. I later saw this culture transplanted into other media, principally in isotonic solutions of animal serum (sheep and mules), and grow in some of these culture tubes; some were sterile, because its culturing does not seem so easy as for other similar organisms.

I afterwards saw this culture injected into the peritoneum of other Guinea pigs, and saw reproduced lesions absolutely similar to those of yellow fever. The Guinea pigs had marked epistaxis, intense icterus which stained a yellow color all tissues, stomach contained black fluid (coffee grounds) and fatty degeneration of the liver, sometimes also of the kidneys, and finally chiefly, pulmonary hemorrhages, which are very constant in inoculated Guinea pigs. To such a degree were these lesions that many times after performing a human autopsy, it was possible to compare immediately the specimen of human organs with those obtained from Guinea pigs, which appeared microscopically identical.

It was not only in the inoculated Guinea pigs that the lesion appeared characteristic, but also in other animals, as dogs and monkeys, especially brought from Panama by Dr. Noguchi, since the indigenous monkeys showed a resistance.

The transmission to Guinea pigs was made in several ways. By way of the digestive tract it appeared that it was innocuous. Several times I have seen ingested fresh viscera of sick Guinea pigs by well ones without their showing any appreciable changes. On the other hand, subcutaneous inoculations were always positive; after two or three days, in general, the Guinea pigs had fever ending fatally with typical lesions of yellow fever. This I have seen realized in various series, finding after each step the same organism and the same lesions, which appeared to me absolutely confirmatory.

I saw also its transmission from man to animal, and from animal to animal, by means of the mosquito, *Aedes calopus*. Those recently sick in the second or third day of the disease introduced one hand uncovered to the elbow into the interior of special cages containing large quantities of female *Aedes calopus*. These, after having been infected, were guarded for fourteen days; at the end of this time a Guinea pig was introduced into the cage with the abdomen shaved and the feet tied. Not entirely satisfied, the thorough and untiring Noguchi wished to see the development of the disease in the animals day by day, taking not only the thermal curve, but also making daily examinations of the blood and chemical and microscopical examinations of the urine. He was also able to observe that the albuminuria presented similar variations as observed in man, and also the presence of cylindruria more or less abundant. Now, some of these inoculated Guinea pigs, after showing evident signs of yellow fever, became normal, spontaneously cured. If then (at this time) they were now inoculated either with a culture or with an emulsion of viscera, the result was negative. The Guinea pigs were immune to the yellow fever infection.

Among many other experiments to prove the specificity of the discovered organisms can be cited the phenomena of bacteriolysis of Pfeifer, and the passing of these organisms through a Birkfeldt filter (*v. y. n.*) proving the infection of healthy Guinea pigs with the filtrate, and finding the organisms in the animals thus inoculated, thus completing the chain. By these means it seems to me that a new road for investigations is now open; the organism found by Noguchi, because of these cited proofs, appears to me as the pathological cause of the disease.

Two great problems are immediately suggested, diagnosis and treatment; on both of which problems Noguchi now finds himself

working. For a diagnosis it would be necessary to discover a technique capable of demonstrating the organism under a direct and immediate examination, and, relative to the treatment, perhaps it will not be difficult to find a curative serum, since the organism, when inoculated in animals, will grow.

CLINICAL.

There is nothing important or new which I can add to the clinical description of yellow fever, although I have watched this disease for ten years, during which time there have passed under my observation nearly fifteen hundred cases. The complete classical picture described by authors has been seen, but if there is something worthy of being noted, it is a very great frequency of grave cases, which might be explained because I have worked in an isolation hospital where only suspicious cases are sent, which are, at least, of medium severity,—nine cases have remained doubtful, or complete data have not been obtainable.

Rarely has it been possible for me to see the beginning of a case of yellow fever. In the few cases this has happened—a nurse of the same isolation hospital, or persons from private practice—I have noticed nothing more than a sharp attack, more or less violent, of an acute infection; chill, prostration, headache, bone-ache, pain in the limbs, principally in the legs, more rarely vomiting and epigastric tenderness. At times the commencement is not so intense, so that the patient does not suffer much and can bear the pain for a few hours, even continue at his occupation for a day or two; but as a rule the individual does not resist, and promptly seeks his bed and medical assistance.

The chill is usually single, not very severe, and in some cases absent. The headache is of all signs, at the beginning, the most worthy of consideration, because it is rarely lacking even in cases relatively benign.

It is very important to note the exact date of the beginning of the disease, because the diagnosis may largely depend on the day of development of a suspected case. But this is in some cases very difficult, since the individual may have suffered from an attack of malaria in the period of inoculation of yellow fever, which, moreover, is not a rare event—since malaria prevails in every month of the year. Doubts immediately arise when we see subjects

who, according to our data, are met on the seventh or eighth day, and are found with high temperature, but without albuminuria, which ordinarily does not correspond to yellow fever. At other times the invasion is benign, and the individual is slightly indisposed only on the second or third day, but this is very rare.

GENERAL SYMPTOMS AND THEIR EVOLUTION.

In practice it is the rule to begin the observation of cases of yellow fever about the second or third day. Then we find the picture of the second period. This is an acute infectious stage, without any special characteristics, but symptoms common to all generalized infections. It is what authors describe as the congestive period—face red, swollen, the mucosa hyperæmic, gums tumefied, vaso-motor changes of the skin, agitation moderate, high fever, pulse at all times rapid and with hypertension, urine normal without albumin, and nothing of note in organs or the body as a whole.

This stage changes on the third, fourth or fifth day, when the temperature descends a little, the pulse, however, much more so, prostration is accentuated, icterus appears in the conjunctivæ and there appears a small quantity of albumin in the urine, with a few cylindroids in the sediment, and vomiting appears; also pain in the epigastric region, and hemorrhages occur, which are combined with icterus and albuminuria, the three signs which dominate the picture of the third period.

Also belonging to this period, which lasts from the fourth to the eighth day, the nervous phenomena, toxic in character, such as agitation, delirium more or less violent, convulsions, coma, accompanied generally by meningitic cry, and finally Cheyne-Stokes respiration.

As a general rule the symptoms go on developing by degrees, the temperature descends, while icterus is accentuated, and albuminuria increases to such a point that it reaches a maximum when the patient is apyretic. The same thing takes place with the bradycardia, which persists several days into convalescence.

The duration of yellow fever is stated as seven or eight days, and the end is verified in favorable cases by lysis approximately regular; but, in grave cases, it is possible to see on the seventh or eighth day an abrupt fall in temperature, a critical stage, accompanied by profuse sweating, chilliness, collapse, which generally ends in death.

SPECIAL SYMPTOMS.

Temperature. As has been said before, a chill initiates the fever, but this single chill is not so intense as it is common, for many times the patient will not refer to it spontaneously, but the fact has to be brought out by investigation.

The initial temperature is always the highest at the beginning of the disease, but it reaches rarely the limits of hyperpyrexia; usually it is from 39 to 39.5 degrees C.—seldom passing 40 degrees C. An observation has been noted by former clinicians that a high initial temperature in yellow fever portends always a severe prognosis in the development of the disease: This observation we have confirmed frequently in our observation hospital, and we are able to add that this is more accentuated in those cases in which the temperature does not remit after the second day, but remains elevated.

As a general rule there is a morning remission each day more pronounced, the variation of the temperature curve is more extensive each time until the temperature becomes normal. Sometimes the remission is very marked in the fifth or sixth day, in which some authors believe they see something characteristic of the disease, and which they believe diagnostic. For my part, the number of cases in which this phenomena has been clearly seen is so small in number that I do not consider it of very great value in making a diagnosis. As a general rule pyrexia in this disease is the phenomenon most important, and the observation of the graphic curve is useful, about comparable with that of the pulse.

PULSE, HEART, ARTERIAL TENSION.

In the first and second periods,—that is to say, up to the third or fourth day, the pulse is rapid and strong, the tachycardia keeps pace with the temperature—but slowly begins to separate from it—so that as the pulse begins to fall slowly we are able to see in some cases clearly the Faget phenomenon—which in our opinion, is very characteristic—that is, as the pulse falls the temperature ascends. Very rarely, there is a relative bradycardia which we believe only to be of real diagnostic importance when the pulse continues to fall. Sometimes this may be disguised by associated infections (malaria, suppurative conditions) in which cases there is a tachycardia in the course of the disease.

In children of twelve years of age there is only a relative bradycardia, because at this age, the pulse is normally more rapid than in the adult. Nevertheless, if we take into account this increase, it is not difficult to see that the bradycardia corresponds.

In very grave cases the pulse rapidly descends, and when its graphic curve has reached a point above that of the temperature it is possible, then, to pronounce a fatal prognosis; because it means that there has been a severe hemorrhage or an acute fibrillar degeneration of the myocardia. In these cases internists say that the disease writes its own cross.

Relative to the heart, some clinicians have believed that they have found a systolic bruit in the center of the præcordial region. This bruit, which is in some cases perceptible, does not appear to me as anything characteristic, because the same sound can be heard in nearly all cases of severe pyrexias.

The arterial tension is naturally elevated the first day of the disease. As happens in all acute infections, the tension diminishes progressively until it becomes normal in convalescents. In grave cases there is an abrupt fall, which announces fatal ending.

RESPIRATION.

As a general rule nothing abnormal is noticed in the respiratory apparatus. However, in some cases there are evident signs of active congestion, which are revealed by means of a stethoscopic examination—of blood-stained sputa. I have seen a case of this character which ended fatally, abruptly.

ICTERUS.

Special conditions of climate and race make this sign of much less value, which is, however, very constant in yellow fever. An exaggerated hepatic function is the rule in warm climates—a great number of people have a slight icteric tint in their conjunctiva, in a state of apparent health. It is possible to add that the frequency of malaria produces constantly hepatic hyperæmia; in a similar way greater number of febril conditions produce an icterus more or less apparent. On the other hand, the brown color of the skin of our indigenous race, does not permit us to clearly distinguish the icteric tint in them. After all, it is usually possible to prove an icterus, which should increase from the third day on. This, in my judgment, should be present to have weight in a discussion of the diagnosis.

In one third of the cases the icterus is pronounced; it is intense, produces strong color of sulphur—in skin and mucosæ. There is present at the same time, bile in the urine, to which some attribute an importance which does not appear to me justified.

HEMORRHAGES.

The hemorrhagic phenomena are generally late,—however, in the past year it has been possible to demonstrate cases of black vomit on the third day of the disease, especially in children.

In the order of frequency of the organs which have a tendency to bleed, we should place first the gums, second the nasal mucosæ, and third the stomach; so that with variable frequency all the other mucosal surfaces bleed, from the conjunctivæ to the vesiculo-urethral. But it is not only in mucous membrane that we see hemorrhages, but we find them also in the connective tissue, and parenchyma of various organs, as well as in the skin itself, which is, in reality, a true purpura. In regard to the quantity, it is undoubtedly the mucous membrane of the stomach where the greatest bleeding takes place, although sometimes we see a very intense epistaxis and other severe hemorrhages.

I have an impression that when a mucous membrane has been previously changed by some lesion, that a hemorrhage takes place with greater ease than before. Thus I have seen two rectal hemorrhages in subjects who have suffered from amoebic dysentery, or who were suffering from a chronic amebiasis at the moment they were attacked by yellow fever. This also happens with women who have an endometritis.

THE DIGESTIVE APPARATUS.

One of the most characteristic phenomena of this disease is the appearance of the gums during the first two days—congestive stage. They are intensely red and tumefied, while, when we reach the hemorrhagic period, they bleed with great frequency—their margins spread over the alveolar borders, and blood stains the teeth. This hemorrhage to some degree is accompanied by marked salivation, which stains the clothing while the sick person sleeps.

The tongue has a dirty appearance, without taking on the typhoid characteristics. In grave cases it is dry and cracked because of the marked dehydration.

The epigastric region is moderately painful in the early days,—

becomes, in two thirds of the cases,—very sensitive about the fourth or fifth day of the disease. This sensitiveness, which is at times exquisite, is accompanied by a sensation of anguish and active thirst, more pronounced if there is vomiting. The vomitus is at the beginning glairy and bile-stained, until there appear the well-known black particles (fly specks), which indicates that there is a superficial hemorrhage in the stomach. When the condition is more intense, the vomitus becomes completely black, and the dejections are also of the same color.

In some cases there is no epigastric tenderness, but the umbilical region, or indeed the whole abdomen, appears equally sensitive. In certain cases the hypogastric region, and the iliac fossæ are very sensitive to pressure, which is more often observed in women. This appears to me related to the hyperæmia of the internal genital organs. The liver and the spleen are seldom found congested, unless due to some other disease.

URINARY APPARATUS.

The first phenomenon worthy of being noted in an oliguria, which becomes apparent before the appearance of albumin in an appreciable quantity. If you watch the curve of the quantity of urine in twenty-four hours, you are able to see that it slowly increases as the temperature descends, which appears to indicate a prognosis in some way favorable, but in other cases the quantity grows less, and may cease completely for twenty-four hours, which is truly an anuria, a warning of the nearness of uremia.

Albuminuria is noticeable sometimes even on the second day, or more often on the third day, made evident by heating the urine. At first only a small quantity, it continues to increase progressively, from the second or third day, into defervescence, and then decreases slowly. The quantity of albumin per liter reaches a very high proportion, but not for some time. This is a characteristic of albuminuria in yellow fever; it increases and decreases independently of the temperature, while in other pyrexias, (malaria and typhoid) the albuminuria follows the level of the temperature curve, and declines with it. If you observe the graphic curve, you are able to see the albuminuria cross, in general, the temperature curve, at the moment when there is a final descent.

The albuminuria is always accompanied by cylindroids and other

renal elements in the sediment, which is not at all characteristic, since the same thing is observed in other severe infections.

BLOOD.

The examination of the blood is useful in yellow fever, because it furnishes important data for the diagnosis of this disease. First of all, the presence of parasites of malaria produces, in many cases, a doubtful diagnosis, but should, without doubt, be held under consideration, since the two infections are able to be associated, or, better expressed, a subject attacked formerly by malaria, is able to contract yellow fever. The red blood corpuscles do not suffer much alteration. They appear to be slightly increased. On the other hand, leucocytes are with great frequency diminished in number, (leucopenia) and present usually degenerative signs and artifacts, which appears to show that the diagnostic sign of Arneth is entirely lacking (the same appearance as in typhoid fever or kala-azar). The presence of degenerative forms makes one feel for a moment, in some way, that it was typical of this infection, but after a short time this belief was corrected.

After all, the blood characteristics, added to the other noted signs, appear to be most useful.

NERVOUS SYSTEM.

It is interesting to observe the state of excitation in the first few days—loquaciousness—agitation—insomnia—constant headache,—because these signs are related to encephalic ischemia, becoming slowly hyperemic, and the nervous phenomena of the toxic period become very severe.

It seems, on the other hand, that the nervously excitable personality and the terror of a fatal ending of the disease contribute greatly to change the intellectual state of a patient. After the fifth to the seventh day of the disease, these nervous phenomena appear, which, after all, are of the uremic stage. They consist of a delirium more or less violent, with convulsions more or less frequent, to coma, from which the patient rarely awakens.

CONCLUSIONS.

Hasty and incomplete as these conclusions may be, I consider it useful to make these early clinical statements because of the importance they will have toward reaching a diagnosis of the disease.

The lack of time, on the one hand, and the fact that I shall

not be able to tell anything new, on the other, prevent me from taking up your time describing the pathological anatomy and treatment, which I believe have not varied much in the past ten years.

I wish to give you a resumé of my ideas formerly expressed, as follows:

1st. Guayaquil appears to be the only important focus of yellow fever on the surface of the globe.

2nd. The Ecuadorean people and government have made up their minds to eliminate this disease.

3rd. The Rockefeller Foundation, by means of a special Yellow Fever Commission, of which the illustrious General W. C. Gorgas is president, has lent and continues to lend its co-operation to the sanitary authorities of Ecuador. This co-operation which deserves the gratitude of the Ecuadorean people, appears at the present time to be giving excellent results.

4th. Dr. Hideyo Noguchi has discovered an organism which, judging from experimental results, is undoubtedly the specific cause of yellow fever.

5th. The diagnosis of yellow fever is not able to be established from a single sign, but by the detailed study of combined symptoms which are present.

(I) THE AFTER-HISTORY OF TRYPANOSOMIASIS IN AFRICA.

(II) CONCERNING IMMUNITY TO HUMAN TRYPANOSOMIASIS.

By JOHN L. TODD, McGill University, Montreal, Canada.

I.

In 1911,¹ 12,298 natives were examined in the territory of the Gambia. By the methods employed, 79 of these persons were found infected with trypanosomes and 21 others had superficial lymphatic glands so enlarged that an examination would have revealed trypanosomes in them also¹. It was already known^{2, 3, 4, 5}, from observations made on both Africans and Europeans, that while the majority of apparently healthy persons in whom trypanosomes were found would die within thirty of forty months, some might live for longer periods—one European who had been

treated, and apparently cured, died of trypanosomiasis in the eighth year after he became infected⁶.

It was hoped, by continued observation of the natives examined in the Gambia in 1911, to obtain accurate records of the progress of the disease and to learn what proportion of those with enlarged glands in whom no trypanosomes had been found might eventually show signs of a trypanosome infection.

The Protectorate of the Gambia is inhabited by an orderly, prosperous, fairly stable, pastoral and agricultural native population. It was largely because these conditions make it possible to keep track of individual natives that the examinations were made in 1911. Elsewhere in Africa, as in the Congo Free State, it is almost impossible to follow an individual over a long term of years.

The Gambia is divided into a number of provinces. Each province is administered by a Travelling Commissioner. Each Travelling Commissioner goes yearly through his province and has an excellent opportunity for seeing or hearing of the condition of individual natives. The possibilities of error in records so obtained, through mistakes in identity or through errors of diagnosis, are evident.

Mistakes in identity can be avoided by no one so well as by a Travelling Commissioner. He knows many of the natives and he is known by all of them. The possibility of mistakes in identity was reduced by recording the age and sex as well as the names of individuals, and also by making reference to any special means of identification, such as a goitre, or the loss of an eye. When it is desired to keep track of native children, the names of parents should always be given.

Mistakes in diagnosis are unavoidable in records which depend upon the evidence of natives or of Europeans who are not physicians. Nevertheless, natives, and Europeans who live in an area where human trypanosomiasis occurs, are familiar with the clinical evidences of the disease and they are rarely wrong when they say that someone has it or has died of it.

When a Travelling Commissioner is in his Province he is much occupied by administrative duties. It is, therefore greatly to their credit that some of the Commissioners have kept records of the cases existing in 1911 in their Provinces. Travelling Commissioner E. Hopkinson, M. D., D. S. O., especially has been able to follow, year by year, each one of his cases. This communication

is almost entirely based upon the observations made by him. It is regrettable that the records from other Commissioners are far less complete than they might have been.

Lists of 350 natives who had been carefully examined were left, in 1911, with Commissioners; these had been chosen for examination on account of their enlarged glands; 79 of these natives were cases of trypanosomiasis. In the South Bank Province (Travelling Commissioner Hopkinson) there were 12 cases of trypanosomiasis in a list of 33 persons who had been carefully examined. They were selected because of enlarged cervical glands from 720 natives taken at random. At the end of 1918, 4 of Hopkinson's 12 cases of trypanosomiasis were still living. The remainder had died at irregular intervals during the period elapsing since 1911. About one-third of the cases occurring in the remaining Provinces were lost sight of, 25 of them had died and, when last reported on in 1916, three were living.

The cause of death was practically always said to be "sleeping sickness". The cases still living are said to be perfectly well and those who have seen them suggest that they are "cured".

Records have been kept of so few of the natives with slightly enlarged glands and in whom no trypanosomes were found that nothing can be said concerning the possibility of undetected trypanosomiasis having been present in them in 1911. Several of them have died. In no case was death reported to have been due to trypanosomiasis.

It is very much to be hoped that it will be possible for the Commissioners to continue their observations on these cases. The opportunity afforded by them of obtaining accurate information concerning the duration and course of trypanosomiasis in native Africa is unique.

CONCLUSION.

Four natives, living in the Protectorate of the Gambia, found to be infected with trypanosomes at the beginning of 1911, were in good health at the end of 1918.

II.

There is no history, or tradition, of a time when trypanosomiasis was not endemic and universal in the Gambia. In 1911, about 0.8 per cent of the population was shown to be infected with

trypanosomes; tsetse flies, *Glossina palpalis* and *G. morsitans* are widely distributed and are often very numerous¹.

The Gambian natives' manner of living does not particularly expose them to bites by *Glossina palpalis*; their villages, grazing grounds and farms are usually at some distance from the water. The natives are prosperous; they have not been weakened by the miseries of famine or war and are the better able to resist disease. The method of examination employed in searching for cases of trypanosomiasis is known to be fallacious and cases doubtless were missed¹. None-the-less it has long been felt that these factors are not sufficient to explain why only 0.8 per cent of the population were found to be infected with trypanosomes in a well-peopled area where trypanosomiasis has been endemic for many years and where tsetse flies are numerous.

A variation in the virulence, or in the species of the trypanosome might account for the low infection rate; but the trypanosome from the Gambia has not been shown to differ from the *T. gambiense* which causes epidemics in East and Central Africa⁹; and typical cases of "sleeping sickness" of the severest type do occur.

If the Gambian natives possessed a partial immunity their rate of infection would be low. It was maintained⁷ that the small percentage of trypanosomiasis¹ in the Gambia among natives who are elderly (over 40-45 years) supported such a suggestion.

That view was opposed⁸ by maintaining that cases of trypanosomiasis are found amongst groups of persons in direct proportion to their exposure, by reason of their occupation or residence, to the bites of infective tsetse flies. It was rightly pointed out that, in the Gambia as elsewhere, those who have passed middle age are exposed by their occupation much less than are other natives to tsetse bites.

Nevertheless, a native in the Gambia can scarcely live to become elderly without having been bitten, many times, by tsetse flies which have previously bitten persons infected with *T. gambiense*. That there are elderly natives, suggests that to reach their age they must, during their lives, have resisted a trypanosome infection; on this ground alone it was suggested that an immunity to human trypanosomiasis does exist¹⁰.

It is submitted that this view is supported by the health at the end of 1918 of four natives who, in 1911, were shown to be infected with trypanosomes. If they continue to live without signs

of ill-health, and immunity—spontaneous cure—will be accepted as existing; if they develop clinical trypanosomiasis, either from a new infection or from the old one, their history will show that the disease ran a course so chronic as to justify the statement that these four cases showed a partial immunity to the disease.

It has also been maintained¹¹ that if an immunity existed it was not a sterilising immunity but rather a tolerant immunity which permitted the existence in the human host of limited and undangerous trypanosome infections, either continued or renewed. It is submitted that the continued existence of health of Travelling Commissioner Hopkinson's four cases is not discordant with such a view.

Proof of the existence and nature of any immunity to trypanosome infections possessed by natives can only be obtained by the observation and repeated examination of known cases, over long periods of time. It is hoped that the records of these Gambian cases may continue uninterruptedly.

CONCLUSION.

The existence in an endemic area of four cases of trypanosomiasis, seven years after their infection was demonstrated, is additional proof that some degree of immunity to human trypanosomiasis does exist.

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NEWS AND COMMENT

AMERICAN ASSOCIATION OF ELECTROTHERAPEUTICS AND RADIOLOGY.—The twenty-ninth annual meeting of this society was held September 16-19 in Philadelphia, under the presidency of Dr. Wm. L. Clark, of Philadelphia. A very interesting program was furnished by prominent men in these specialties. Various sessions were devoted to symposia on induced catabolism, metabolism, the cardiovascular system, x-ray in orthopedics, reconstruction following war injuries, and physiotherapy.

IRISH MEDICAL ASSOCIATION.—Dr. J. Marshall Day has been elected president and Dr. E. Magennis vice-president of the Irish Medical Association, the membership of which now exceeds seven-hundred.

SOUTHERN MEDICAL ASSOCIATION MEETING.—The annual meeting of the Southern Medical Association will be held at Asheville, N. C., November 12 and 13, with headquarters at the local Y. M. C. A.

ANTI-MALARIA CONFERENCE.—The American Anti-Malaria Association held a conference at Florence, Ala., on October 15, having as its object the launching of a campaign to eradicate malaria from the United States. Senator O. W. Underwood was chairman of the conference.

LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.—At the meeting of the Louisiana State Board of Medical Examiners held in July, sixty-seven out of seventy-one physicians successfully passed the State examination.

OBSTETRICIANS AND GYNECOLOGISTS ELECT OFFICERS.—At the thirty-second annual meeting of the American Association of Obstetricians and Gynecologists, held in Cincinnati September 15-17, under the presidency of Dr. John F. Erdmann, New York, the following officers were elected: President, Dr. Geo. W. Crile, Cleveland; Vice-President, Drs. Palmer Finley, Omaha, and David Hadden, Oakland, Calif.; Secretary, Dr. E. Gustav Zinke, Cincinnati, (re-elected) and Treasurer, Dr. Herman E. Hayd, Buffalo. The next meeting will probably be held in Atlantic City, N. J., September 13-15, 1920.

COOTIE EXTERMINATOR.—According to a recent report, French scientific men have discovered an asphyxiating gas which not only destroys the body louse, but which also acts with soothing effect on the body of the tormented soldier. The discoverers of the gas are Professors Bertrand, Broca, Rousseau and D'Arsonville, who presented it before the French Academy of Sciences on September 1. The asphyxiant is pulverized chloropicrine and it will be employed extensively by the French army in camps and cantonments and will also be distributed among its colonial troops.

EXPECTED INFLUENZA RETURN.—Surgeon-General Blue, of the Public Health Service, in an official bulletin under date of September 13, discusses the question "will the 'flu' come back this year?" He believes it will appear, though not in as severe a form as last winter. He suggests that city officials, state and city boards of health should be prepared in the event of a recurrence, and that now is the time to make preparations. Concerning immunity, he states that the evidence is not conclusive, but there is reason to believe that an attack during the earlier stages of the epidemic confers considerable though not absolute immunity in the later outbreaks.

NATIONAL TUBERCULOSIS ASSOCIATION SUBMITS REPORT.—The annual death rate from tuberculosis in the United States is more than 150,000 and there are more than 1,000,000 active cases of the disease in the nation, according to the report of the Executive Committee of the National Tuberculosis Association, which met on September 13, at the Russell Sage Foundation in New York City. In order to combat and prevent the spread of the disease a national campaign is necessary, funds for which will be sought by a ten-day sale of Red Cross seals, beginning December 1. The total of the several state budgets will be more than \$6,500,000. An additional campaign has been planned for the coming year which is to be extended to every part of the country, to impress upon the people the fact that tuberculosis is preventable and curable, and special efforts will be made in this campaign to the searching out of unsuspected cases.

CHILD HYGIENE ASSOCIATION MEETING.—The annual meeting of the American Child Hygiene Association, formerly known as the American Association for the Study and Prevention of Infant

Mortality, will be held at Asheville, N. C., November 11-13, under the presidency of Dr. S. Josephine Baker, N. Y.

MILLIONS FOR MEDICAL EDUCATION.—The General Education Board has been given \$20,000,000 by John D. Rockefeller, to be used in improving medical education in the United States, according to recent newspaper reports. The announcement states that the income and the entire principal are to be distributed within fifty years and that a preliminary survey of the medical schools will be made to determine which are worthy of being improved.

MALARIA IN CUBA.—It is stated by expert authorities that the death rate from malaria in Cuba has dropped since 1898 from 25 per 10,000 to 1.8 in recent years. Malaria occupied the first place in the list of causes of death when the Americans took charge of Cuba, while now it occupies the sixteenth place. In the last two years, however, the mortality has been 2.7 and 2.4 per 10,000, respectively.

SUGGESTION TO SHORTEN PREMEDICAL COURSE.—At the final session of the Pennsylvania State Homeopathic Medical Society, held in Philadelphia, September 20, the members of that body passed a resolution appealing to the National Federation of State Medical Boards to shorten the premedical course so that the degree of M. D. might be obtained after six years' study instead of seven.

CHILD WELFARE ASSOCIATION PLANS YEAR'S WORK.—At the fall meeting of the Child Welfare Association of New Orleans on October 4, extensive plans were made looking to the needs of the 15,000 babies of the city through its thirty-two clinics and its special staff of physicians and nurses. A maternity service has been established with Dr. C. Jeff Miller as director; Drs. P. J. Carter, L. E. King and R. Blakely as staff physicians, and the Misses Celeste Janvier and C. Judis as nurses. This is accounted the most important development of the association's work. Mothers have been invited to register for the service at any Child Welfare station between the hours of 1 and 2 p. m.

THE UNITED STATES CIVIL SERVICE COMMISSION announces open competitive examinations for the positions of Chief of Division for Scientific Research, \$3,500-\$4,500; Chief of Division for Educational Research and Development, \$3,500-\$4,500; Educational Assistant, \$2,800-\$3,600; Chief of Division of Relations with

States, \$3,500-\$4,500; Chief of Division of Records, Information and Planning, \$3,500-\$4,500; Supervising Assistant and Inspector, \$2,800-\$3,600; Field Agent, \$1,800-\$3,000. These positions are to fill vacancies in the Interdepartmental Social Hygiene Board for duty in Washington, D. C., and in the field. The examinations are to be held in the important cities throughout the United States on November 4, 1919, and are open to male and female.

NATIONAL DENTAL ASSOCIATION MEETING.—The meeting of the National Dental Association was held in New Orleans, October 20-24. Free dental operations by the leading dental surgeons of the country were available to the poor of the city during the convention. The work was done for the instruction of the visiting dentists during clinics.

MEDICAL PERIODICALS DELAYED BY STRIKE.—On account of the strike of certain organizations of printers and employees, which had tied up completely the offices in which they were employed, the medical periodicals published in New York City did not appear for the week of October 4. It is estimated that 152 weekly periodicals published in New York City failed to appear during that week.

CLINICAL CONGRESS MEETING.—The ninth annual meeting of the Clinical Congress of the American College of Surgeons was held in New York City, October 20-24, under the presidency of Dr. William J. Mayo, of Rochester, Minn. The program included many valuable papers on surgical subjects and proved of great interest to those in attendance.

THE AMERICAN RADIOLOGICAL ASSOCIATION.—The organization of this meeting was recently perfected, with the election of the following officers: president, Dr. Albert Soiland, Los Angeles, Cal.; first and second vice-presidents, Dr. D. Quigley, Omaha, Nebraska, and Dr. E. A. Merritt, Washington, D. C.; secretary, Dr. Bundy Allen, Iowa City, Iowa; treasurer, Dr. Alden Williams, Grand Rapids, Michigan. The Executive Committee is composed of the following: Dr. O. H. McCandless, Kansas City, Mo., Dr. A. F. Tyler, Omaha, Nebraska, and Dr. Amedee Granger, New Orleans. Dr. B. H. Orndoff, of Chicago, was chosen chairman of the Board of Councilors; Dr. E. H. Skinner, of Kansas City,

chairman of the Organization Committee; Dr. Russell H. Boggs, of Pittsburgh, chairman of the Program Committee, and Dr. E. C. Samuel, of New Orleans, chairman of the 1920 New Orleans Meeting. The association plans to have a meeting in New Orleans about two days prior to the meeting of the American Medical Association.

DR. URBAN MAES, Professor of Surgery in the Tulane School of Medicine, was elected a member of the Society of Clinical Surgery at the meeting of this body, held at Rochester, October 10, 1919.

Among the doctors of New Orleans who have returned home from their vacation and resumed practice since our last issue are: Drs. W. H. Block, C. J. Bloom, H. Daspit, J. D. Bloom, J. A. Estopinal, P. I. McIlhenny, A. Caire, G. S. Bel, W. E. Levy, H. P. Jones, J. Hume, W. H. Harris, J. J. Ryan, M. S. Meyer, A. G. Friedrichs, E. P. Lowe, C. G. Cole and A. Granger.

Among the Louisiana physicians who have returned from service since our last list are the following: Drs. F. A. Howell, W. R. Metz, Ralph Hopkins, M. S. Meyer, H. J. Dauterive.

REMOVALS.—Drs. Valentine F. Fuchs and W. T. Patton, from 1109 Maison Blanche Bldg., to 410 Medical Bldg.

Dr. S. K. Simon, from 1105 Maison Blanche Bldg., to 3439 St. Charles Ave.

Dr. J. T. O'Ferrall, from Cusachs Bldg., to 3439 St. Charles Ave.

Drs. R. E. Stone, J. W. A. Smith, P. J. Kahle and A. Mattes, from 701 Title Guarantee Bldg., to St. Charles and Common Sts.

Dr. Allan Eustis, from Cusachs Bldg., to 3621 Prytania St.

Dr. J. D. Martin, from 410 Medical Bldg., to 3601 Prytania St.

Dr. S. F. Braud, from 410 Medical Bldg., to 4th Floor, Cusachs Bldg.

Drs. I. I. Lemann and Randolph Lyons, from Maison Blanche Bldg., to 3521 Prytania St.

Dr. Arthur Weber, from 710 to 1226 Maison Blanche Bldg.

Dr. M. H. McGuire, to his residence, 1114 Webster St.

Dr. J. R. Hume, from 312 Machecha Bldg., to 1024 Maison Blanche Bldg.

Dr. P. T. Talbot, from 710 to 620 Maison Blanche Bldg.

Dr. S. R. Humphries, from 420 to 408 Macheca Bldg.

Dr. K. F. Meyer, to 2nd and Parnassus Ave., San Francisco, Cal.

The Kentucky Medical Journal, from Bowling Green to 532 W. Main St., Louisville, Ky.

Medical Herald, from 713 Lathrop Bldg., to 536 Ridge Bldg., Kansas City, Mo.

New Orleans Polyclinic Research Laboratory, from Municipal Bldg., to 504 Macheca Bldg.

MARRIED.—Dr. Ross R. May, Whitewright, Texas, to Miss Pauline Lenox, Pendleton, Ark.

DIED.—On October 7, 1919, Dr. John Louis Deslattes, a native of Louisiana, 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 respective publications. The acceptance of a book implies no obligation to review.

A Practical Treatise on the Therapy of Surgical diseases for the use of Practitioners and Students of Surgery, by James Peter Warbosse, M. D. In three volumes of 2600 pages with 2400 illustrations. W. B. Saunders & Co., Philadelphia, Pa.

This System of surgery written entirely by the author and dedicated to those 'who suffer from surgical diseases and injury' is a monumental contribution to the profession and reflects a brilliant tribute to its author for his skill, ability and originality as a surgeon, teacher and writer. It is not a work written exclusively for the surgeon but gives a full discussion of the medical and non-operative treatment of all surgical conditions where such treatments exist, and in this feature appeals both to the medical practitioner as well as the surgeon. The best surgical procedure and technique is amply illustrated and along with this are given many substitute or alternative plans of treatment and emergency procedures which will prove of great aid and service to those lacking the skill and training of the experienced surgeon and in surroundings where the best methods cannot be applied. In this feature the writer is constantly appealing to the resourcefulness and originality of the reader. In many ways the work stands out prominently as a radical departure from the old stereotyped treatise on operative surgery. There is no classification under chapter heads but the material is exceedingly well arranged and there is little duplication or overlapping.

Surgical literature has been thoroughly searched and nothing omitted of any importance and due credit is given to surgeons where it has seemed called for, but there is a refreshing absence of proper name nomenclature as applied to operative procedures, methods and instruments, for the reason as the author states "all of them are the product of a long series of antecedent workers" and most instruments and procedures, bearing proper names, were used before the time of the individual whose name they bear. The illustrations (2400) are with few exceptions original and their artistic skill and clearness add greatly to the value and lucidity of the text. There is no Surgeon or Practitioner who reads this book who will not be better for the reading as it is constantly appealing to the higher and more lofty ideals in a determined effort to aid those surgically afflicted.

Vol. I. Deals with general principles, antiseptics, surgical materials, anesthetics, wounds, inflammations, surgical fevers and infections, fistulas, sinuses, ulceration, gangrene, nutritive disturbances, tumors, the vascular system, the osseous system, muscles, skin, nerves, etc.

Vol. II. The head, spine, neck, thorax, breast, abdomen.

Vol. III. Hernia, rectum, anus, vermiform appendix, liver and gall-bladder. Genito-urinary organs, the upper extremity, pelvis, lower extremity, amputations, plastic and cosmetic surgery. The new born, electricity and radiation, injuries from electric currents, gas poisoning, first aid, bandaging and the economics of surgical treatment.

CARROLL W. ALLEN.

PUBLICATIONS RECEIVED

- F. A. DAVIS COMPANY.** Philadelphia, 1919.
The Medical Treatment of Cancer, by L. Duncan Bulkley, A. M., M. D.
- P. BLAKISTON'S SON & CO.** Philadelphia, 1919.
Plastic Surgery. Its Principles and Practice. By John Staige Davis, M. D., F. A. C. S.
- J. B. LIPPINCOTT COMPANY.** Philadelphia and London, 1919.
Atlas of Operative Gynecology, by Barton Cooke Hirst, M. D.
- W. B. SAUNDERS COMPANY.** Philadelphia and London, 1919.
The Medical Clinics of North America. July, 1919. Vol. 3, No. 1.
The Surgical Clinics of Chicago. August, 1919. Vol. 3 No. 4.
- FORBES & COMPANY.** Chicago, 1919.
The Health of the Teacher, by William Estabrook Chancellor.
- HISTORICO-MEDICAL PRESS.** New York, 1919.
The Don Quixote of Psychiatry, by Victor Robinson.
- WASHINGTON GOVERNMENT PRINTING OFFICE.** Washington D. C., 1919.
Public Health Reports. Vol. 34, Nos. 36, 37, 38 and 39.
- SERVICE AND REGULATORY ANNOUNCEMENTS.** U. S. Department of Agriculture, Bureau of Chemistry.

REPRINTS.

A Plan for the Eradication of Venereal Diseases in Localities; Eradication of Tuberculosis in Localities, by Edmond Souchon, M. D., H. F., A. C. S.

Cardiovascular Response to Infection, by Samuel E. Earp, M. D., M. S.

Frederick Gaertner, A. M., M. D., LL. D., etc., Physician, Surgeon and Pathologist.

What we know about Cancer. A Handbook for the Medical Profession. (American Society for the Control of Cancer, N. Y.)

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for September, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	5		5
Intermittent Fever (Malarial Cachexia)	2		2
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	1		1
Influenza	4	2	6
Cholera Nostras			
Pyemia and Septicemia	1		1
Tuberculosis	32	27	59
Cancer	31	7	38
Rheumatism and Gout			
Diabetes	7	1	8
Alcoholism			
Encephalitis and Meningitis	2		2
Locomotor Ataxia	2		2
Congestion, Hemorrhage and Softening of Brain	15	11	26
Paralysis	3	1	4
Convulsions of Infancy			
Other Diseases of Infancy	7	11	18
Tetanus			
Other Nervous Diseases	2		2
Heart Diseases	52	21	73
Bronchitis	1	2	3
Pneumonia and Broncho-Pneumonia	11	12	23
Other Respiratory Diseases	2	2	4
Ulcer of Stomach			
Other Diseases of the Stomach	2	3	5
Diarrhea, Dysentery and Enteritis	13	9	22
Hernia, Intestinal Obstruction	3		3
Cirrhosis of Liver	4	3	7
Other Diseases of the Liver	1		1
Simple Peritonitis		1	1
Appendicitis	5		5
Bright's Disease	17	12	29
Other Genito-Urinary Diseases	11	7	18
Puerperal Diseases	4	4	8
Senile Debility			
Suicide	3		3
Injuries	24	13	37
All Other Causes	17	30	47
TOTAL	284	179	463

Still-born Children—White, 17; colored, 27; total, 44.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1000 per annum for Month—White 12.04; colored, 20.26; total, 14.28. Non-residents excluded, 11.81.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure..... 29.97
 Mean temperature..... 80.
 Total precipitation..... 2.93 inches
 Prevailing direction of wind, northeast.



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

COLLABORATORS:

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Ex-Officio

Ex-officio

Vol. 72

DECEMBER, 1919

No. 6

EDITORIAL

HEALTH INSURANCE AND MEDICAL EDUCATION.

The appeal for doctors by rural communities grows stronger every day and as yet it has not been met. Our suggestion of state provision of medical services is too radical for early adoption, though it cannot be disputed that sooner or later it must come to this disposition of the need of the people.

Medical schools generally are taxed to the utmost in meeting the

present requirements in medical instruction to their students. Most medical schools find it difficult to maintain a properly balanced schedule upon the funds available and nearly all of them spend on the student about as much as the student pays over and above what the student pays, and this seems necessary in order to provide the required courses. This is accomplished through available endowment, as far as this goes, and through the voluntary services of the majority of the men who do the teaching. To adequately provide the instruction for the medical student of today means an annual outlay of from \$350 to \$400. Few schools charge the student more than \$200 and many charge less than that; medical departments of state universities charge only nominal fees, for instance.

Quite a number of the states have realized the importance of aiding the schools for professional training and the allowances have been ample to meet all requirements. The facilities for administering such education, however, are restricted so that the number of students at such schools must be limited and it is logical to expect that the greater number of students would be drawn from the state affording such instruction.

Other states with less interested legislatures have medical colleges which are either a part of the state university or of endowed universities and in which nothing like adequate endowment or provision obtains.

The time has come when the public should have what it needs and what it demands. At the same time the public should be prepared to pay for this. If the rural districts are deprived of medical attendants, because the cities attract most physicians and because the compensation is better, the supply to the country must be met.

While the medical schools are regularly reducing the number of students by high standards and by enforced economy in administration, the population of the country continues to grow and the need of doctors is constant and not decreasing. The people, then, are responsible for their own lack of medical service and they may correct this either by raising endowment to conduct medical schools for the public benefit or by instructing their state legislators to provide the ways and means for such service. It may be done by the state assuming that medical schools render public service and by providing means by allowing a budget to cover the costs of maintaining schools or the legislatures can broaden the function of the state health boards by providing ways and means for the appoint-

ment of doctors under state pay so that these may be assigned wherever and whenever they may be needed. In the 1890's Belgium had adopted such a plan of Health Insurance and within the last two years Great Britain has brought about a similar plan. The public should pay and if the time is ripe for such legislation, it should come soon.

AMERICAN PUBLIC HEALTH ASSOCIATION.

If we may judge by the bouquets, both from official and non-official sources, thrown to the local committee of arrangements for the forty-seventh annual meeting of this association, held in New Orleans on October 27 to 30, this session was the best ever.

The total attendance was 1020, every part of the country was represented, many eminent sanitarians were present, the scientific and the commercial exhibits were numerous and interesting, and practically everybody was well pleased.

The weather man behaved pretty well although, in his enthusiasm to show many visitors a contrast, he gave us a temperature higher than the average for that time of the year.

The entertainments were numerous enough, well managed and apparently much enjoyed by the membership.

The program of the general sessions included papers especially on malaria, influenza, details of public health administration and work of prevention in the Southern States. The section on industrial hygiene handled the methods of ascertaining the fitness of individuals for the various types of work; the questions of heating, lighting and ventilation in factories; the practical application of scientific engineering to the removal of nuisances and the prevention of disease conveyed by polluted water. The sociological section studied chiefly the problems bearing upon home life in the industries.

President Lee K. Frankel's annual address embodied a plea for a coordination of national health activities, claiming that public health is an asset equal in importance to commerce and agriculture and deserving of equal recognition in our conception of government.

He reported that the number of members of the association and subscribers to its Journal was above 4500, that its income for the last fiscal year was about \$34,000 and that for the first time in

its history the association is not only self-sustaining but with a surplus in the treasury.

The officers elected for the ensuing year are: President, W. S. Rankin, M. D., of North Carolina; vice-presidents, A. J. Douglas, M. D., of Manitoba, S. L. Jepson, M. D., of West Virginia; W. H. Robin, of Louisiana; treasurer, G. H. Sumner, M. D., Iowa; secretary, A. W. Hedrich, C. P. H., of Massachusetts, re-elected.

Our local committee, headed by City Health Officer W. H. Robin, deserves great credit for the manner in which it handled the convention.

THE MEETING OF THE SOUTHERN MEDICAL ASSOCIATION.

Asheville wept for most of the time of the Southern Medical Association meeting, November 10 to 13; that is to say it rained or was misty most of the time. This seemed to interfere in no way with the work of the various sections, which were in every way successful. The discussions in the sections on medicine and surgery were of interest, which was discounted by the fact that there were too many papers on both programs, which limited the discussions proportionately.

The inclement weather prevented much of the expected enjoyable outings in the "Land of the Sky," but to those who went for the meeting's sake, nothing more could have been asked.

The interest of the ex-presidents was noted in the presence of all but one of them and a registration of over one thousand made another record, for Asheville it too much out of the way to make it ideal for a meeting place and at least one of the hotels needs much rehabilitation to make it desirable for a pleasure jaunt.

The next place of meeting will be Louisville, Kentucky. Dr. E. H. Cary, of Dallas, Texas, was made President; Dr. Seale Harris remaining as Secretary-Treasurer.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THE CONTROL OF VENEREAL DISEASE.*

By DR. WM. EDLER,
Scientific Assistant, U. S. Public Health Service, New Orleans.

Assuming that the primary function of the physician is to prevent rather than cure disease, and taking as an axiomatic truth the fundamental proposition that disease is the greatest dissipator of human energy that is known to mankind—with these premises granted, I come to you as a representative of the Public Health Service of this country to put squarely and candidly and succinctly before you as physicians a problem as complex as it is enigmatical and as worthy of your conscientious effort and energy as any that has ever confronted organized medicine.

I take for granted that you and I agree that the biologic struggle for existence is not so much between man and man, as it is between man and bacteria. As the years have gone by and as medicine has progressed, just in that proportion have the so-called "constitutional" and idiopathic diseases been, through the realms of research, added to the classifications of infections. And, hand in hand, in precisely the same ratio, as have developed the nomenclature and the classification of bacterial diseases, so, too, has grown the great science of prophylactic medicine.

Smallpox and typhoid fever are not entities any more, their presence in a community is merely a reflection of the medical aptitude of the general, social and economic standing of the people in that particular locality. And the time is coming, or am I prematurely optimistic in saying, the time is here, when a community with a large percentage of venereal disease will be looked upon by the nation as a decidedly unhealthy and economically precarious place to survive. Up to a year or two ago it was considered good civic taste to have a tenderloin district with all its retinue of procurers, panderers, pimps and prostitutes. No one stopped to think that it cost a community millions of dollars annually to maintain such a district, and of course no one (and

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

sad to relate only few of us) outside of physicians has realized the grim and ghastly toll in agony and anguish in disease and death. Had our municipal governments established on some prominent street a drinking place seductively arranged with a sweet tasting nectar invitingly blended so as to entice every one, and then polluted it with typhoid bacilli, they could not have more successfully vitiated the health of the community.

Now, if you will pardon all this preliminary talk, I will come down to our immediate proposition.

We said in the beginning that disease was the greatest of all dissipators of human energy. Little did we know that of all the diseases *venereal* disease creates more havoc in our daily lives than all the other infectious diseases put together. For this information we can thank the war and the army statistics. The army statistics tell us that there were more sick days through venereal disease than from all other infections. But, you tell me in reply, that venereal disease and soldiers are synonymous terms. And in answer to that I will tell you that venereal disease was not an army malady, but a civilian one; that out of this great preponderance of venereal disease per centum as related to other infectious diseases, it did not originate in the army, but was gratuitously presented to it by your state and 47 other states. Not only was this true relatively, but it was so forcibly true that the statistics show that for every six cases of venereal diseases recorded in the army statistics *five* of them came from civil life. In other words, in this was venereal disease was not an army problem, but a civilian one. We protected the man in uniform, while the community where he came from infected him. So that to reason logically the proper way to win a war is to take all your prostitutes and wish them on the enemy. In that way you would rid your own community of a parasite and a plague and foist upon the enemy a spike for their guns that would be unparalleled. Would it interest you to know that 75 per cent of the soldiers in the Franco-Prussian War were venereally diseased?

Now listen, we have rid the army of venereal disease; we have taken every soldier and made him uninfected to his home community before he was discharged; we have taught him the rudiments of sex hygiene and impressed him, as well as we knew how, with pictures, lectures and pamphlets that sexual promiscuity and venereal disease go hand in hand and that both are degrading and

demoralizing; and, we, having done our part in the army of soldiers, are offering our help to you to protect an army of workers, an emergency, if you please, that is always and eternally present, and I ask you men as physicians to lend a hand and meet us on a common ground and work for a common purpose to fight a common foe. How can you help? Listen:

In the first place you can report every case of venereal disease in your practice. This is obligatory under your state laws and is very necessary to the government as a means of correlating their work, as well as for purposes of impressing legislators with the necessity for continuing this work. For the past 5 months there have been less than 1000 cases reported in this state, showing an apathy to the work or an ignorance of the law that should at once be rectified.

Second: You can by your every effort help to stamp out prostitution. You will find it a difficult work; not, as your sophists will tell you, that it is necessary to protect the decent women of your community; not because your boy must sow his wild oats and must have venereal exercise; not because a restricted district is the lesser of the two evils of "scattered" clandestine prostitution, but because prostitution is an organized, commercialized industry, well equipped with all the adjuncts and accessories of any organized, commercial institution from the advertising department down to the guaranteed or money refunded commodity. Do not be deluded that the "regulated," "medically examined," "passed by the censor" type of prostitute is either safe or sanitary. Cemetery is the proper adjective, because in the law of averages from a mathematical standpoint the "safe" prostitute does not exist—*There ain't no such animal.* All have venereal disease, and while the occasional one is not infectious she certainly always is potentially so. If you are a live wire in your community, you can arouse public sentiment to the point where tolerant public officials to these evils will either have to stand up for the ideals of the decent people, who elected them—for no community has a preponderance of indecent ones—or you can force them to openly align themselves with the interests they represent. This has successfully been accomplished in many cities where the political regime soon learned that they *did* possess the legal machinery and the pep and power to abolish their tenderloin districts, once they knew the public was thinking of making a political change. No

one has the opportunity to mould public opinion better than you, as a physician. You are a part of the family life of your patients, and by education, by civic activity, through boards of health and in public lectures you can paraphrase the slogan of the soldier from "to make the world safe for democracy" to "to make it risky for debauchery."

No state in the union has better laws to do this than your own. Every contingency is covered legally. There is no excuse, and best of all your motive is as altruistic as humans can be. Every case of venereal disease you prevent will be a monetary loss to you. You can go before the public and show them there is nothing up your sleeve.

Your state has \$29,000 to spend for this work. The U. S. Government is spending \$4,000,000 to educate the public and eradicate the prostitute.

Does it do any good to carry on this propaganda? Listen: One of the little northwestern states 5 years ago inaugurated a campaign against venereal disease and prostitution. By suppression of red light districts and the education of its citizens it accomplished the remarkable result of sending into the army a body of men who, from a percentage standpoint, ranked lowest from venereal disease infection of any state in the union. The little state of Oregon claims this honor. Truly a record to be proud of. Your state ranked thirty-eighth. Surely a record to be improved. How can you improve it? Here are the rules that will put you at the top of the list:

1. Report your venereal cases.
2. Put the lid on your town.
3. Send every prostitute to a detention hospital until she is non-infectious.
4. If you do not treat venereal disease, refer the person to a reputable man who does, instead of brusquely evading his malady.
5. Work to put every advertising quack out of business. He is a part of the tenderloin organized machinery.
6. See that your druggist does not counter-prescribe for these cases. It is against the law for him to do so.

And, lastly, remember you and I have a job on our hands that needs tact, energy, perseverance and a confidence that is engendered by the fact that we know our work is not for today or tomorrow,

but that our efforts in combatting disease leaves its imprint on the race, as well as throws its shadow well before. If I read rightly the public will soon realize that Health, Wealth and Happiness are synonyms, and when it does we shall find that it does not cost 1/100 as much to keep well as to get well, to all of which we pledge, as physicians, all that we are or hope to be.

DISCUSSION OF DR. EDLER'S PAPER.

Dr. C. L. Chassaingnac, New Orleans: The two points to which I wish to call attention are these: Of course there should not be any antagonism between the civilian population and the army on this question any more than any other, but I do not think it is exactly logical to make a comparison of the prevalence of venereal disease in the civil population and the army population. The doctor tells us it is not the soldier who got the venereal disease, but the civil population who got it and sent it to the army. Why? Certainly nine-tenths of our army was composed of people from civil life. However, this is purely an academic question. The practical thing I want to call your attention to is this. Whenever we are told about the advisability, the necessity of controlling venereal disease, with all of which I agree, of course, we are given various means for stopping the progress of this disease—education, picture shows, etc. But one point I do not hear mentioned. As Dr. Chandler said, we are not here as moralists, we are here as physicians, and consequently I am at a loss to understand why the doctor in his list of various things to be done did not mention prophylaxis. It is done in the army and in the navy. In fact, I believe it is contended that nothing showed such great results as prophylaxis. There might be some objection from the moral standpoint to any suggestion of escaping from the penalty of transgressing the moral law, but we are dealing with facts. There are a great many things that might be the result of transgressing the moral law, but that is no reason why we should not treat those not yet suffering from this disease by prophylaxis, especially if it does not interfere with anything we may do to control the disease. I am not objecting to any of the points so ably presented by the doctor. We should have education, we should have the doing away of the restricted districts. I agree with everything he has told us, but I cannot understand why he should not add the proper use of prophylaxis for those who have been exposed. Not long ago I asked a legal friend of mine about this and he said he thought the point was well taken. I asked him if it would be morally wrong to suggest such a possibility, and here is his reply to me: If in a certain locality there should be an aggregation of thugs, we of course would teach the good citizens that they should not go to that section, that it is dangerous. In addition to that the police authorities certainly should clear out the gang. But these two propositions being correct, it is not meant that we should not indicate to men who for one reason or another nevertheless go there that they should take a gun along.

Dr. Francis S. Furman: I would like to ask if we as a community are contemplating the establishment of a prophylaxis station. I think it is pretty generally recognized that the reason the army had as little venereal disease as it did was due to the fact that it had prophylaxis

stations and the men were compelled to avail themselves of it, because if they did not and contracted venereal disease they had to face a court martial. They availed themselves of it in nearly all instances I am convinced. Now these men are coming back home. They are already beginning to go to the doctor asking for just that work. Is there anything being done to furnish prophylaxis stations where men who have been so foolish as to expose themselves can be treated? I believe prophylaxis stations would accomplish more than the suppression of prostitution.

Dr. Gardner: That is contemplated in clinics, but not otherwise in civilian life, so far as I have learned it has not amounted to anything. In the army there was court martial in front of the man, but in civil life he takes the risk.

Dr. — Gardner, (guest): I have no disposition to take the time of the State Medical Society in the discussion of this very important subject, as inviting as it might be. But I do wish to bring to you the assurance that the Government at Washington, through the function of the Public Health Service, and especially the Division on Venereal Disease Control, wishes to extend to you most cordial sympathy and cooperation in the eradication of this greatest curse that has ever been upon the human race. We all recognize the fact that every true practitioner of medicine is really a public health officer serving without pay. I repeat that the Government proposes to enter into definite and hearty cooperation with you in this feature of your work. It does not propose to come with coercion, but with sympathetic cooperation; not to preach to you with regard to your moral duty and obligation to your people, but simply recognizing the fact that your heart is already open and alive to the crying need of your people in regard to this particular matter. Neither does the Public Health Service enter into this work to create any new agencies for the carrying on of this work, but to use the agencies which you have already instituted for the prosecution of the work through the State Health Boards and the local boards and institutions which you have already created and are fostering. As for my part in this work as regional consultant in the States of Alabama, Mississippi and Louisiana, I shall be glad to cooperate with you in carrying forward the work of clinics, in standardizing the reports of clinics and cooperating with you in your local work or community work wherever you think I may be needed at the discretion of the State Health officials, the local authorities and the individual practitioners.

Dr. M. W. Swords: This is a subject to which I have given much attention. It is a subject in no wise new. Gonorrhoea and its manifestations date back to the Old Testament. If you read the fifteenth chapter of Leviticus you will find a clear and accurate description of gonorrhoea. True, a disease that causes more ills than all other diseases that human flesh is heir, is certainly a peril and a menace to society and to the human race. No one will doubt that statement for a moment. But I believe firmly that while vice is not necessary to the welfare of man, yet it is a part and parcel of man. God Almighty has endowed man with certain strong impressions that are evidenced often in his earliest days. That is not only true of man. The Almighty for the purpose of guaranteeing the continuation of procreation firmly established that principle in human—beast, fish and fowl. Each of your farm boys could demonstrate that statement by going into your farm lot each morning.

Therefore I say again that vice is unfortunately a part and parcel of man's being.

No doubt vice should be regulated, and as Dr. Chandler has said that regulation should be by education and not legal suppression. To strike directly at the prostitute is the smallest part of the active factor in the regulation of venereal disease. The prostitute in order to ply her trade must necessarily remain in good health. She learns the art of prophylaxis, she learns the virtue of a good syringe and a little lysol, she knows what cleanliness means, therefore she protects her business by protecting her body, which in a measure is a protection to the man who visits the house of prostitution. It is always by the clandestine route, by the little girl you meet on the street, the girl who is not plying the trade except to have a good time and make a little pin money to buy a new dress, who does not take any of the precautions adopted by the prostitute. If you are going to eradicate this disease it is by education, by educating the boy and girl to know the danger of these diseases; to the girl to know what it really means to her as the mother of children, and to the father also. You must teach the boys and girls what prophylaxis means; how to protect themselves. is a matter of education and you will not stamp out this disease by putting the prostitutes out of business. In the first place, you do not know the number of prostitutes in a town, for unfortunately in late years the worst house of assignation is the automobile. The object of reporting your cases is that it acts as a sort of barometer; it shows the Board of Health where work should be done, and with education and reporting your cases you are accomplishing a great deal in the control of this disease.

Dr. R. H. Blackman, Shreveport: This discussion, I should think would be a great help to the State Board of Health in eradicating this disease, but it seems it has taken a very wide range. Inasmuch as most cities have already taken measures to stamp out legalized vice, we as physicians should deal with it very strictly.

As to the point mentioned by Dr. Swords, that the most of this disease comes not from the professional prostitute but from the shop-girl, if this be true, is it not also true that with legalized prostitution stamped out, we would have a gradual stamping out of the disease? The shop-girl would not be so accessible to the disease and is it not true that these girls get the disease by coming in contact with men who have visited the houses of prostitution at some time? Because, as was well said, all professional prostitutes at some time have had venereal disease, I feel it should be stressed that by eliminating the prostitute you would also get rid of the nucleus, or the focus of infection, and in time this disease will be eradicated.

If, as has been said, "gonorrhoea causes more distress and suffering than any other disease to which the human flesh is heir," certainly syphilis runs it a close second, when men like Warthin, of Michigan University, reports that in his autopsy work forty per cent of the cases show evidence of syphilis, and this not in a large city, but in a hospital where most of the cases come from the country districts. If this condition prevails in the country districts, what must it be in larger communities? So syphilis must run gonorrhoea a close second in its fearful toll of human life, and we as medical men should do all in our power to control, as much as possible, both syphilis and gonorrhoea.

Dr. William Edler, (closing); I am sure we all agree that this is an immense question and that meeting it will tax our wit and ingenuity. But I want to submit to you as a hard fact that there is only one reason for venereal disease and that is sexual intercourse; and equally as hard a fact that to make intercourse hard to find necessarily limits sexual infection. I believe this is self-evident to all of us. In any community where there is an advertised district, where young men can go, and not only can go but are expected to go when they come to the city—if there are no such places that they can easily find they will not become venereally infected. That has been a factor in the reduction of venereal disease in the army. We did not restrict prostitutes in the army, we annihilated them. They were not there around the camp, because every effort was made to actually put them out of business, to make their business unprofitable, and although medicinal prophylaxis did have something to do with it, this was the large factor in controlling the disease. I told you about Oregon and the effect of the suppression of prostitutes on their soldiers in the draft. Not over two per cent. of their men had venereal disease, and that is an argument that is more than a coincidence to me.

I do agree with all the gentlemen have said about sexual intercourse as a physiological proposition, that we all have sexual ambitions and appetites, but I do not believe we as physicians should actually commit ourselves to any public policy of teaching the laity that they have a right to pamper artificially this sexual appetite that does exist. In other words, we are in danger of making this physiological factor a pathological one, if you please.

So far as the prostitutes are concerned, whether they use lysol or whether they do not, I want to repeat that my personal opinion is that I do not believe there can be a prostitute that is not or has not been venereally infected. There is only one thing that could keep her from being venereally infected, and that is an immunity either natural or acquired.

So far as prophylaxis stations are concerned, that is a problem we have tried hard to settle. We do not turn down the man who comes to us and says he has been venereally exposed. Whether we as physicians should go to the laity and tell them "If you will come to us after you have been exposed we will protect you and see that you do not get venereal disease,"—I want you to consider what you are going to submit to them. At one time in the navy it was proposed that no man could leave a boat at port without a prophylactic package, so-called. The presumption was that every man would visit a bawdy house—an insult to the sailor. Many of them did not, many went to the Y. M. C. A., some played cards and did other things. It was finally abandoned, I am glad to say.

I want to repeat that the problem is complex, it embraces economic and sociological factors, the passions of human beings; and yet I do submit to you that in any community where the public will arouse itself the prime factor is putting down the red-light district, for the clandestine prostitute gets her infection, whether directly or indirectly, from the man who visits the houses of prostitution. All I ask is that you realize that opportunity is a large factor in venereal disease, and if the opportunity is not there certainly you will be able to control a great deal of your infection.

CONTROL OF VENEREAL DISEASE.*

PAUL J. GELPI, A. M., M. D., New Orleans.

If the world war has caused havoc and destruction unparalleled in history, it has also left in its wake much for which mankind must be grateful. It has enriched both medicine and surgery with new stores of knowledge and novel methods of treatment. It has furnished valuable statistics chief among which is the amazing fact that out of 1,000,000 draft men three (3) per cent were infected with venereal diseases. This has been the starting point of the great moral wave which has found expression in a movement for the nation-wide control of venereal diseases.

It is the hugest task ever undertaken by preventative medicine. What makes the problem so complex is not only the universal prevalence of venereal diseases, but also its intimate association with the sexual instinct, sociological and economic questions and even the marital relations. Conditions as they exist today have been handed down to us from the remotest times and civilized nations have grappled with them with more or less success. We have the great advantage of having begun the fight under unusually favorable circumstances and it is now only a question of continuing what was originally intended as a war measure. We have a better knowledge of venereal diseases, we know the specific organism of the venereal triad, we have improved methods of treatment and prophylaxis and we possess besides the advantage of control of laboratory tests all of which should facilitate our work, and increase our measure of success.

It is not possible in the narrow limits of this paper, to consider the many phases of the venereal problem. It is my purpose to confine myself to a few points which I believe will materially assist in the crusade now going on.

The first requisite for a successful venereal campaign is the full cooperation of the doctor. He should report promptly all venereal cases for statistics not only denote the prevalence of the disease, but likewise serves as a barometer for the estimation of the result of preventive measures. Prompt and accurate diagnosis means prompt treatment. So the doctor should use special care to differentiate between the various venereal infections, not overlooking the possibility of mixed infection. When in doubt he should

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

resort to the laboratory, and once the diagnosis is established he should apply the remedy without delay. Doctors have been accustomed to treat venereal conditions, especially gonorrhœa, with levity. The time for this is now past. It is the doctor's duty to educate his patient. He should inform him that he has a serious communicable disease, and impress him with the danger to himself and his neighbor. Finally in order to make the impression deeper and more lasting, he should furnish him a memorandum briefly explaining the nature of his case, the modes of transmission, the serious sequellæ, his personal care and his responsibility to society.

Special attention should be given to the education of youth. Parents should instruct their children regarding sexuality, just as the child has a right to be taught the danger of fire, so has the youth the right to know the dangers of the venereal peril. Sexual hygiene should be taught in the higher grades and particular stress be laid on venereal infection. The screen offers a perfect medium for the illustration of moral and hygienic lessons. Such moving pictures as "Fit to Fight," "The End of the Road," "Damaged Goods," should be shown broadcast. They are not only interesting and instructive but present a vivid portrayal of how venereal infection spreads and its tragic consequences.

A most prolific source of infection is the prostitute. It is essential therefore that they be apprehended, treated and cured. To accomplish this special hospitals are necessary where they can be thoroughly examined, and if found infected they should be treated until they respond negatively to the laboratory tests. The Wassermann reaction should be applied to all except those in whom the clinical signs warrant a positive diagnosis. The City of New Orleans under the direction of the Health Department opened a venereal hospital of 120 beds on June 1, 1918, antedating by one month the passage of the venereal Act by the State Legislature. It was the first venereal hospital of its kind to be operated in the United States as a war measure. The admissions to date were 1,243 of which 144 were treated for gonorrhœa and 90 for syphilis.

Facilities for treatment should be offered the general public. Clinics should be established for the diagnosis and treatment of gonorrhœal conditions along modern lines. The clinics should likewise include the diagnosis and treatment of syphilis and place

the administration of salvarsan at the disposal of all who cannot afford the price.

The apprehension and cure of the prostitute is not sufficient for the suppression of prostitution. Once released from the hospital she habitually returns to her usual mode of living. The reason for this is that she is looked upon as an outcast and experiences difficulty in securing honest employment. There should therefore be reformatories to which the unfortunates could be transferred after they leave the hospital. They should be taught some vocational training and positions secured for them through social service organizations.

Prophylaxis should be generally taught. Some will object on moral grounds, but we must make allowances for human weakness and remember the pit-falls of clandestine prostitution. The wonderful results obtained in the U. S. Navy with prophylactic treatment convinces us of its effectiveness and should prove a powerful weapon in combating venereal diseases.

We have all had the sad experience with syphilis and gonorrhoea in the home. This is usually the result of negligence or ignorance. A venereal certificate should be a prerequisite of matrimony. It would act as a safe guard and would tend to save the innocent and further diminish infection. This certificate should state that the holder is free of any clinical signs of venereal diseases and that the usual laboratory test gave negative results.

I realize that the suggestions enumerated above are not free from imperfections. No doubt some will find fault with the plan and declare that it will not eradicate venereal diseases, some will point out that similar crusades waged in European countries have failed and others will urge that any venereal campaign must prove futile, because we are not able to state with absolute certainty when a luetic or gonorrhoeal patient ceases to be a carrier. Experience teaches us however that venereal cases treated early and carefully respond to treatment and do not usually communicate the disease, the active carriers being the ones not treated or not cured. I feel confident that much good must come from venereal control, even if we prevent only a few cases of blindness, save a few women from the laparotomy table, if we can mitigate or cure the syphilitic taint in the present and future generations I feel our effort will not have been in vain. Some one has aptly said: "When it has been determined that a thing cannot be done, let an American come

on and he will do it." Therefore, it behooves us to join hands and give our full cooperation to the movement and thereby insure its success.

DISCUSSION OF DR. GELPI'S PAPER.

Dr. H. W. E. Walter, New Orleans: Speaking from the standpoint of syphilis it might interest the members of this society to know that the Charity Hospital in New Orleans has inaugurated a clinic on syphilis. Heretofore this disease has been treated by the genito-urinary clinics and in many instance in the wards. Of course we know how much syphilis there is, but there is ample room there and the Superintendent decided on this as a central, organized means of administering treatment to indigents with lues. In this syphilis clinic where we treat both races and both sexes of all ages it would be a revelation to any of you men to call there and see what we are attempting to do. We are just in the formative stage, but I feel sure a great deal of good will be accomplished. We have many people in New Orleans who cannot afford to pay for treatment, and in many cases even if they could pay for one dose, one dose is not enough to bring about the desired results. We are working hand in hand with the department of pediatrics at the Charity Hospital, and also with the social service department, which in the past has not been all that was desired but which will now probably be a powerful factor for good. We are told by health experts that every American is entitled to health, that everyone is entitled to be well, and certainly at the top of the list we should put the babies that come into the world scarred by the mis-steps of fathers, who are not responsible for their condition, but who in many instances can certainly be helped. The social service department is going through our asylums in New Orleans. These asylums are mostly non-sectarian in character, they have not the means to pay for treatment, so we are going through the asylums and making Wassermanns and studying the little ones. We are giving them what they need when they need it.

I could talk on and on on this subject. There is a great deal of work to be done. But before I stop I want to very cordially invite any member of the society, particularly those in New Orleans, who would like to enlist with us in this work, to come and help us. We need a lot of help. I cannot do the work by myself and the resident staff of our hospital is not large enough to permit sufficient help to be given by the internes. We need your support, we need your assistance in this work. I thought it might be of interest to the society to know that we are cooperating with the government in this work, and the hope is that this treatment may be given gratis to all who deserve it, and that the little ones may have their scars removed.

Dr. William Edler: I was very much interested in Dr. Gelpi's paper because of the fact that I am particularly assigned to this work. One thing I want to impress on this organization so far as venereal disease is concerned: We are not attempting in this fight to start an hysterical crusade against prostitution and against venereal disease. One thing has been reiterated on the floor a number of times; it has been tried, and tried, and tried, and failed. What we are after is to get a sustained effort to fight venereal disease just like we have a

sustained effort to fight plague, typhoid fever, smallpox, etc. To that end—I do not know whether you are familiar with the program of the government to fight venereal disease. There has been a special department created in the Public Health Service called the Department on Venereal Disease, that has its own organization under an Assistant Surgeon General, its own staff of officers, its own building, so that its work will not be a matter of days or weeks or months, but a sustained effort throughout the years until venereal disease is at least under control if it cannot be entirely eradicated.

Another feature of Dr. Gelpi's paper I want to take up is the question of sending the prostitute back into civil life, putting her into the same social environment that originally created her particular occupation. We know from a psychiatric standpoint that between fifty and sixty per cent. at least of prostitutes are mentally deficient; they are actually mentally below normal; they have not the intelligence of ordinary human beings, and it is because of this fact that they are preyed upon by the general industrial grind and competition of a given community. That factor has made it immensely important in the states that have organized this work well to actually organize reformatories and institutions where these mentally deficient persons can be put, not for a week or a month or a year, but for the rest of their lives. In other words, actually to put them in institutions where their life can be made livable, where they can be trained to do certain work and made self-sustaining in institutional existence. That is the only logical way to handle the problem ultimately. Some of these women who have been forced into prostitution by untoward circumstances can be sent back into their former life on parole. That is the idea the government is working on.

Dr. C. L. Chassaing: The subject is so vast and complex and so much attention is properly being paid to it nowadays that I think we should lose no occasion to express our views frankly and clearly thereupon. The paper of Dr. Gelpi is very interesting. He brings out his points clearly, but as he says himself it is impossible within the limit of time assigned to consider the various parts of the problem adequately, and all any of us can do further is perhaps to call attention to some features which he has not thought proper to bring out.

I find it most difficult to say anything that is worth while without being entirely too lengthy, so I shall try to limit myself simply to one or two points. One thing I must say, even at the risk of reiterating something which I stated last night, is on the point of prophylaxis. I stated last night that the reason so much stress should be laid on prophylaxis is because it does not interfere with any other measures that are being taken for the control of this disease. I certainly heartily agree with all that has been said in favor of education of the youth. A good deal can be done in that way. More than this, I have been told by young men that their first wrong step was taken through bravado or through the example of someone who treated the subject lightly, stating clearly that they could have resisted the temptation had they known really what the possible price would be. So there is no question that we would be able to limit the spread of this disease if we could make the young men clearly understand the reason for controlling the disease and the importance of the disease.

But further than that, if we ever do want to really control this

disease and absolutely get rid of it, we will have to change our entire way of living; we will have to lead more natural lives. We cannot expect, with the instincts that are implanted in us, to teach the young man on the one hand that he must wait until he has accumulated a certain amount in order to take care of his wife as she has been accustomed to previous to marriage—in other words, that he must have made his success in life before he marries, and expect him to be able to control his instincts during all that time. We will have to change that. If it is going to be safe at all and if we wish to really prevent the spread of this disease—A man ought to be able to marry, to mate properly and purely, when he is sufficiently developed for his full strength to have come unto him. We cannot proceed in the other way socially, hold down these natural instincts, and then expect that a great majority will come out whole in the end. A certain proportion will, but the majority will not. We must not, either, hold the male entirely responsible. Is it tending to the good of the race and to the proper way of living for the female of the species, for instance, to dress as she does today? Do you think there is no inducement at all in the dressing today, and the dancing today, and a great many other things that were taken from where—originally from the under-world? The fashions we see today, the mode of dancing we see today when I was a young man were seen only in places where a young man should not have gone. That is not in favor of keeping up the morals of the young man, keeping him away from temptation.

Now, to come back to prophylaxis. It does not interfere with anything else. We can have education and training and good methods of living, proper methods of dressing, we can control prostitution, but there is absolutely no reason why we should not be prepared to teach prophylaxis to those who notwithstanding the danger will expose themselves. I do not mean the prophylaxis that was touched upon last night. I do not believe we are justified in handing out prophylactic packages to men in the army and navy; we do not want to be accessories before the act. But there is no reason, if a man has exposed himself, no matter what the cause—why we should not show him a possible way to prevent the evils that would probably follow this exposure. We are not talking about morals, but nevertheless I cannot think it would mean bad morals because we can sometimes prevent the bad effects of an act which may have been immoral to start with. I believe we can do as much good toward the control of this disease by prophylaxis as by any other measure.

Dr. Jack T. Cappel, Alexandria: I have been especially interested in the prevention of venereal disease in order to save our man-power on the other side. This was especially true in 1917 when we first arrived in France and when our men did not realize the responsibility that was on their shoulders. They had wine everywhere, along with other temptations, but that was the greatest we had to overcome. So the doctors became a bunch of preachers. Every few days we would get our men together and give them a lecture on the prevention of venereal disease. At the same time we had to encourage the use of prophylaxis if they did fall to temptation. Later on, after we entered the first battle or two, our men began to realize the responsibility on their shoulders and they listened more intently to our lectures and we had very little trouble. Then after the armistice there was a great relaxation. The

men said "The war is over, we will have our fun." The only measures we could take then to stop it was to form a labor battalion, and whenever a man developed venereal disease we took him away from his outfit and put him in the labor battalion. A man who has gone through a few battles has something that corresponds to the college spirit, and he would rather endure any punishment than be sent away from his own outfit. That helped us a great deal and we had very little trouble.

In regard to wine, we found out that if our men stayed sober we had very little venereal disease, so we got the General in command of our Division to let us give every man intoxicated one injection for prophylactic, whether he left his divisional area or not, and we reduced venereal disease down to about one-third. I think when the older men get back you will find they are much wiser and better men and there will be very much less disease among them than among the men who did not get a chance to go over.

Dr. Isadore Dyer, New Orleans: The question discussed last night and today is one which has been of interest to me for a good many years, probably receiving more attention from me than from most of you. As long ago as 1899 the evils of venereal disease and the related prostitution had become of sufficient moment throughout the civilized world as to occasion the first and only international congress for the consideration of these matters. That was held in Brussels, and I had the honor and privilege of being a delegate from this society and from the State of Louisiana, and contributed two papers, one of which dealt with the question of prostitution in the United States. Up to that time I believe that was the only survey of prostitution throughout the United States that had been made. It considered a variety of questions, some of which have not been discussed here—some of them economic—and mostly, in the paper which dealt with prostitution particularly, the various incentives and occasions for the trade on the part of those engaged in it. Among the points of interest to me, one upon which I would like to lay stress today and which has not been discussed here, is the question of the age of consent. Some of you who have been members of the society for a long time will recall that at the first meeting of the State Society held in Shreveport, in 1902, I read a paper on the Age of Consent, and in that tabulated the ages of consent under legislative acts in the various States of the Union, showing a large proportion of states in which the age was ridiculously low.

While the prevention of venereal disease is one of supreme importance, and while the methods discussed here are all of value, the question is not going to be solved until it receives consideration from an economic point of view as well as from a medical point of view. I think there is no one point which is of more importance than the awakening of interest among state legislatures, and this should largely be done in the matter of the age of consent. There must be a means of preventing the opportunity for the satisfaction of the lust of man, and if in states like Virginia, North Carolina, Georgia and South Carolina, and for a long time Louisiana, the age remains at ten years, nothing much can be done. The Louisiana legislature has now raised the age of consent to eighteen, but so far as I know it is still ten in the other states mentioned. I have been much interested in this question, having submitted the idea that the control of prostitution and the regulation of the hygiene of sex should be a board of health matter,

and it seems to me that among the most important means of removing temptation from the youth, especially of the southern states, no one factor will contribute more than the raising of the age of consent. If the age of consent of the female remains at ten or twelve, if there is no punishment or penalty, the temptation will remain and the young boys who are just attaining the age of puberty will have opportunity to satisfy their first cry of lust. But until that shall be removed, in the South at least, an important condition remains in the negro as a source of venereal disease. I understand that the failure to remove from the statute books such low age limitation has been largely due to the fact that it might afford the negro opportunity for blackmail. But I think in this enlightened age that evil should not be sufficient to counter-balance the evils which result among the whites.

I would like to emphasize the point made by Dr. Chassaing—the women on the streets today of all ages—I would say even children, for I have seen them twelve and fifteen years of age on the streets of New Orleans and New York—dressed like prostitutes, with their faces painted so that their own skin cannot be seen behind it, with their eyelashes and eye-brows blackened, with their lips rouged, as if they were parading the streets as an incentive to the members of the male sex to prosecute their lust.

Dr. R. McG. Carruth, New Roads: I would like to urge that practitioners make the patient understand the gravity of these diseases. I have been practicing medicine for thirty-eight years and I have gathered a considerable amount of experience as a country practitioner with regard to the levity with which one of them, gonorrhœa, is usually regarded. I have never failed to give my patient, even in the early days of my practice, a lecture on the subject. In general, unless it is some timid boy, people come in smiling, and speak of it as if it were nothing more than a "bad cold" of the urethra;—this is what they sometimes call it. If I have not the time to give these patients a talk then and there, I explain to them I am too busy, and have them come later. Then I explain to the patient what a terrible disease it is; how it has caused more blindness than any other single cause; how it has been the cause of more operations;—that a very large percentage of operations on women are due to it. I try to impress upon him the gravity of his condition after I have made an examination of his case. But lately, since the enactment of this new law, I never fail to give him a copy of this law; and if he is a negro and cannot read, I read it to him. I also refuse, and have always refused, to accept a fee in my office as remuneration for one single consultation. I explain to the young man that I charge him a lump sum, generally \$25, for the case whether I give him this single consultation and do not see him again, or he comes every day, or every two or three days, for three months. And I do not **guarantee anything**, any more than I would guarantee to cure a mosquito bite; in other words, I have him understand that the cure rests with him. So many men consider that as soon as they are relieved,—have no more pain nor discharge, that it is nothing to go around and infect others; they seem to consider that most of those they go with in this way, do not deserve any pity. But this law, if it is enforced, will be of great benefit. I believe we will be able to cure more of our cases than ever before.

Dr. P. J. Gelpi, (closing): I want to thank the gentlemen for their

discussion. When I selected the subject of my paper some time ago it was with the idea that it was a real, live topic, and that the meeting of this society was a favorable place to bring it up. As I intimated in the early part of my paper, it is impossible to deal with all the points that would suggest themselves in considering a subject of this kind. I wish to thank the gentlemen for bringing up several other points, and especially by Dr. Chassaignac and Dr. Dyer. I am a great believer in prophylaxis. Some may object on moral grounds, but in a purely scientific question such as that before us I do not believe we should allow the moral side to guide us at all. The idea is to prevent venereal disease, and if we have a prophylactic means by which we can reduce the number of cases I think it is our duty as doctors to offer it to those who for some reason or other may expose themselves to infection.

PERTINENT, CONSTRUCTIVE HEALTH ACTIVITIES.*

By OSCAR DOWLING, M. D., New Orleans, La.

All health activities are pertinent. Those selected for discussion at the meeting of this section have been pertinent through the ages. They are more apparent today, because our "measuring rod" is more exact, therefore, the facts more convincing.

Before an audience of physicians one can speak frankly of venereal diseases and drug addiction. This in itself is advancement, since by frank admission of what exists we may arrive at a common understanding which makes possible unity of effort.

The General Assembly of 1913, in common with legislatures of many other states enacted needed legislation for the control of venereal disease and the sale and dispensing of habit-forming drugs. In the ten months which have passed we have made little progress in those features of venereal disease control which are fundamental and important. At present, in addition to the central laboratory of the State Board of Health in New Orleans, four branch laboratories are in operation. A hospital at Alexandria has been provided for the treatment of women prostitutes. A hospital for male patients will be opened within a few weeks—a clinic also is in operation. Charity Hospital, New Orleans, has recently extended its clinical service—there are now one for syphilis and one for gonorrhoea. The Shreveport Charity Hospital may have the provision under way within a few days. In Monroe there are a laboratory and a clinic and in Baton Rouge the laboratory

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

work will be extended by establishing a clinic as soon as a force can be obtained.

During the past two months, since Act 61 went into effect only 904 patients have been reported as suffering from gonorrhoea, syphilis and chancroid. There should be not less than 20,000 cases on record. As doctors you know more intimately than any one else the number who are suffering from these infections. You realize better than any one else the ravages of the diseases. The sinister menace to our civilization can not be other than apparent to you. I need not ask you to recall the draft records; you are familiar with the figures. They stand a disgraceful charge against us as a nation. To effect any results in control the first requisite is a report from each physician of each patient. Further, a report of the patient who fails to return for treatment and is not being treated by another physician. The establishment of clinics has been retarded because of lack of records which would be proof of the need. Each community thinks the evil is abroad in some other community not their own, or they say show us how many persons are affected with these terrible diseases and if we have them we will help.

That we have condoned and even laughed at the number of men infected is not to our credit; that authorities have permitted and still ignore the spread of venereal disease through licensed prostitution is a social crime.

The medical history of Louisiana—if I may so term it—proves the value of frank recognition of the existence of any infection. For years the policy of secrecy was the patriotic duty of every loyal citizen. What did it avail? In the past there might have been some excuse but today when causative agents are known and the means of control have been demonstrated science and intelligence unite in the demand for action.

Each of the forty-four states is making an effort, more or less, to prevent the spread of these diseases. In some, state boards have almost complete returns of all cases and reports of from 75 to 90 per cent of the "floating" patients. In the latter, almost without exception, the situation has been attacked from the standpoint of contagion. A case of epidemic meningitis is promptly reported and the patient isolated. This is protective—it is a community right. Why not apply to the other infection equally dangerous if

more insidious? Too many persons emphasize the personal side and ignore or fail to grasp the social right to protection.

The U. S. Public Health Service is doing its utmost to back-up the efforts of city and state authorities to get rid of this evil. It is urging those who are active to be more diligent and those who are negligent to move up. Every phase of publicity and assistance that can be effective is being utilized. Taught by the experience of the nations in war, the service realizes what this evil means, and they want every individual in the whole nation to know the dire consequences of infection. The appropriation by Congress of a million dollars to educate the nation on this subject is an unanswerable argument as to its necessity. The states were given their prorata of this appropriation; Louisiana received \$18,000.00. In order that next year we may receive an equal amount, the state will have to appropriate on a dollar for dollar basis. The government takes no excuse. It feels that if the citizens are awake to the value of these efforts they will be more than willing to furnish their share of the expense. You will see that it is imperative that we make progress during the present year that our records may show efforts in the right line.

What to do with the addict is another problem which is now demanding attention. The enforcement of Act 252 brought from cover many drug users. They must be provided with the daily dose of the drug of their addiction. The doctor, or some authority, must take the responsibility. It is only humane to provide—temporarily it may be—but to provide these unfortunates with the drug. As in the case of venereal disease, many physicians and many of the laity have an antipathy to the drug user. When we realize that the majority of addicts, perhaps 99 per cent, were in the beginning neurasthenic, neurotic, or otherwise defective, and that possibly, because the physician was ignorant of this fact, the habit was formed, we will have more patience if not sympathy.

Early in April, in every municipality in the State of New York a conference will be held with the health department and mayors and health officers will be asked to establish local clinics at which addicts may be treated by physicians named by the state authorities. It is reported there are 500,000 addicts in the state and that many of them have been the victims of unscrupulous peddlers and physicians who have charged exorbitant prices for the drug and for consultation and treatment. Our experience has proved that

morphine can be bought at wholesale and sold (in solution) at a low cost compared with market prices. Temporarily, we are taking care in New Orleans of more than 300. No treatment other than reduction of the daily amount and examination has been attempted. But the increasing number, the character of the patients, the number of whites and colored, the different ages and sexes make even the simple daily supply a burdensome task. If carried on under the most favorable conditions, it can be considered simply an expedient. In a few other places similar arrangements have been made.

It has been widely suggested that after July 1, the drug addicts will greatly increase. While I do not think we wish to discuss this tonight, it is a phase which makes it incumbent to adopt such precautions as we may think necessary.

As physicians and as citizens we are interested in the civic aspect of the question. The laws are adequate. Their effectiveness is dependent wholly upon the public. With rigid enforcement of the law and the regulations of the Sanitary Code it will take a generation to get headway in the suppression of the venereal infection. Likewise, in the elimination of drug addiction. That a train of physical and mental ills follow in the wake of these evils is conceded; that it is a public duty to prevent sickness, insanity, feeble-minded, blindness and kindred causes which are consequences needs no argument. Further, it need not be added that the physician should lead in the war of extermination. The recent decisions of the Supreme Court, Nos. 367 and 370 are of interest. These relate to violations of the Harrison Narcotic Act. Appeal was made from decisions of the lower courts. 270 makes clear that a physician may not "sell, dispense or distribute" a drug for the purpose of gratifying the appetite of the habitual user." In 370, to the question whether a physician may provide "the user with morphine sufficient to keep him comfortable" the decision is, "to call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required."

A decision of the U. S. Circuit Court of Appeals affirming the decision of the Federal District Court for the western district of Texas was published in the daily press April 4. The article states:

"Physicians and druggists cannot evade the Harrison law by prescribing and filling prescriptions promiscuously for drugs and derivatives of the habit kind to addicts according to the United States court in a decision here, Friday.

The government charged that certain doctors conspired with a druggist, by which they sought to furnish morphine and other derivatives to drug addicts in El Paso on the ground that these addicts were their patients.

Attorneys for the government claimed that the persons served by the two doctors were not patients, but addicts who craved the drug, and who should not be served, as it was contrary to the act.

Lawyers who viewed the verdict said that it meant that no physician could issue a prescription unless he was curing a patient in the future."

These decisions are clear cut as to the restrictions which are placed upon the practice of prescribing for addicts. There is no alternative but to obey.

I am not unmindful that in Louisiana the tuberculosis situation is acute; that the problem of the feeble-minded presses; that medical supervision of school children is imperative; that better care of mothers and infants should be instituted; that these are not our only pertinent activities, but because of the psychology of the time and the help offered by the national government, measures for relief and treatment of drug addicts and the control of venereal infection seem the lines in which the most headway can be made at present.

Some time ago 48,000 doctors of the United States had approved the venereal disease campaign. In January 42 states were at work with the aid of the allotments. Hawaii has since qualified. These facts give evidence of the general attitude. We can not ignore; whether we will or no, we must approve but approval without zeal in the cause counts for little. The commercial and ethical good of Louisiana will be subserved by prompt, cheerful acquiescence with the government plans and it is up to us as physicians to lead in the enforcement of the laws, state and national, which have been enacted to this end.

DISCUSSION OF DR. DOWLING'S PAPER.

Dr. William Edler: I want to state a practical illustration of the value of reporting venereal disease. About a week ago there came in from a little town in Louisiana reports from two physicians on two patients infected with venereal disease, both getting the infection from a sixteen-year old prostitute. The health officer was immediately wired to have the girl quarantined, and I venture to say in that way saved the state five thousand dollars, because very probably she would have infected as many as ten to twenty men in the next three or four weeks. That is a factor in reporting venereal disease that I do not think you have thought of. I remember one time we had six boys in one village who had all been infected by one syphilitic woman, but at that time we had no law such as we have now. You may be sure that the re-

porting of venereal diseases has more than a mere statistical value, for there are many things going on behind the scenes that you as physicians never know. These reports that you send in are carefully studied and every effort is made to use your report as a basis for preventing a new case of venereal disease.

Dr. M. W. Swords: It is true that in my twelve years of medical experience, my experience with those addicted to the use of drugs was practically nil. I do not believe I knew personally three drug users. Therefore the experience I have lately gathered has been an experience forced upon me, and if my impressions are erroneous it is because of the fact that I have gotten them from an irresponsible source.

When this drug law went into effect there was an avalanche of drug users that came to the offices of the State Board of Health each morning. I never in my life looked upon a more depraved, suffering mass of humanity. It was an awful sight to see these people asking for assistance, dirty, sick, nauseated, faint and hungry, and it occurred to those interested that something must be done. This suffering was not pretended. I want to say to you that no matter whether a drug user is a neurotic or not—we will not argue the reason for his drug addiction—but I will say that when this habit is well established the drug becomes an absolutely physiological necessity to the user; he must have it. You can call that psychological if you will, but that drug is absolutely necessary for the proper function of every organ in that man's body. Give it to him, he is bright and alert, his actions are quick and he becomes apparently perfectly normal. Deprive him of it and he is absolutely a menace to himself, he cannot do a thing in the world, he cannot even think. That is the situation we had to cope with.

We first gave them one injection a day, but we soon found that would not do; it would not hold them up until the next day, therefore we had to devise means by which a sufficient quantity of the drug to keep them in a normal state for at least twenty-four hours could be given. Some of them took as much as forty grains a day, usually hypodermically. The majority of them had their regular amount cut in half and this was gradually reduced until they were getting just enough of the drug to keep them in an apparently normal state and enable them to carry on their daily occupation. I will not say that every morphine user is a criminal, but they become criminals if deprived of it. They had to earn in some way the money to pay for their daily allowance—about fifteen grains. There were more than 300 drug addicts in the City of New Orleans of the latter type. It meant that these men were spending between \$20 and \$30 a day for morphine, and if they earned \$7.50 from legitimate sources they were compelled to depend on illegitimate sources for the balance, and it amounted to something like \$50,000 to \$60,000 a month more than they were earning. They stole the difference. How do I know that? They told me so. That is what we are saving the citizens of New Orleans—between \$50,000 and \$60,000 a month. We spent last month a little over \$3,000. We are paying \$12 an ounce and we are selling it to them at cost and a little bit more for overhead expense. This is a big subject.

My experience of the last few months teaches me that about two per cent. users of morphine are criminals, that is were criminals when they began to use morphine. About forty per cent. are criminals from necessity. They have been compelled to go out and steal money to

purchase this drug because it has become an absolute physiological necessity to them. The result is—take a man who earns \$7.50 a day. He would spend, even if he gets a prescription from a doctor, \$5.00 or \$6.00 a day for morphine, and he has \$1.50 left for the support of his family. You say something ought to be done with this man. If you deprive him of his morphine he cannot earn the \$7.50 a day because he cannot work, and the spending of the \$5.00 a day is absolutely necessary in order that his family may have the \$1.50. Deprive him of it and he becomes a ward on the state and his family are deprived of the necessities of life. That man is now getting his morphine at about 45 cents or 50 cents a day, and the result is his family is getting practically all his earnings and he is buying new clothes. If you could have seen these people when we first began this clinic and see them now, you would never recognize them as the same people.

It was said that selling morphine to these people would make New Orleans a haven for drug addicts. But the moment a man applies for drugs he is asked if he has any legitimate means of support. If he says no, we tell him we cannot furnish him this drug until he finds some legitimate means of support; that he must purchase this morphine with clean hands, that we will not accept tainted money in this clinic. He goes out and obtains legitimate employment, comes and buys his morphine with honest money when before he was buying it with dishonest money. In other words, you have taken a bad thing and made a good thing out of it. That man is getting back some of his respect; we are making a better citizen of him. The police say that seventy-five per cent. of the petty thieving has stopped since we have been giving these people this drug. Two U. S. officials happened down there the other day in that particular line. They said they had looked at the daily paper and at the calendar of the courts and noticed the wonderful diminution in petty thieving and wondered why. In trying to find out the cause someone told them of the clinic operated by the State Board of Health. They spent an entire afternoon with us. They said we had found the solution of the petty thieving problem, and it is the only solution of the drug addict problem. You must furnish these people with drugs temporarily until you can establish institutions where they can be placed permanently.

Dr. Oscar Dowling, (closing): There is a regulation of the United States Public Health Service that prevents any individual suffering from gonorrhoea or syphilis from going from one state to another without a special permit. If an individual moves from this State to Alabama, Mississippi or Texas he must get from the health department a permit; he then must report to a certain physician, and this physician reports back that he has arrived. Recently there came to New Orleans from another town a man and his wife. We received notice that they were coming and that the woman had gonorrhoea and they were to report to a certain physician. We notified the city Board of Health. These people arrived and reported to the physician and are now under treatment and I hope on the way to recovery.

SOME OBSERVATION ON THE DIAGNOSIS AND TREATMENT OF GASTRIC AND DUODENAL ULCER.*

By J. E. KNIGHTON, M. D., Shreveport, La.

It is not my intention to deal with either phase of this subject in an elaborate way, but to discuss briefly some observation with reference to the value of the silk thread test as a diagnostic measure and the practical application of what is known as the Sippy method of treatment.

At the beginning, I want to state that ulcers of the stomach and duodenum are much more common than most of us have been accustomed to believe and if we make a routine practice of bringing to our assistance every means that may contribute to definite and specific knowledge as to our patient's condition, we will all soon come to the same conclusion. As to the silk thread test, you are doubtless all more or less familiar with its application. It consists of a piece of number 15 or 20 braided silk thread of sufficient length that when swallowed the lower end may pass through the stomach and into the duodenum while the upper end is tied into the button hole of the night garment. A small button or shot should be attached to the end of the thread that is swallowed and this is taken at night on retiring, being swallowed with a glass of water just as a capsule or pill is taken. This is withdrawn the next morning for inspection.

If the thread has passed through the stomach and into the duodenum the lower end will be stained yellow from its contact with bile. If an ulcer is present in the esophagus, cardiac orifice, lesser curvature, pylorus, or duodenum there will be also a blood stain on the thread corresponding to the location of the ulcer. If there should be a blood stain without bile stain it suggests that the button failed to pass into the duodenum and that there is an ulcer above that part of the digestive tract.

If the thread shows neither blood nor bile stain it is of no value as it has evidently failed to pass into the duodenum. During the past twelve months I have tried this test in a considerable number of patients and have studied the cases in connection with the X-ray and other diagnostic measures and the results are almost invariably in harmony. An ulcer may be present in the fundus or greater curvature without the thread coming in contact with it and hence

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

no stain would be shown. I have seen cases of duodenal and pyloric ulcer, as shown by the X-ray and other methods, which failed to give the blood stain on the thread, but in these cases the bile stain was also absent. This test is of great value when positive results are given, and a positive diagnosis may be made in this way in many cases that would be very difficult of diagnosis by other means. I will exhibit a number of the threads for your inspection which have been used for this test and which will illustrate what I have tried to tell you. When we come to consider the treatment of ulcer, let us assume that there are cases that are amenable to medical or nonsurgical treatment, and in support of this contention I quote from one of our most noted American surgeons, Dr. Arthur Dean Bevan, of Chicago:

“I am convinced that the great majority of gastric ulcers can be cured by proper medical management, and that this should always be our first choice in the handling of the case. There are, of course, a number of conditions that demand surgical management. These I believe to be cases with definite hypertrophic obstruction at the pylorus, cases with a history of repeated serious hemorrhages, and cases in which medical management in spite of being efficiently followed out, is not successful in curing the case.”—*Surgical Clinics of Chicago*, October, 1918, Page 816.

The Sippy method of treatment consists of rest in bed, frequent feedings of small quantities of milk and cream, followed by the administration of alkalis in sufficient quantities to completely neutralize all free hydrochloric acid. Since Sippy published the results of his work about four years ago, I have been following his technic with the most gratifying results in properly selected cases.

It is important to remember that most cases of gastric and duodenal ulcer are associated with or have been associated with some primary focus of infection, and I believe many failures of both medical and surgical treatment are due to the fact that the primary focus of infection has not been discovered and removed.

When a diagnosis of ulcer has been made, a careful investigation of oral and nasal cavities, tonsils, and accessory sinuses should be made to determine the presence or absence of any suppurating process in these locations. If such be found it should have appropriate treatment along with the ulcer treatment if we would get the best results.

I recall a recent case of duodenal ulcer which had made but little progress toward recovery after two weeks treatment when an

X-ray examination of mouth showed a rather large abscess around the root of one tooth. The tooth was extracted and the patient improved from that time, and is apparently well at the present time. We frequently find gastric and duodenal ulcer associated with chronic appendicitis and chronic cholecystitis, and it is a well known fact that these conditions almost invariably produce hyperchlorhydria. Under these circumstances it is almost impossible to get results from medical treatment of the ulcer, probably for the reason that it is so difficult to control the hyperacidity. In conclusion I would like to emphasise the following:

I. There are cases of gastric and duodenal ulcer that may be cured by medical treatment.

II. There are other cases that are purely surgical conditions and valuable time should not be wasted in attempting to treat them otherwise.

III. The essential elements in the nonsurgical treatment of ulcer are rest in bed, frequent feedings, and neutralization of the free hydrochloric acid by means of alkalis.

DISCUSSION.

Dr. Fossier: There are good results from medical as well as surgical treatment in cases of gastric ulcers. I know of these cases which have been operated on three or four times. I do not think that the operation was responsible for the recurrence, but I blame the failure to the lack of proper treatment after the operation. I know a young lady who was operated on four times for gastric ulcer, and invariably a short while after each operation was invited by the operator to a soft shell crab supper. Naturally if we have such dietetic errors we must have recurrences. A relapse of gastric ulcer does not mean that the ulcer was not cured, but usually that the patient did not follow the advice given him.

Dr. Knighton, (closing): The question that suggests itself to us is, how are we to know when an ulcer is cured? I believe most of us would consider a patient cured who had gone six years without symptoms. The case referred to by Dr. Eustis that recurred after six years had probably been well and at this late date developed another ulcer. If not, I would regard it as a very exceptional case. I agree with Dr. Eustis that the ideal operation is to resect or tie off the pylorus in conditions with gastrocolostomy. I believe that surgeons, internists and general practitioners alike have a most profound respect for any statement made by Dr. Arthur Dean Bevan, of Chicago, and when he published the statement which I quoted in the paper, it was after long association with Dr. Sippy and ample opportunity to observe the results of his work.

A DISCUSSION OF URETERAL AND PROSTATIC CALCULI.*

By E. P. MERRITT, M. D., Atlanta, Georgia.

The invitation to come to your city and discuss with you a few medical matters or problems is indeed a source of pleasure as well as a great privilege, I assure you.

The subject which I have chosen is not absolutely new; nevertheless, it is interesting to me and I hope will be to you gentlemen. There are some cases we see that are more or less a mystery to us; oftentimes the mystery could be cleared up if we would stray from the beaten path of the diagnostic dictionary, and use some method that seems more acceptable to our individual minds.

Upon the subject of etiology of urinary calculi or stones, we find ourselves standing almost under the same arch as did the workers of a century ago. At intervals some etiological changes or factors have been promulgated, but as far as I know have not been proven.

The uric acid coagulation, the hereditary, the different grades of water, diet, climate, and many other theories are offered; each probably plays a part. The hereditary phase has been of interest to me, as a large percentage of my cases date back to the family history. The majority of investigators are of the belief that most urinary stones get their origin in the kidney. Of course, this does not include the true prostatic stones. My discussion will only deal with ureteral and two cases of prostatic stones. The symptoms will be taken up as the X-ray plates are exhibited.

Ureteral Stones: Give more pain ordinarily than kidney stones. The symptoms vary in such a degree that the diagnosis is sometimes credited to other anatomical abnormalities. It is not so rare to see a patient that has sacrificed the appendix trying to be relieved of a ureteral stone; I have seen two such cases.

The diagnosis of ureteral calculi in some cases gives concern,—for instance, where the X-ray gives negative findings; again where shadows are cast in that region in abundance. Of course this can only be cleared up by use of the cystoscope.

Some physicians argue, leave the stone alone and it will be expelled through the graciousness of nature. This is not always true, as I have removed several that have been in the ureter for

* Read by invitation at the Meeting of the Orleans Parish Medical Society, May 12, 1919. (Received for publication Oct. 10, 1919.—Eds.)

two or more years, giving trouble, not only ureteral pains but causing gradual pathological and destructive changes in the kidneys. The methods I use does no harm to the structures and removes at least 90 per cent of stones in selected cases, and most every case is a selected one.

The non-cutting or cystoscopic method should be tried and given time to show its value, before a surgical interference is resorted to.

A brief review of my method, after diagnosis is established:

The operating cystoscope is inserted into the bladder. Note size and shape of ureteral orifice; if small may be clipped with ureteral scissors to size desired. This done carefully is of no serious consequence. Then the obstruction is located with catheter or ureteral dilator and noted. Then a solution of papaverin or novocain is injected below obstruction, also above, if possible. After this, ureter is thoroughly dilated below obstruction with dilators or forceps. Then about 4 to 6 c.c. of a sterile solution of olive oil is injected. This is repeated every three or four days, as the tenderness subsides. The patient is instructed to drink abundance of water, and if possible take some very fatiguing exercise. Short intervals.

The medicine is given symptomatically.

It was my privilege to include two cases of prostatic calculi of late. One in a middle aged man; the other a young man. The symptoms were various but somewhat unlike.

Both were positive per X-ray.

The older man had eighteen stones in the median lobe. The younger man one small stone in median lobe. The stones could not be palpated per rectum. I feel sure that I have overlooked several such cases because they were negative to the rays.

Those two cases were very much distressed mentally. They gave many urinary symptoms; most prominent among them was frequent urination with much distress at terminal, much burning and distress followed sexual intercourse with the older man.

The cases will not be reported in full here as they would cover many pages. But we must look for some of the uncommon conditions that exist and have more things in mind as we examine patients. I only mention these two cases because I almost "passed them up" for neurasthenics, as they had been passed upon previously.

In conclusion, I wish to commend the good work that the medi-

cal profession is doing in your city in all lines of work. It is my privilege to know of some of the original work that your colleague Dr. Walther has done in the urological field, I heartily congratulate him. I believe the men in the South are as good as the world affords, but it seems that they are very modest in a sense of the word, by not letting their medical knowledge shine out to the world, and taking a bolder stand. I hope I may be forgiven by saying we lack co-operation. The South has given the world some of the greatest men it has had, medically and otherwise. The South, as we may say, is only a part of the greatest nation on earth.

DISCUSSION OF DR. MERRITT'S PAPER.

Dr. Gelpi: I heard with great pleasure the papers of Drs. Englebach and Merritt. Dr. Walther had rightly emphasized the fact that by various devices we are able to avoid operations in the treatment of Urological cases. The X-ray catheter is of great value in verifying X-ray findings. The X-ray shows the shadow and the catheter indicates whether the shadow is in line with the ureter.

A word about the use of olive oil: I have great faith in its usefulness; in one particular instance a patient had for three months repeated attacks of renal colic. Oil was injected about the stone and in about three weeks it passed into the bladder.

This case also upholds the point that you can avoid operations by proper manipulation, for later X-ray examinations showed that the stone was coming down after dilation and the use of oil. The patient eventually passed the stone.

Dr. H. W. E. Walther: Dr. Merritt's talk on ureteral and prostatic calculi is illuminating and brings forth some work that can be done by cystoscopy in the suspected conditions of ureteral calculi. Advances are being made rapidly in the management of these conditions and although calculi will often pass if left alone, by the aid of mechanical means, patients can be relieved from suffering and the treatment shortened.

Cases of prostatic calculi are of rare occurrence. I have not seen a single case of calculus in a prostate. As far as the ureteral calculi are concerned, they are exceptionally common in the southern part of this country. We see more than any other of three portions of the country put together. The practical means for relieving are so simple that they should be studied out more frequently than they have been in the past.

Dr. C. P. Merritt, (closing): I think next to the prostatic calculi the ureteral stone is the most interesting of all. I would dwell as forcefully as possible on the combined use of the X-ray catheter and olive oil in dilatation, to ensure correct diagnosis. The noting accurately of sign and slope of urethral orifice, if small clipped with urethral scissors to size desired. The use of papaverin or novocain, below and if possible, over obstruction and the use of sterile olive oil every three or four days until exposure of stone.

If after a reasonable time this is not successful, then it will be time enough to resort to surgical interference.

SURGERY OF THE GALLBLADDER.*

By MAURICE J. GELPI, F. A. C. S.,
House Surgeon, Charity Hospital, New Orleans.

In the short time allotted me for the discussion of this enormous subject, my remarks necessarily must be proportionately brief.

While we still occasionally find in our midst a venerable practitioner who proclaims the efficacy of sweet oil for gall stones, persistent gall-bladder disease is generally conceded to be distinctly a surgical condition. Looking at the subject from this standpoint, many important topics naturally present themselves for consideration. For obvious reasons, however, we shall limit ourselves to a brief discussion of three subjects only.

1. Some general considerations in the handling of cases of gall-bladder disease.
2. Cholecystectomy versus Cholecystostomy.
3. Surgical Technique.

GENERAL CONSIDERATIONS.

From the diagnostic standpoint, no class of cases requires closer study than the average case of gall-bladder disease, when the clinical history and symptoms are not typical. More or less constant pain and "indigestion" are prominent symptoms. There may be slight jaundice with an occasional rise of temperature. This type of case in particular must be studied from every angle before appropriate treatment can be suggested and the best results obtained. Frequently the only suggestion which can be drawn from the clinical history and superficial examination of the case is that the pathology probably lies somewhere in the right side or at most in the right upper quadrant. This calls for at least an attempt to establish or eliminate especially the presence of gastric or duodenal ulcer and appendicitis.

Sometimes even the cystoscope must be called upon to eliminate the right kidney as the possible source of trouble. I can recall such a case where it was absolutely impossible to determine whether to make the incision in front or behind, without the assistance of the cystoscope.

The case was referred as one of possible gall-bladder disease. The clinical history and symptoms were indefinite but there was a palpable mass extending below the right costal margin, strongly

* Read before the Camp Logan Base Hospital Medical Society, Jan. 15, 1919.

suggestive of a hydronephrotic kidney. Outside the usual laboratory and X-ray examinations referable to the stomach, a possible tumor of the colon was eliminated by the X-ray. The negative urinalysis was not sufficient to disprove the presence of a simple hydronephrosis, so that a pyelogram was made with a lead ring surrounding the most prominent portion of the abdominal mass. Although the kidney was found ptosed and slightly hydronephrotic, as the ring shadow proved to be distinctly higher than the kidney pelvis, the problem was thus solved and the condition was attacked from in front. Exploration revealed a removable hydrops of the gall-bladder, six inches in length, containing a number of stones and sand. The case is simply cited to show the importance of thorough investigation of the type of gall-bladder case in question.

This complete investigation, of course, is not so urgent in the case having typical gall-stone colic, where the symptoms are definite, nor in the cases which present the syndrome of cholangitis with obstruction of the common duct accompanied at each attack by chills, fever, and jaundice. In these cases the indication is usually clear from the start. This is not always the case, however, in the group of so-called "unaccountable jaundice." Though Judd believes that in this type; "Any variation in the jaundice or suggestion of fever or chills, should be an indication for exploration."

In the cases with jaundice, Judd calls attention to the importance of transfusion *before* operation. Calcium lactate in my experience has proven of no definite value. Blood serum would appear to furnish greater possibilities and has been used with definite though not uniform success. My experience with transfusion before operation is nil, but the suggestion is a happy one and certainly worthy of investigation.

As a preparatory measure for operation on gall-bladder cases, especially the septic group, it has been suggested that large doses of soda be given as a routine. My own impression is that such cases do better when sufficient soda is given to alkalinize the urine, when the patients are not starved, and when large quantities of water are allowed. As a post-operative measure a drop of glucose and soda is ordered as a routine. As in other abdominal work, gastric lavage is at times of extreme value.

CHOLECYSTOSTOMY VERSUS CHOLECYSTECTOMY.

The question as to whether the gall-bladder should be removed

or allowed to remain is still under discussion. The tendency in the last ten years has been towards cholecystectomy rather than cholecystostomy. Here as in other conditions the proper course would seem to be to individualize and select the procedure which obviously offers the greatest possibilities for the case at hand. It would appear as though in the cases of "strawberry" gall-bladder and chronic cholecystitis with or without stones, everything else being equal, the operation of choice should be cholecystectomy. This is particularly true where the inflammatory condition seems to be limited to the gall-bladder alone. In my own hands, where the inflammatory condition in the gall-bladder had not reached a definitely chronic stage, and where there was still a certain boggi-ness and edema, and where there was more or less acute inflamma-tory reaction in and around the gall-bladder and ducts, the cases have always done better where cholecystostomy was done primarily even though cholecystectomy was subsequently necessary. Better have a patient partially operated and alive, than thoroughly operat-ed and dead.

In cases where the common duct is drained, the gall-bladder may or may not be removed. If the gall-bladder appears to be function-less it should be removed unless there is a strong probability of stenosis in the common duct. In the presence of a suggestion of pancreatitis the logical procedure would seem to be to preserve the gall-bladder as a safety-valve, though no less an authority than Judd, makes the following statement:

"Enlargement and hardening of the head of the pancreas is an indication for removal of the gall-bladder in preference to drainage, and this would still hold good in the presence of a slight degree of jaundice, if the jaundice is due to pancreatitis. Cholecystectomy seem-ingly accomplishes more in cases of pancreatitis associated with gall-bladder conditions than does any other form of treatment. This is probably due to the changes produced in the excretory apparatus by the removal of the gall-bladder."—(J. A. M. A., July 13, 1919.)

This is rather startling to some of us with more limited ex-perience who have been timid in removing the gall-bladder in such cases for fear that subsequent pancreatitis might arise, requiring drainage via the gall-bladder.

TECHNIQUE.

As regards technique, there are but a few points to which atten-tion will be called. Too much importance cannot be laid on the making of a free incision. There is no work in the abdominal

cavity which requires a better exposure than the surgery of gall-bladder and ducts and there is no region in which it is at times more difficult to obtain. The number of incisions devised is an evidence of this. Whether you select one or the other of the more or less classical incisions such as that of Robson, Moscowitch, Bevan, or Kocher, the object is always the same,—to *see* as well as *feel*.

The simple, long, straight, right rectus, split-muscle incision seems to serve the purpose very well if retraction is applied in the proper direction. Nowhere is it more necessary to follow the old master's injunction to "make the incision twice as long as you think it ought to be, and perhaps you won't have to enlarge it much." This long, right rectus split-muscle incision makes practically all the contents of the cavity accessible, including a low-lying appendix. The retraction should be done with a large, strong retractor placed at the outer upper lip of the incision and the pull should be exerted outward and upward.

If the liver is sufficiently mobile and can be grasped with the gall-bladder, a splendid exposure of the under surface with the gall-bladder and ducts can be obtained, by first pulling the liver downward and then rolling it upward, over the costal margin. Masson assists in this procedure by placing a folded square between the dome of the liver and the diaphragm. Additional exposure can sometimes be obtained by cutting the round ligament of the liver. This can be repaired subsequently.

Apparently good results are obtained irrespective of whether the gall-bladder is removed from the duct toward the fundus or vice-versa. However, considerable assistance can be derived from the use of the gall-bladder as a handle, during the process of extirpation from the duct toward the fundus. In extirpating from the fundus toward the duct there is always present the possibility that, as the duct is approached, the gall-bladder may be detached from its bed and the duct torn before either itself or the cystic artery can be ligated. Of course, this can be obviated by preliminary ligation of the duct and artery, but if this is accomplished, as it is the most difficult part of the procedure of extirpation as a rule, why not continue the dissection from below upward? Furthermore if the dissection is from the fundus toward the duct, the gall-bladder cannot be utilized to hold the liver out of the way until the duct and artery are ligated. As the liver

falls, it obscures the view at the critical moment of the operation. Cholecystectomy from below upward therefore offers distinct technical advantages.

Ordinarily, it seems to be of little moment as to whether the cystic artery is ligated with or without the duct. However, an experience with a case where the ligature apparently cut across the cystic duct in a vomiting spell just a few hours after operation has taught me the advisability of tying each separately whenever it is feasible. When my attention was called to the case referred to I assure you that I slept better that night in the consciousness that there was a separate ligature on the cystic artery.

As a rule the drainage cases that seem to fare best are those in which the drainage is continued for a prolonged period. While post-operative hernias are distinctly less frequent in the upper than in the lower abdomen, prolonged drainage often has a tendency to develop the condition, especially where there is marked flabbiness and attenuation and weakness of the recti and where the general condition of the patient is bad. When it is morally certain that a hernia will develop, a useful procedure is to anticipate it by making use of the closure suggested by Laplace of Philadelphia. The bulk of the incision is closed in the usual way but opposite the drains where the hernia is expected, the skin is approximated to the peritoneum thus forming a pocket on either side of the drain, containing in their normal anatomical relations, the rectus and sheaths. When the tube has been removed for some time, and the drainage is complete this leaves between the gaping skin lips, a granulating surface sealing over the peritoneal cavity. By means of an incision under local, the skin edges are released, the pockets opened and without further dissection, repair of the anatomical planes can be easily brought about, without invasion of the peritoneal cavity. The procedure is more frequently applicable in cases of appendiceal abscess than in gall-bladder cases but even in the latter it has some definite value.

CONCLUSIONS.

So as not to impose upon you any longer, I will conclude by again calling your attention to the points which I have endeavored to emphasize.

1. The average atypical case, suspected of gall-bladder disease requires the most painstaking investigation from every possible standpoint.

2. Better operative results are obtainable as a rule when appropriate preliminary preparation has been followed.

3. In the general run of chronic cases of cholecystitis with or without stones, especially if the inflammatory condition is restricted to the gall-bladder in particular, cholecystectomy seems to be the operation of choice.

4. In the average hands primary drainage is better in doubtful cases even at the risk of a secondary operation.

5. It is particularly important to obtain the necessary exposure to *see* as well as *feel*.

6. It is sometimes appropriate to anticipate the formation of a post-operative hernia by a proper closure which allows of easy immediate anatomical restoration.

SKIN DISEASES AMONG THE PORTO RICAN TROOPS.*

By HERMAN GOODMAN, (B. S., M. D., New York).
First Lieutenant, M. C., U. S. A.,
Venereal Officer, Camp Las Casas, Porto Rico.

Although Porto Rico is situated in the tropics, and in our capacity as Venereal Officers we were alert to find all the skin cases among the 12,000 troops stationed here, the past six months have disclosed few instances of dermatological interest. In our routine work, we have personally examined some 7000 men, and our office has seen all the skin conditions arising in the command.

The first dermatological cases seen were instances of the rash of dengue, of which latter we had an epidemic. We owe to Dr. W. W. King, U. S. P. H. S. a full study of this condition which we quote in full from "Clinical types of dengue in Porto Rico," *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, February, 1917.

"Skin—The skin, dry early in the fever, usually became moist, and more or less perspiration continued during the attack. Crisis was often accompanied by profuse sweating.

"An initial rash, definitely marked, was observed twice to my knowledge, but had more cases been seen early enough it might have been noted frequently. It was scarlatiniform, principally upon the body and face, and lasted one day in one case, four days in the other.

"Terminal rash was present in 82 per cent of the twenty-eight patients whom I was able to observe personally at the proper time. The failures were mostly in the milder cases. I was informed of the rash in numerous instances by both physicians and patients, but only too often I was told that it was not looked for, even by the physician. This eruption took three forms; (a) an extensive erythema resembling

* Published with authority from the Surgeon General, U. S. Army.

scarlatina but more patchy; (b) resembling measles and; (c) smaller, darker, more sharply defined macules, in some instances resembling mosquito bites. Rarely was one type seen without association with one or both of the others, giving quite a characteristic picture. In color, it varied from a brilliancy almost that of scarlet fever to a barely perceptible redness. In one case it was associated with some urticaria to which the patient stated he was subject.

"In distribution, the arms, chest and abdomen were the favorite sites in the order named, but face, neck, thighs, and back were frequently invaded. I saw the entire integument, including palms and soles, involved more than once. In degree, it varied from a few scattered macules to such abundance that the finger could hardly be placed anywhere upon the skin without touching the eruption. It was commonly well marked, but when very slight and indefinite it could easily be overlooked. The time of its appearance in the vast majority of cases was immediately following the final return of the temperature to normal after the terminal rise of fever, i. e. fifth to seventh day. In those cases in which I could reasonably well calculate the day, 50 per cent developed the eruption on the sixth, one as early as the third, and another as late as the ninth day. Duration was from a few hours to several days. I heard of, but did not see, one eruption said to have remained two weeks. Generally it had faded in one or two days.

"Itching was not uncommon, especially when the eruption was fading, and in several it was quite annoying for a day or two, but only after the eruption had been very marked."

We recognized two cases of Frambesia, or Yaws, among the enlisted men. Each already presented the generalized eruption of crusts under which were the strawberry pulpy masses. The *Treponema pertenuis* of Castellani was demonstrated in the lesions from both patients and the Wassermann was four plus positive in both men. One patient was treated with arsenobenzol of Schamberg and the lesions did entirely recede. The presence of of concomitant syphilis must always be considered but the clinical picture and the organism together with the history were definite. The tabulated data of the case treated at the camp is given.

CASE OF YAWS: Private A. R. Age 24. In service two months. Presented about 26 lesions; crusted; umbilicated; dry; under the crusts a moist papular pulp; *Treponema pertenuis* demonstrated in smears.

Wassermann: August 7, 1918, three plus; August 21, 1918, four plus; Sept. 13, 1918, four plus; Dec. 2, 1918, negative.

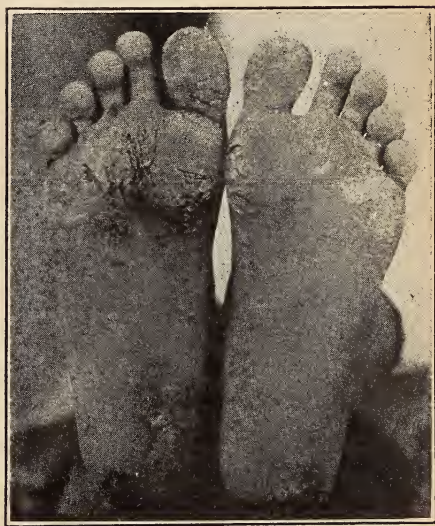
Arsenobenzol: August 22, 1918, 0.3 gm; August 28, 1918, 0.3 gm; Sept. 16, 1918, 0.4 gm.

The delay in initiating treatment was incident to the transfer of the patient to the Base Hospital and his return to the camp.

Our photographs of this case were not good, but the Insular Board of Health has published photographs of cases from a recent epidemic, some of which we enclose.

Pediculosis pubis was found twenty-four times in one regiment

within a few days and, recognizing an impending epidemic, measures were taken which limited the ravages of the pediculus.



YAWS—Published through courtesy of Health Dept. of Porto Rico.

Tinea versicolor flavus is a very common condition. Unlike the *Tinea versicolor* of the states, there is a variety here which attacks the skin of the face, neck, and shoulders, although it is common to find this variety associated with the type which affects the trunk and limbs. (Compare Footprint, Stelwagon, page 1148, 7th edition.)

Alopecia areata was found, once of the head and another instance of the bearded region. Etiology was not sought for.

Vitiligo is also common in Porto Rico. Extensive cases are seen, as in one soldier, where the only pigment left to his colored skin was some twenty spots on both cheeks, which took on the appearance of marked freckles.

We were much interested in the large number of men who had nevi. Examples of vascular nevi, nevus unius lateris, pigmented nevus, and nevus pilosis could be found in every company examined.

One example of scrotal tongue came to our attention. No history of syphilis; absence of any concomitant signs or symptoms; and a negative Wassermann excluded lues as the origin for this defect. It caused the patient no discomfort.

Psoriasis we have seen but once. To those who adhere to the meat eating origin of this affliction, this statement should bring confirmation since Porto Rico is not a strong meat eating community.

The only case of urticaria seen was in an American officer but lately arrived on the island. Usual treatment brought prompt relief.

Zoster we saw some twelve times. Herpes simplex was common during the epidemic of influenza. Herpes progenitalis was also seen several times.

Pyoderma was found frequently among the recruits. The lower legs and foot were most often affected. Ecthymatous lesions were also present. The habit of going barefoot and the universal uncinariasis account for most of these lesions. Many men during their examination volunteered the information that certain scars about the lower legs, clinically not syphilitic at all, were the results of syphilitic infection. Blood tests in these cases were all negative. We are led to agree with King "of the numerous skin ulcers coming under my notice in Porto Rico, the vast majority have seemed to be due to ordinary pyogenic infections."

Tinea cruris, or the eczema marginatum of the older writers, was encountered about thirty times. King thought this a "very common disease in Porto Rico and is seen with remarkable frequency in persons of excellent sanitary habits." He recognized the unity of this infection with the interdigital eczema recently popularized as Ormsby's Tinea. We have diagnosed tinea of the crural region, armpits, and toes in the same case.

Keloids are far more infrequent than was expected in a population of many full negroes and many more mulattoes. The only interesting keloid seen was one of a vaccination scar.

Some thirty-four cases of leprosy were seen at the Leper Colony just outside the harbor of San Juan. All types were represented. Also a rare case of ulcerating granuloma of the pudenda was seen at the Hospital jail at San Juan.

PROCEEDINGS OF THE AMERICAN SOCIETY
OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

**THE MECHANISM OF THE SPONTANEOUS ELIMINATION
OF YELLOW FEVER FROM ENDEMIC CENTERS.**

H. R. CARTER, Assistant Surgeon General, U. S. P. H. S.

First: This inquiry is limited to places in regions in which yellow fever is endemic: biologically, to places in which *Stegomyia* is abundant and active at all seasons: geographically, to tropical America.

The mechanism of its spontaneous elimination from places north or south of this endemic zone is too well known to be discussed—viz.: the death or inactivity of *Stegomyia* caused by cold weather.

Since the causative parasite does not hibernate (or if so very rarely) in such imagos as do hibernate—in the U. S. at any rate—and since, spite of the findings of the Commission of the Pasteur Institute, the parasite is not from a sanitary standpoint transmitted by the infected mosquito to its progeny developing after a winter, and since no reservoir host exists to carry the parasite over the winter in this territory; naturally, it, the parasite, dies out, and when the insect host again becomes active the next summer there are no parasites to infect it in the community and it is free from yellow fever.

Secondly: It is limited to places in the above regions in which elimination was not due to the sanitary measures taken for this purpose. I say “for this purpose” because all effects are due to causes; and measures, resulting in the elimination of yellow fever, may be considered “sanitary measures,” even if they occurred accidentally—or, as we shall find was the case—against the effort of the community affected by them.)

This mechanism by which this has been accomplished is in effect the same as that I have just mentioned—as occurring outside of the endemic zone i. e.—the control of the insect host. It differs from the elimination due to cold weather only by the degree of destruction of *Stegomyia* and the method of accomplishing this. Indeed, in places far South—as in Key West—the degree of the elimination of *Stegomyia* by the advent of winter may not exceed that of a well conducted campaign against their breeding places in Panama.

Note that in such places it is not necessary to exterminate *Stegomyia* to eliminate yellow fever. If the number of mosquitoes be brought below the "critical number" for yellow fever—at that place the disease will die out. Note too—that this critical number for any place will vary directly as the proportion of men immune to yellow fever to the total population.

Thus: if with 100 cases of yellow fever introduced into a community in which all were susceptible to yellow fever, the number of *Stegomyia* were such that exactly 100 men would be infected from them, the disease would neither die out nor increase. This would be the critical number of *Stegomyia* for that place and time. With fewer mosquitoes than this, less than 100 men would be infected and the fever would die out. If more, it would increase. Now if one-quarter of the inhabitants are immune to yellow fever, obviously the same number of mosquitoes which infected 100 men before would now infect only 75—one-quarter of their bites going to immunes, and hence wasted—and the disease would die out. The number of mosquitoes required to infect 100 more men, and hence perpetuate the fever, would have to be increased by one-third above the first number.

Obviously then this critical number, below which the *Stegomyia* must be brought to eliminate fever is less in a town as the proportion of susceptible people increases and more intensive work is required to eliminate it from such a community, other things being equal, than from one in which a large proportion of the population is immune. This will be recalled to you later.

Yellow fever has been driven from the great permanent endemic foci of Havana, Vera Cruz, Panama, Rio, Santos and Para, by sanitary measures—i. e. by control (lessening) of *Stegomyia*. It has also disappeared from a number of former endemic foci in which no such measures were taken and in which *Stegomyia* are still abundant and active. This is so well known to you that it only requires mention. Among them I name Georgetown and Demarara in British Guiana—the former the seat of the epidemics of which Blair's invaluable monographs are based. They are free now as are Kingston and Port Royal in Jamaica. Add Port-au-Prince, Jacmel, Cape Haytien and San Domingo, in none of which can sanitation have been a factor for there had been none. Yellow fever was virulent in all four for years—and to the last named is accredited the evil distinction of being the place where this disease

was first introduced to the white race. St. Thomas accounted a danger to naval vessels for many years, as always infected, has been reported free for over 25 years, as has St. Lucia, the site of severe epidemics, except for one epidemic in 1901 from infection introduced from Brazil (Low). Except St. Lucia none of these have, I think, reported yellow fever for from 20 to 30 years.

Havana was freed from yellow fever by sanitary measures—control of *Stegomyia* breeding. Nothing of the sort was done at Puerto Principe, where there was a sharp epidemic in 1899. I think the same is true of Santiago de Cuba, with an epidemic the same year, but I have less knowledge of the sanitary measures taken there. Cienfuegos and Matanzas, to my positive knowledge, were free from yellow fever long before this sanitary measure was instituted there. All four of these Cuban towns are free now, and have long been free. La Guira—once of evil fame—Maracaibo and Corinto, all formerly infected, have shown no fever for a number of years, and at none was sanitary work done prior to disappearance of the fever. I could add many others.

What is the status of these towns as regards yellow fever? Has the disease simply ceased to *appear*, being still existent, or has it ceased to *exist* in this community? In other words, does the "Spontaneous Elimination" of which I have purposed to show you the "Mechanism" occur. This really is the first proposition to be proven.

The reappearance of fever in certain towns after periods during which it has not been reported has made us, especially those of us charged with Maritime Quarantine, slow to accept a place as free from yellow fever simply because none has been reported there for some time and this without impugning the good faith of the local health authorities. Yellow fever can exist among the children of a town, especially if there be much negro blood among the people, and be scarcely capable of diagnosis. It would practically not be reported among such. Non-report of yellow fever does not of itself imply its non-existence.

We need not consider the old theory that although it is not appearing in man yet the organism is still alive and growing in fomites ready to attack any susceptible man who is exposed to it. And yet I am persuaded that part of this idea—that of the permanence of the condition—is the parent of the concept of "latent yellow fever." That it is carried on indefinitely "in endemic

centers" by "recurrent attacks among the indigenes" is the doctrine of the Commission of the Pasteur Institute. The role of human carriers without symptoms in thus continuing the disease would be added by some writers. This has been further modified by the doctrine of "larval yellow fever; that the strain has been so attenuated by passing through the resistant indigenes that the disease is taken lightly even by new-comers (Europeans) and hence not recognized, although immunizing them. In any case the general belief has been that a town or district infected with yellow fever in the tropics rarely frees itself—that is without sanitation—from the infection.

You see the difficulty. It may not be easy to pronounce such a town free from yellow fever. Have we then no test to determine the presence of yellow fever—the existence of the parasite—in a community? Let us see: The *positive* test is simple and convincing. If a case of yellow fever is contracted in that community, yellow fever exists there. The *negative* must be that people susceptible to yellow fever live in this community and are not found to develop it. Obviously these "controls" must be people in whom yellow fever would be recognized if it occurs and should live so as to be exposed to any yellow fever which may exist therein.

Negative evidence is convincing in proportion to its mass, and to accept this negative test as convincing we must have large numbers of exposures of such people—i. e. many people exposed over a considerable period of time—and the more intimate the local relations with the native population among which the fever is supposed to be latent the better.

With regard to that last condition, however, I would say that in my experience the attempt to isolate any considerable colony of susceptible people in a town in which yellow fever prevails so as to protect them from yellow fever is of only very temporary benefit and doomed to failure. Certainly this is true for soldiers, sailors and workmen.

So far as "larval yellow fever" is concerned, the advocates of this phase of the disease admit—or rather assert—that the passage of the organism through new-comers restores its virulence and the disease becomes recognizable. Prolonged residence then of large numbers of new-comers in the infected environment should do away with this camouflage of the disease—for the existence of which, indeed, I have seen no satisfactory evidence. There is analogy of

work. Isn't this test fair? Let us apply it. I think you will admit Georgetown and Demarara, Kingston and Port Royal as now free from yellow fever without argument. At none of these places was work for the control of *Stegomyia* done prior to its disappearance. We received men at Ancon who had yellow fever contracted in Corinto in 1905 and '06; when it was also reported at Managua and Valencia. We kept an inspector at Corinto from 1908 to 1912, a man who had not had yellow fever. He reported no yellow fever; no sanitary measures taken and *Stegomyia* in abundance. In the spring of 1912, 5,000 Marines landed at Corinto, making this place their base of operations. They occupied this place and Managua and Valencia all summer. No yellow fever occurred among them. Could there have been any in Corinto? We have had Marines at Jacmel, at Cape Haytien, at Port-au-Prince and at San Domingo. Prior to this and when we had no control of port sanitation we had naval vessels lying at these ports and landing parties, and no yellow fever among either garrisons, crews or landing parties. Yet in 1905 of two naval vessels lying in Panama Bay, Panama being infected, one became infected—7 cases and 2 deaths—although they took (all) the precautions their regulations called for; certainly more than were possible in the close harbor of Port-au-Prince or when sending armed men ashore. So in Guayaquil—in 1917, I think—one naval vessel lay in the harbor and she developed yellow fever aboard, losing her Commander. All of these Santo Dominican towns had had yellow fever badly and for many years, infecting the vessels—naval and others—in their harbors.

In Maracaibo, in 1916, Gen'l Gorgas' party found Americans working the oil wells. There were a large body of them; they were all over the town; they were practically all susceptible to yellow fever and they had been there some 18 months or 2 years. Maracaibo was *alive* with *Stegomyia*. There had been no yellow fever among the Americans. Obviously there was none in Maracaibo.

Baranquilla is the Caribbean port of entry to the Colombian highland. Through it pass each year some thousands of people susceptible to yellow fever; Colombians from the plateau; Americans and Europeans. These people, going either way, wait in town from one to six days for vessels. No yellow fever has been reported among them since 1907 or 1908. It could scarcely have been missed. Guiteras made a most careful examination of the mortuary records of the town since 1911 and we are sure that yellow fever

has not been prevalent (among the children) since that date. Baranquilla is innocent of any yellow fever sanitation; with it count Cartagena which cannot stay infected and leave Baranquilla free.

Why multiply examples? I could give you a number of others, but I think I have shown that by our test *strictly applied* towns in the tropics *do* free themselves from yellow fever, and that without sanitary work. This is the first part of my proposition.

The examples I have given show that this is not rare. If I had time I could show that it was in no wise uncommon.

By what mechanism is yellow fever thus eliminated? Let us see:

If we assume that one attack of yellow fever gives—usually—a permanent immunity to that disease the argument will be easier to follow, and we will do so. I, myself, believe that this immunity is generally permanent—as much as that from small-pox or measles. Other men do not. It will be seen that this assumption of permanence is not essential to the argument for the mechanism presented.

From the known facts of the conveyance of yellow fever, it is obvious that the conditions for the continued existence of yellow fever in a community are three: the parasites, active *Aedes (Stegomyia) calopus*, and susceptible men; all present at the same time—the insects having access to both classes of men.

Parasites exist only in an infected mosquito or in an infected man. They live in the mosquito only during its life, and only a short time—infective to mosquitoes—in man.

Here, then, are two postulates:

1. Since the parasites in the mosquito live only during the life of the host—say, ten days—no interval greater than 10 days may elapse between the date when some sick man is bitten by them, and the date when one of the mosquitoes infected by him feeds on a man susceptible to yellow fever, without the death of the parasites, and hence the extinction of yellow fever in that community.

2. Susceptible people, then, are necessary for the continuance of yellow fever in a community. Such people must not only be present, but must be present under certain conditions of time and place with relation to the *Stegomyia* infected from other people with yellow fever. If in a community there be no susceptible people fulfilling these conditions, yellow fever will disappear.

Now let us consider a community in the tropics in which yellow fever is present, *stegomyia* abundant and active at all seasons, and with susceptible people. Parasites, of course, are present in those sick of yellow fever, and, since *stegomyia* are active all the year round, this place will be an *endemic focus* of yellow fever.

Obviously, if one attack of yellow fever produces in general a permanent immunity, such a community will have in time no people susceptible to yellow fever left, unless there is an introduction of such people. Yellow fever would then disappear, and, as soon as the infected mosquitoes died off (within our 10 days), the parasites would disappear and the community be free from infection. Indeed, yellow fever would doubtless disappear before there were "no people susceptible to yellow fever left," because, under the doctrine of chances, there would be no susceptible people left fulfilling the conditions of time and place mentioned above before there were absolutely none at all—possibly long before. Once free, it would remain free forever, unless the same three factors for conveyance are again brought together. In the natural course of events a new generation would grow up susceptible to yellow fever, susceptible immigrants move in, and *stegomyia* breed to the limit; but unless the *parasite* be again introduced the community would remain free from yellow fever. In such a community—growing naturally—an epidemic would result if parasites are introduced some years after it has been free of infection, the maximum age of the natives then developing the yellow fever depending on the length of the interval of freedom.

An immigration of susceptible people, then, is necessary for the continuation of yellow fever in a community, and if this immigration fails, or fails to fulfil certain conditions, yellow fever disappears. This mechanism I have called the "elimination of yellow fever by failure of the human host."

This immigration might be of susceptible people from some other place, or of infants born in the place itself. This is just as true an introduction of susceptible people as the other. As old Blair says, they "truly are they new-comers." If these additions to the susceptible population *conjointly* fulfil the conditions necessary for the continuance of yellow fever, as I have stated them, it will continue; if they do not, it will disappear.

The effect in continuing yellow fever of each class of these additions to the susceptible population—men from outside the com-

munity and babies born in it—will depend on many factors, but among others on its amount, increasing for each class as that class increases.

Both classes of immigration, then affect the continuance of yellow fever, and theoretically either one may be sufficient to continue it. Yet the proportional effect of the introduction of an adult and the birth of a baby in keeping up the infection is very different. That of an adult immigrant is very much the greater, so that to supply the people necessary to keep up yellow fever, it requires a very much larger number of babies to be born than of susceptible adult immigrants. In proportion to their number, then adult immigrants are of far more importance in thus keeping up yellow fever than babies, and a town receiving no susceptible immigration needs to be much larger to be a permanent focus of yellow fever than if it did receive such immigration. Indeed Gorgas, in 1916, expressed himself as believing that immigration of susceptible adults was *necessary* to continue yellow fever—that it could not be kept up by the births alone.

This matter is treated of rather fully in a paper read before the London Society of Tropical Medicine and Hygiene, June, 1917.

How does our explanation agree with the known epidemiology of yellow fever and with the facts we have adduced in our first proposition? On this agreement will depend whether we hold it tenable or not. Obviously if our explanation holds, it will be the small and moderate sized towns receiving little immigration which will free themselves of yellow fever; the large cities and those with much susceptible immigration not doing so. And so we find.

1. The towns I have mentioned as freeing themselves of yellow fever are all small, or of moderate size, and out of the way of commerce, receiving little immigration of susceptible people, and this phenomenon is evidently common among such towns.

2. It is the large towns and those with considerable susceptible immigration: Guayaquil, Havana, Vera Cruz, Panama, Rio, etc., which did not free themselves, or are not yet free, from yellow fever.

3. Besides these there are certain communities of small towns between which the travel relations are so close that they must be held, for this mechanism, as a single large town. Indeed, in such a group of inter-related towns the propagation of yellow fever would be decidedly slower than in a single town of their joint population

and the fever would therefor last longer and be less apt to disappear than in the single larger town. Such a section is Yucatan and Campeche—the large sisal haciendas being indeed towns, and this section has not freed itself from yellow fever, but seems to be a permanent endemic focus of yellow fever needing sanitation for its elimination.

4. Also note how towns which were badly infected while prosperous—hence large and with much immigration—as Georgetown and Demarara, Port-au-Prince and Cartagena, become free from yellow fever as their trade declines. And see how Guayaquil reverses this.

5. Also we do find these small towns liable to epidemics of yellow fever from time to time—when a sufficient number of susceptible people have accumulated and the parasite is again introduced—and that when this occurs, as at Buenaventura in 1915 and 1916, “children and people who have moved in during the past 10 years are attacked.” The last epidemic here was 12 years previously. The occurrence of epidemics among these native-born is, to me, *proof* that yellow fever has not been general—whether “latent” or not—since they were—say—3 or 4 years old. It had not immunized them.

It is this recurrence of fever which has given rise to the belief in “latent” yellow fever held by many very eminent men. Unquestionably yellow fever may, and (at times) does, exist unrecognized among the native children of a community; showing itself only—or rather being recognized only—when it attacks some stranger. Here we have true recrudescence whenever an influx of strangers occur.

This view is too well known to require elaboration. It is true, and I will not pretend to predicate how long such a condition may last; nor deny that, under some conditions, it may last indefinitely, and by this means alone keep the place or area of communicating places a permanent focus of yellow fever, and without cases occurring sufficiently marked to compel recognition. What I do deny is that this is the rule. Indeed, I believe that it is rather the *rule* for yellow fever to disappear—to disappear completely—from isolated communities of moderate size and this without sanitary work or diminution of *Stegomyia*.

The instances given prove that the spontaneous disappearance of yellow fever is not rare. An analysis of them, if there were

space, would show that in the absence of adult immigration and of inter-travel—if one may coin a word—among them, this is to be expected to occur in a large proportion of towns, and that after this even when there are influxes of strangers, outbreaks in such towns do not occur, unless they are in communication with some infected focus. These outbreaks then are re-infections and not recrudescences of “latent” or “larval” yellow fever.

I think our explanation then agrees, and agrees completely, with the facts as we have found them and with the known epidemiology of yellow fever. Not only is it consistent with the facts observed, but the deductions from it are in accordance with other facts not hitherto noted, or at least not stressed. On this kind of evidence we are accustomed to accept other laws of nature. I only wish I had time to pile up the accumulation of data which exists—all consonant with that I have given you.

It is obvious that the explanation I have given of the spontaneous elimination of yellow fever depends absolutely on the doctrine that an attack of yellow fever confers immunity against another attack. In proportion as that immunity is permanent and general, the chance of the exhaustion of the susceptible human material by a definite number of cases of fever, that is at a definite time, to the point of causing the disappearance of disease in greater than if the immunity be of short duration and uncertain. If this immunity be not permanent, but yet endures for some time, the disappearance of yellow fever by the mechanism I have outlined can still occur. This is evident. It is also evident that the men in our community who lose their immunity through lapse of time keep up the supply of susceptible material just as immigrants would. In proportion as attacks recur frequently and at short intervals, so will the chance of failure of the human host, to the point of causing disappearance of the disease, diminish. If “frequently recurring attacks of the indigenes” are the rule, and these recurrences are indefinite, they might very well continue the fever indefinitely, independently of immigration or of new births. The *possibility* of disappearance by the mechanism we have given is then not dependent upon the permanence of the immunity given by one attack, but the *chance* of its occurring in any place at any definite time is directly dependent on it, and reaches its maximum when, as we believe, one attack gives permanent immunity. The fre-

quency with which yellow fever has disappeared when immigration was lacking is evidence against recurrent attacks.

Similarly our explanation fails in the presence of a permanent reservoir host for the microorganism of yellow fever infective to *Stegomyia* or otherwise capable of communicating it to man—analogueous to those for the trypanosomes of sleeping sickness. The existence of animal hosts, other than man, with the same reactions to the parasite as man—i. e. in which an immunity temporary or permanent was caused by an infection—would not seriously affect it. Such animals if present, would simply count as a certain extra number of men.

The evidence for the existence of a permanent reservoir host seems to me to have no basis in observation. That against it or rather against it being an animal associated with man—in the places in which yellow fever has been studied, of necessity negative—is considerable.

Nevertheless, it would be much easier to accept the American origin of yellow fever—for which the historical evidence is very strong—if we had evidence of the existence of such a host in Columbian and pre-Columbian times in the Antillies or on the Caribbean littoral.

One thing we must note, however: The *fact* that yellow fever does disappear from towns in the tropics without sanitary work and with *Stegomyia* abundant is true. The explanation I have given is logical: it is in accord with what we know of the epidemiology of yellow fever, and I believe it to be true. Nevertheless, it is only a deduction from observed facts—not the facts itself. What do you think of it? I want your views and your criticism.

One other thing: For a town which has freed itself from yellow fever *by the failure of the human host* to remain *permanently* free from yellow fever, *isolation* from infected places is necessary. When yellow fever has been eliminated *by the control of the insect host*, this isolation is not necessary *as long as this control continues to be efficient*, because with the control of the insect host, yellow fever is not communicable, and such parasites as are brought in by infected men or infected mosquitoes would, at the most, establish a very temporary focus of infection. If the control were complete, infected men would transmit no parasites. It is to be noted, however, that the reduction of *Stegomyia* sufficient to eliminate yellow fever from a town in the tropics would nearly always be less than

that required some years later to prevent its spread, because there will then be a larger proportion of susceptible people than at first. Hence the mosquito control must be more intensive.

It is worth contrasting these two methods for the elimination of yellow fever. That the control of the insect host is unquestionably the method of election for the sanitarian, while the method by which it is eliminated *in nature* is by failure (control) of the human host.

The method by which malaria has been eliminated in nature (i. e. without intentional antimalarial work, as an incident to agricultural progress) is the control of the insect host, the reverse of what has happened for yellow fever.

Note that malaria practically does *not* give parasitic immunity and reservoir hosts (human) are common.

Let me conclude with this thought.

The great diminution of yellow fever which has been going on since the fall of the tropical sugar industry, and which is still in progress, is due to a variety of causes:

1. To the diminished trade and commercial importance of the West India Islands and the Caribbean littoral—and hence diminished immigration to this region.

2. The substitution of steam for sailing vessels has enormously lessened the number of infections (parasites) carried between ports, thus lessening the re-infection of such ports as had cleared themselves of yellow fever. Sailing vessels frequently carried *stegomyia* as well as infected men, while iron steam vessels very rarely carried the former, and hence, spite of the shortened voyage, were much less efficient in the transport of parasites. Sailing vessels too, lay longer in port; have larger crews per unit of carrying capacity and are under laxer discipline—thus furnishing a much larger number of susceptible men ashore—temporary immigrants—in the ports they visit.

3. With the loss of its commercial importance—indeed before it—came in the diminished strategic importance of the Caribbean Sea and the practical withdrawal of European fleets and garrisons. In the 18th, and the early part of the 19th centuries, the Caribbean was the rendez-vous of the fleets of Great Britain, France and Spain and to an extent of the United States. The war vessels—sailing ships then—lay long in port; some in permanence as Receiving Ships for crews fresh from Europe. They carried large crews—

1,000 men or more—and their shore parties added markedly to the susceptible population of the Caribbean seaports. They were a prime factor in carrying yellow fever from port to port both in infected men and in infected mosquitoes. It is worth noting how very generally the introduction of yellow fever in the different ports is ascribed to a naval vessel.

The rôle of the European garrison, with its frequent drafts from Europe, was the same, but less patent.

4. The extinction of the great permanent foci of Havana, Vera Cruz, Panama and Rio. With this a number of less important places were freed from yellow fever by sanitary work in control of the insect host: Para, Manaos, Iquitos, Pernambuco and Caracas. This enabled such ports, on the Caribbean especially, as could spontaneously free themselves of yellow fever to remain free—being no longer exposed to re-infection, or rather much less so exposed. The smaller ports, freeing themselves from yellow fever from time to time by failure of susceptible people, had been doubtless continually re-infected from the permanent foci, whenever they had accumulated sufficient susceptible material—by birth or immigration—for the spread of the fever.

5. The European war has both restricted foreign immigration and, by the commercial depression it caused, greatly lessened the movement of all people between different towns and from the plateaus to the coast towns—thus both lessened the number of susceptible people in infected places, and by lessening travel limited the chance of spread of infection to places which had cleared themselves of infection. Where the parasite is absent the fever will not recrudescence with a return of prosperity and influx of susceptible people. These have returned to Maracaibo and to some other towns with no outbreak of fever.

It is this diminution of the area infected which make us so hopeful that a well-organized effort against yellow fever will result in its elimination from the earth—its complete elimination never to return. In many places where yellow fever now exists, it will need but a minimal amount of sanitary work to turn the scale against it and eliminate it, and the freeing of one place from yellow fever so frequently prevents infection of another—on endless chain for good. And there has rarely, since it was known to white men, been a time so favorable for making this effort as the present. An attack on a weakened, retreating enemy pressed home, should not admit of

rally, but end in his complete destruction. It is upon these facts that the purposed action of the International Health Board is based. This purpose is this complete, permanent elimination of yellow fever from the globe. This fate has befallen some of the higher forms of animal life, even in historical times, but this will be the first time in which an attempt for this purpose is made against a micro-organism pathogenic to man. Its accomplishment will (I do not say "would") mark an epoch in sanitation. It will make those who have helped in it glad to have lived.

EPIDEMIC OF FEBRILE JAUNDICE IN BARBADOS IN 1919.

By DR. JUAN GUITERAS,
Director of Health, Republic of Cuba.

The present paper is an abstract of a report rendered to the International Health Board of the Rockefeller Foundation, and which I offer to the Society of Tropical Medicine with the permission of the Foundation.

A determination of yellow fever infection in the Island of Barbados was rendered peculiarly difficult and trying by the unusual conditions prevailing on the Island. A form of febrile jaundice with albuminuria, affecting a large number of persons in a West India island, is very suspicious of yellow fever. I was never before confronted with such a situation. I had also to contend with a total absence of death records, so that I was unable to apply my method for the epidemic diagnosis of yellow fever, namely the study of the death rate of children, and from certain diseases.

A Disease of the Black: The disease was confined to the blacks and to the poorer class of blacks. Except for one case which Dr. Gorgas and myself saw autopsied, and one other mild case, also nearly white, the few who were not black were dark mulattoes. There were ten deaths, all blacks, with the exception of the one just mentioned.

Autopsy Findings: The findings in the autopsies were the first basis for the diagnosis of yellow fever made by the local practitioners. If we consider only the naked-eye appearance, such findings were perhaps the most suspicious feature. I saw one autopsy besides that witnessed December 4. The features were the same in both cases: Very dark liver extremely congested blood welling up

profusely on cutting into liver. Four of the ten livers were found in this condition. One was doubtful; it was described as "pale, but not boxwood." The other five were described as "boxwood."

Four of the stomachs contained *black vomit*; one a dark gray fluid containing blood; the other five contained no black vomit. I saw the case with the dark gray fluid. The mucosa of the stomach was pale. It appears to have presented petechiæ (?) in other cases. The cases with black vomit in the stomach had dark livers; the others had pale livers. Only one case presented at the same time black vomit in the stomach with boxwood liver. The spleen was enlarged in one case. Some nephritis is described in all.

The bodies of all ten cases were a very deep yellow in color, the yellow showing under the black and very intense in the sclerotics.

Histological Findings: The histological findings were strongly against yellow fever. The liver cells were rarely fatty, even in the cases in which the liver was described as boxwood. The necrotic areas of liver cells were generally absent. In one case necrotic areas were occasionally seen, quite irregularly distributed. The blood capillaries were distended, some times decidedly so. The short fatal case of five days' duration deserves special attention. The history given below:

Fatal Case of Five Days' Duration: The patient was Joseph Miller, a black, aged 23 years. Had been working in a water trench and was admitted on December 7, with a history of onset of the disease on December 4 with chill, vomiting, and pain in loins. This is the only case seen by me which points distinctly to such pain. Patient thought that on 3d day he vomited once a fluid containing blood. He staggered on admission and was quite weak, but his mind was perfectly clear. Had jaundice and albumin that began to precipitate soon after the examination. At 4 P. M. his temperature was 99.5 and pulse 76. On the morning of December 8 his temperature was 98.4 and pulse 88. In evening, had a temperature of 101 and pulse of 100. He died the following morning early, after a sudden attack of dyspnea. No convulsions. Had been passing urine freely and there had been but a slight increase of the albumin on the 8th. Jaundice quite intense.

Autopsy showed a dark and greatly congested liver. Upon section the blood welled up rapidly, filling the gap. The stomach contained about a pint of dark gray fluid containing some blood. The mucous membrane was swollen and pale without ecchymotic spots. The spleen was much congested. Left lung very much engorged and semi-splenic. Upper right lobe less so, but lower right lobe blanched and completely collapsed. Probably some sudden obstruction of the bronchus—unlooked for—was the cause of death and may explain the short duration of the disease which appeared to be tending toward recovery.

Clinical Features of Cases: The duration of these cases was too

long to warrant a diagnosis of yellow fever. My record of cases in the past shows that the majority of deaths from yellow fever occur on the sixth day. The duration in these ten fatal cases was:

LENGTH OF FATAL CASES.

No.	Days Duration
1	5
1	6
3	7
1	8
1	10
1	12
1	16
1	unknown

Average duration 8.6 days.

The average duration of yellow fever cases terminating in death in Guayaquil, Panama (Buena Ventura), and Trinidad, the only histories at my disposal, was 6.4 days.

The duration of the cases terminating in recovery was likewise too long. In the majority of cases in Havana, the duration of the disease was seven days. Comparing the Barbados cases with those of Guayaquil, Buena Ventura, and Trinidad, the following averages of duration are disclosed:

Barbados cases	13.6 days
Guayaquil	} cases 7.4 "
Buena Ventura	
Trinidad	

Study of Temperature Charts: The charts reveal a tendency to a typhoid type, with occasional occurrence of a secondary rise, described in Weyl's disease, and in the sporadic cases in Havana. The temperature charts are generally quite distinct from yellow fever. Note particularly the chart of Constance Coppin, the last case reported positively, soon after my arrival. There are seven days in succession on which the temperature rises to 104 or over. *No case of yellow fever ever rose to 104 under such circumstances and recovered; yet recovery occurred in this case.*

With regard to *pulse*, though a slow pulse is often noticed, it is generally found rather late, as a consequence of the jaundice. Thus, we do not see the true Faget sign of the diverging lines of temperature and pulse. It is true that the cases generally came in too late for early observation, but this in itself is an indication against yellow fever.

Jaundice: The jaundice in these cases was more intense than in cases of yellow fever; it appeared later and developed very rapidly. Even in light cases the jaundice was very well marked and the urine contained large amounts of bile pigment. In other words, I think there was distinct evidence of an obstructive jaundice. To my knowledge, the stools were white in four of the cases. As a matter of fact, until two deaths occurred on September 22, it was believed by our conferences that the epidemic all over the island was jaundice, without anything extraordinary about the cases except their frequency and the tendency of some of them to be prolonged and to "turn into typhoid," as one of the physicians expressed it.

Vomiting: Vomiting was absent in a considerable number of cases—perhaps one-half. In some cases it was quite persistent. I believe there was no case with characteristic black vomit. One vomit, and perhaps more than one, contained blood, but persistent and projectile vomiting of black liquid, such as is met with in fatal and grave cases of yellow fever, is not mentioned.

Liver and Spleen: The liver and spleen were somewhat enlarged in some cases. The liver was quite tender in several instances—more often than the epigastrium, in the cases that I saw. In this connection it should be remembered that there is no malaria in Barbados.

Albumin: The date of commencement of the albuminuria is in most instances not known. The cases came rather late under observation and, even so, the albumin appeared after admission in some instances. I believe that this symptom appeared later than in yellow fever. It certainly cannot be shown to have appeared on the third day in the majority of instances. In the cases which I tested for albumin the amount was less than the amount in yellow fever in conditions of corresponding gravity. I gather that this was true in examinations made by others also, though some of my friends do not agree with me in this. The *ring test* was frequently employed and I was told that albumin was shown by it and also at times by the *heat and acid test*. I believe that the *layer test* may give rise to confusion in concentrated, muddy, and bilious urine, if the latter is not cleared by filtration.

Other Features: The absence of restlessness and of complaint of spontaneous pains in the back, head, and limbs, was a feature of the cases seen. To elicit a history of spontaneous pains required

direct questioning; generally they were said to be in the head. On the other hand, I did not find the tenderness of the muscles that I have observed in sporadic Weyl's diseases. The *mental condition* of the patients was not like that met in yellow fever. The patients were quiet, dull, somewhat depressed, and showed no tendency toward excitement or reasoning and talkative delirium. In the short time at my disposal (eleven days) it was not possible for me to record and present the cases in a systematic manner. I simply observed symptoms and facts from day to day and weighed them with a view to arriving at a diagnosis of the epidemic.

Summary of Cases: I recorded forty-six, concerning some of which I had but few data; at times, only the temperature, and occasionally only the name of the patient. Of the forty-six ten died. This gives a *case mortality of 21.7 per cent.* I am inclined to think, however, that many light cases were not recorded and even cases severer in type that occurred early in the epidemic, so that this case mortality is too high; four to six per cent would, in my estimation, be more nearly correct.

Of the forty-six cases, less than a third were officially reported; twenty-two seen by myself, and perhaps a few other cases, were convalescing. I saw also two post-mortems and examined microscopically the organs in five of the fatal cases from preparations made by the Pathologist of the Central Board of Health, Dr. Johnson, who kindly assisted me in all my investigations.

Distribution: The cases were distributed rather irregularly over many of the parishes. The port town, Bridgetown, was singularly exempt at the beginning of the outbreak. The first case reported as yellow fever occurred in Saint Andrew's parish, the least accessible parish in the island; the second occurred in Saint George's, likewise the third, though there was no connection between the two; the fourth was in Saint Michael's; the fifth in Saint James and also the sixth.

Some of the cases of jaundice proceeded from the same neighborhood, but very rarely from the same house. Of the ten deaths, Saint Andrew's, Saint James and Saint Michael's each furnished two; the other four deaths came one each from other parishes.

The following table gives a record of the cases reported in the so-called first outbreak which occurred in September:

CASE RECORD: FIRST OUTBREAK.

No.	Name	Race	Nativity	Age
1	Thomas Foster	Black	Barbados	60
2	Joseph Smith	"	"	41
3	Arnold Clarke	"	"	12
4	Gertrude Inniss	"	"	31
5	Joseph Small	"	"	50
6	James Walcott	"	"	50

Of these six cases, four living at the time of the *epidemic of 1881*; all were living at the time of the *epidemic of 1908*. Such individuals generally escape in a subsequent epidemic, having been immunized by a previous attack. It is improbable that these individuals, all of them black, and all residents of the country districts in the interior, should be singled out to constitute the first cases of a new outbreak.

Previous Epidemics: Complete records of previous epidemics of yellow fever in Barbados are not available. It is, of course, to be borne in mind that the colored population of Barbados is greatly in excess over the white and that cases of yellow fever among the blacks should be correspondingly common. Yet it has been my observation in other communities where there was a large colored population, in time of yellow fever epidemic, that though many of these blacks may have contracted the disease we have not been cognizant of the fact because the attack was very mild, and the deaths, especially among pure blacks, extremely rare. As examples of such epidemics, I cite the epidemic in Jacksonville in 1888 and the epidemic in Brunswick in 1893 where many years had elapsed since the last previous epidemic and where there was, therefore, a large non-immune population of whites and blacks.

Records of Last Two Epidemics, Barbados: There is no registration of deaths in the island; thus, we know nothing of the mortality statistics for the years which were not epidemic years and very little for the epidemic years. In 1881 an epidemic affected the British garrison stationed on the island so seriously that the troops had to be removed. An interesting tabulated presentation of the cases treated in 1881 is found in the records of one of the yellow fever hospitals. The notes are those of Dr. St. Claire Browne, and are given below:

YELLOW FEVER HISTORIES, 1881.

Dr. Browne had under his care 36 patients in which, the diagnosis

of yellow fever was confirmed. Of these, 11 were whites, 7 colored, 18 blacks. There were 4 fatal cases, all whites. There was also 1 fatal case of pneumonia, supposed, on insufficient ground I believe, to have been yellow fever. It was the case of a black who had persistent high temperature, with slight albuminuria, and jaundice appearing on the 10th day; he died of gangrene of the lungs.

Of the fatal cases, one died on the 6th day, one on the 7th, one on the 9th, one of the 22d. The last is a doubtful case: The post-mortem findings being, "Liver much enlarged, pale, and hard, but congested;" spleen much enlarged; stomach "healthy and empty."

Epidemic of December, 1908: The last epidemic known to be yellow fever occurred in December, 1908. The official record, as far as they go, give a resume of eighty-six cases, with twenty deaths. It is generally understood, however, that the disease was much more widely prevalent than these figures would indicate.

RACE DISTRIBUTION OF CASES, 1908.

Race	No. Cases	Per Cent.
Blacks	39	45.35
Whites	32	37.21
Colored	15	17.44

RACE DISTRIBUTION OF CASE MORTALITY, 1908.

Whites	11	34.37
Blacks	7	17.94
Colored	2	13.30

Statistics According to Population: For purposes of accurate estimation, we have calculated the proportion of cases and deaths in each group of the population. The following table is the result, based on a population in 1908 of 20,000 whites and a total population of 194,000.

PROPORTION OF YELLOW FEVER CASES AND DEATHS PER 100,000 CALCULATED BY RACE GROUPS.

Race	Total No.	No. Yellow Fev. Cases	Propor. per 100,00 of ea. Race Grp.	No. Deaths from Yellow Fever	Propor. per 100,000 of ea. Race Group
Whites	20,000	32	160.00	11	55.00
Blacks and Colored	174,000	54	31.03	9	5.17

Thus, the incidence of yellow fever was decidedly greater in the white race and the death rate was greater still. The difference may be expressed by the following formula:

Relation of colored to whites, by number of cases: 1: 5.15
 Relation of colored to whites, by number of deaths: 1: 10.62

Comparison with Recent Epidemics in Other Parts of World: Epidemic jaundice, febrile and infectious, appears to have been more

prevalent in recent years than formerly. *Griessinger's bilious typhoid* is described in recent monographs on the diseases of *Egypt*. There has been an extensive epidemic in the *Italian army* of occupation in *Tripoli*; another epidemic in the army fighting in the *Gallipoli peninsula*. This outbreak appears to have been due to a paratyphoid infection. More recently still, an epidemic in *Japan* has been shown to be a form of spirochetosis; this appears to have been confirmed in connection with a very recent outbreak among the troops in *Flanders*.

Conditions somewhat similar to those prevailing in the armies mentioned may be said to exist, to some extent, at the present time in Barbados. This island is one of the most densely populated countries in the world; the late season has been characterized by the heaviest and most persistent rains in many years; the rise in the price of food stuffs renders it probable that the articles of food for the consumption of the poor have been of poor quality.

In mentioning these three factors—density of population, heavy and persistent rains, and bad food—I am touching upon conditions that may, with some show of reason, be suggested as possible causes of the epidemic. Forms of food poisoning or food infection have been frequently suggested; our own experience in Havana with sporadic cases of grave febrile jaundice point to the probability of infection through the skin by prolonged immersion of the feet in more or less polluted water.

The last heavy rain of the season occurred in Barbados during the first days of December. I remained on the island only eleven days; these were very dry and my impression was that the epidemic was rapidly declining. This impression requires confirmation. The epidemic of yellow fever of 1908-1909 began on the twelfth of December and terminated the following June.

P. S. In the year following the rendering of this report, in 1917, I visited the Island of Curacao, and was informed by the very competent Bacteriologist, Dr. Watermann, who had been commissioned by the Dutch Government to inaugurate sanitary services in Curacao, that two negroes had been detained in quarantine, coming from Barbados, during the epidemic above described, as suspects of yellow fever. Dr. Watermann was able to prove in both cases the existence of an infection with the paratyphoid *B. bacillus*, and has preserved the culture from both cases.

BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

Edited by P. T. TALBOT, M. D., Secty-Treas.

The members of the State Medical Society should no doubt be acquainted with the fact that we are making preparations to entertain the American Medical Association in New Orleans on April 26 to 30, 1920.

At a meeting of the Executive Committee held October 13, it was voted to dispense with our regular scientific program at the annual meeting of the Louisiana State Medical Society for 1920, which is also to be held in New Orleans, owing to the proximity of the dates of the meetings of the two organizations. The dates of our meeting were also changed to April 24 and 26, 1920. This will be purely an Executive Session of the Louisiana State Medical Society and House of Delegates, for the purpose of transacting the regular routine business of the Society. It is planned that on the evening of the 26th of April, after completing the business of the Society, the Annual Oration and the address of our President are to be delivered. The meeting will then adjourn for the session, and the members will be permitted to attend the American Medical Association meeting on the 27.

This program was adopted so that those members of the Medical Society attending the State Medical Society meeting could likewise avail themselves of the opportunity to attend the valuable scientific session of the American Medical Association. It was deemed unwise to have the meeting of the Medical Society in the early part of April, in view of the fact that the American Medical Association would meet in the latter part of the month, and we felt the members would desire to attend the American Medical Association in preference to the State Medical Society meeting, and we would therefore be lacking in attendance.

We are very anxious that the Louisiana State Medical Society present a good attendance at both of these meetings.

Our representation in the House of Delegates of the American Medical Association will probably depend on our membership roll on January 1, 1920. I would therefore urge upon all of the present members and prospective applicants to send in their dues or applications for membership before that date. We at present have a membership of 903 and feel certain that with the culmination of war and the return of members from service, and with new

applicants, we can easily run this up over a thousand members. Why not every present member of the State Medical Society use his influence to secure at least one new member for the organization?

Letters have recently been sent to the Secretaries of the Component Medical Societies urging upon them the importance of making returns for membership for 1920 at once.

During the last few months the bookkeeping system of the State Medical Society has been completely re-arranged by the installation of a voucher-check system. This has been a long felt need and will add materially to the simplicity and efficiency in keeping up with our finances.

Pursuant with the wishes of the State Medical Society, we have revised and had printed our Constitution and By-Laws. A copy of this revision has been mailed to each member. The office of the Secretary-Treasurer has therefore attempted to clear up all of the minute details of the office resulting from our last annual meeting and we are now in a position to go forward with our plans for the next meeting with the American Medical Association in New Orleans in 1920.

In accordance with the amended Medical Law, all physicians are required to renew annually with the State Board of Medical Examiners in order to be considered as qualified practitioners of medicine. Therefore, unless this is complied with, you will be hindered in obtaining membership in your local organization, and this will therefore curtail membership in the State Society.

As you no doubt well know, in order to become a member of the Medical Society you are obliged to be a duly qualified practitioner of medicine. We are very anxious to get our membership rolls complete and be prepared for the arranging of further plans and assisting in the great meeting of the American Medical Association in 1920. We would therefore solicit your aid by attending to these details of registration and dues as early as consistent.

We will from time to time keep the members in touch with any new developments concerning the next annual meeting, through this medium. We want all of you to prepare to receive a big scientific treat and arrange your affairs accordingly.

By complying with the above request, you will aid this office materially in completing details, so that we may be able to devote more time for other arrangements incident to the approaching meeting of the Society and the American Medical Association.

NEWS AND COMMENT

ANNOUNCEMENT OF HONORARY FELLOWSHIP FOR SURGEON GENERAL.—The Royal College of Surgeons of Edinburg, has conferred on Major-Gen. Merritte W. Ireland, Surgeon-General of the Army, an honorary fellowship.

RESOLUTIONS FAVORING PRENUPTIAL PHYSICAL EXAMINATIONS.—At its meeting in New York, the International Conference of Women Physicians, on October 24, passed resolutions advocating that couples contemplating matrimony present themselves for physical examination before wedlock.

EYE, EAR AND THROAT MEN ELECT OFFICERS.—The following officers were elected at the twenty-fourth annual meeting of the American Academy of Ophthalmology and Oto-Laryngology, held recently in Cleveland: president, Dr. Lee M. Francis, Buffalo; vice-president, Dr. Hal Foster, Kansas City, Mo., secretary, Dr. Luther C. Peter, Philadelphia; treasurer, Dr. Secord H. Large, Cleveland; chief of directors, Dr. Clarence Loeb, Chicago. Kansas City was chosen for the twenty-fifth annual meeting to be held October 14-16, 1920.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION ELECTS OFFICERS.—At the annual meeting of said association, held in Louisville, October 21 to 23, the following officers were elected: president, Dr. Frank B. Wynn, Indianapolis; vice-presidents, Drs. Chauncey W. Dowden, Louisville, and Frank Smithies, Chicago; secretary, Dr. Henry Enos Tuley, Louisville (re-elected); and treasurer, Dr. Samuel C. Stanton, Chicago (re-elected). Chicago was chosen as the 1920 meeting place.

RAILWAY SURGEONS ELECT OFFICERS.—At the sixteenth annual meeting of the American Association of Railway surgeons, held in Chicago, October 12 to 17, the following officers were elected: president, Dr. Robert McConaughy, York, Neb.; vice-president, Dr. Isaac F. Harter, Stronghurst, Ill.; Paul E. Gardner, New Hampton, Iowa; George W. Thompson, Winamack, Ind.; treasurer, Dr. Henry B. Jennings, Council Bluffs, Iowa (re-elected); secretary-editor, Dr. Louis J. Mitchell, Chicago (re-elected); and executive board, Drs. Samuel C. Plummer, Chicago, and David Y.

THE REGULAR SEMI-ANNUAL MEETING OF THE FOURTH DISTRICT MEDICAL SOCIETY was held in Shreveport, Oct. 21. The meeting was called to order at 2 P. M., by the president Dr. T. B. Tooke, Belcher, La., and included the following program: Call to order by the president, Dr. T. B. Tooke, Belcher; Invocation, Rev. W. F. O'Kelley, Shreveport; Welcome to Our City, Hon. J. McW. Ford, Mayor of Shreveport; "Welcome Brethren" Dr. J. A. Hendrick, Pres. Shreveport Medical Society, Shreveport; Report of secretary, and unfinished business, Dr. A. A. Herold, Shreveport: Papers read were as follows: "The Wassermann Reaction on the Spinal Fluid in a typical case," by Dr. C. M. Flagg, Shreveport; "Intraspinal Treatment of Syphilis," by Dr. B. C. Garrett, Shreveport; "Epidemic Influenza," by Dr. David B. Davis, Shreveport; "Radium," by Dr. Thos. P. Lloyd, Shreveport; "Report of Some Interesting Urological Cases Seen at U. S. General Hospital No. 14," by Dr. I. B. Rougon, Shreveport; A Discussion of "Tinea Cruris," by W. W. Smith, Shreveport. The following officers were elected for the ensuing year: president, Dr. T. P. Lloyd, Shreveport; 1st vice-president, Dr. S. C. Barrow, Shreveport; 2nd vice-president, Dr. J. C. Yearwood, Caspiana; secretary-treasurer, Dr. A. A. Herold, Shreveport, (re-elected).

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for resident dentist, for men only, on December 9, 1919, at from \$2000 to \$2500 a year. Applications should be properly executed on Form 1312, excluding the medical and county officer's certificates, and must be filed with the Civil Service Commission, Washington, D. C., prior to the hour of closing business on December 8, 1919.

WOMEN PHYSICIANS ORGANIZE.—At the conference of women physicians held in New York City from September 15 to to October 25, it was decided to form a permanent organization to be called Medical Women's International Association. Temporary headquarters will be at the office of Dr. Esther C. P. Lovejoy, 637 Madison Avenue, New York City. The following officers have been elected: president, Dr. Esther C. P. Lovejoy, New York City; vice-presidents, Drs. Christine Murrell, London, L. Trillier-Landry, Paris, and Kristine Much, Christiania, Norway; corresponding secretary, Dr. Martha Feyler, Lausanne, Switzerland, and treasurer, Dr. Ellen C. Potter, Philadelphia.

APPEAL FOR LOUVAIN UNIVERSITY LIBRARY.—An appeal sent out by the librarian of Congress, on October 25, sets forth the urgent desire of the University of Louvain for the rehabilitation of their library. Publications of the learned societies of the United States are especially desirable. The Smithsonian Institute has undertaken to forward any material contributed through the International Exchange Service. Contributions should be strongly wrapped or boxed, and plainly marked "The Smithsonian Institution, Washington, D. C., for the University of Louvain," and itemized list of contributions sent to the Smithsonian Institution.

THE AMERICAN RED CROSS has granted 247 scholarships to American nurses, 109 of whom have recently been released from military service in this country and overseas, to enable them to take training in public health service. Of these scholarships, 123 have been for \$300 each, which will permit the recipient to receive a four months' course of training, while the remainder have been for six, eight and nine months' courses. Each nurse is permitted to choose the school where she desires to receive instruction.

EXTERMINATION OF TYPHUS IN SERBIA.—The five-year campaign, which the American Red Cross physicians and nurses have conducted in Serbia against typhus fever has ended victoriously. The recent report of the Serbian Government states that there are now only about sixty-five cases in the country, two-thirds being in Belgrade. During 1915, out of a population of 3,000,000 people, 150,000 died from the disease. 150 physicians died, so that there was only one physician to each 75,000 persons. The commission is now directing its efforts toward instilling the principles of hygiene sanitation and nutrition into the minds of the people.

PHYSICIANS VICTIMIZED.—The *Journal of the A. M. A.*, has been notified by a Jersey City physician that a man has been victimizing members of the profession by taking orders for the Cameron light diagnostic outfit, requiring a deposit in the name of the Dental and Surgical Company, 1807 Franklin Avenue, Philadelphia. A letter sent to the company has been returned "Not Known." The man is described as about 5 feet 6 inches tall, fair, smooth face and smooth tongued.

KANSAS CITY OPENS TWELVE-HOUR CLINIC.—The free venereal clinic which opened in Kansas City October 16 has extended its

treatment from 9 A. M. to 9 P. M. The extension of hours has been arranged so that people who work during the day may obtain the treatment. Dr. Edward H. Clark is in charge of the clinic.

NEW HOSPITAL DEDICATED.—On November 13, at Oklahoma City, dedication of the State University Hospital took place. The establishment of this hospital is primarily to serve those citizens of Oklahoma who would otherwise be unable to secure satisfactory hospital service. On order of the County Commissioners, such patients are to receive treatment at a normal cost to the county. Owing to the connection of the hospital with the State University School of Medicine, excellent medical and surgical service is available. A limited number of rooms are available for pay patients at standard rates. The hospital contains 175 beds, of which 25 are in private rooms. There are five large sun porches. Eight wards include separate wards for men and women, and for white and colored persons. Ample laboratories for diagnostic purposes, and a diet kitchen with a dietitian on each floor. The entire equipment is absolutely the best and most modern that can be obtained.

DR. WM. GRAVES OF ST. LOUIS APPEALS FOR HUMAN EMBRYOLOGICAL MATERIAL, to serve in his study of "the Scaphoid type of scapula." Fetuses in any and all stages of human development are wanted and it is desired that the material, as soon as possible after delivery, be immersed in 10 per cent formalin in a sealed container, and be forwarded to 727 Metropolitan Bldg., charges collect. Due acknowledgment will be made those forwarding material.

THE SAMUEL D. GROSS PRIZE OF FIFTEEN HUNDRED DOLLARS.—Essays will be received in competition for the prize until January 1, 1920. The conditions are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding 150 printed 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." Full information may be had by addressing the Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22d St., Philadelphia.

UNIVERSAL LICENSES TO PRACTICE.—Representative Mason, of New York, recently introduced in Congress a bill granting licenses

to permit physicians to practice in any State in the Union. It provides that any person who has taken a full four-year course in a recognized medical school and who has been granted a State license, or any person who has practiced medicine for at least five years, may obtain a license to practice in any state on the payment of \$10 to the Secretary of the Interior.

THE KENTUCKY STATE BOARD OF HEALTH has adopted as a requirement for application for licensure, two years of premedical work. The new ruling will become effective in 1923.

THE LANE MEDICAL LECTURES this year will be delivered by Dr. Alonzo E. Taylor, Professor of Physiological Chemistry, University of Pennsylvania. Dr. Taylor has chosen for his subject "Feeding of the Nations at War." The lectures will be held in Lane Hall, San Francisco, December 8-12.

FORT MCHENRY HOSPITAL TREATS LARGE NUMBER OF WOUNDED SOLDIERS.—Col. Joseph H. Heller, government inspector of the Fort McHenry hospitals announces that more than 80,000 wounded soldiers returned from overseas service have been treated at the hospital. Col. Heller declared more soldiers has received treatment in Fort McHenry hospital than at any place in the country, and that a greater number had been cured in its wards than elsewhere. The number treated comprises a fifth of the entire expeditionary forces who were wounded. The Col. also asserted that facial reconstruction science had reached perfection.

TUE SOUTHERN SURGICAL ASSOCIATION will meet in this city December 16-18, 1919.

BEQUESTS AND DONATIONS.—By the will of R. J. Reynolds, Winston-Salem, \$240,000 for improvements, including a five-story fireproof building, has been left the City Hospital, Winston-Salem, N. C.

Columbia, Pa., Hospital has been left \$1000, by the will of Benjamin F. Hiestand, Marietta, Pa.

Methodist Home for the Aged and Infirm, Bala, Pa., \$3000 and a residence; Methodist Orphanage, Philadelphia, \$3000, and Methodist Hospital, Philadelphia, \$500, by will of Elizabeth E. Kilburn.

By Mary Wright, Philadelphia, \$30,000 is left to Christ Church Hospital, Philadelphia.

Mrs. Margaret Olivia Sage made the following bequests: Women's Hospital, New York City, \$1,578,172; Presbyterian Hospital, State Charities Aid Association, and Infirmary for Women and Children, each \$776,586; Charity Organization Society of New York, \$1,573,172; Mt. Sinai Hospital, \$100,000; New York Institute for the Deaf and Dumb, and Servants for the relief of Incurable Cancer, each \$20,000.

Hartford, Conn., Hospital, a donation of \$50,000 from J. Pierpont Morgan, of New York City.

Rockefeller Institute, New York City, an addition of \$10,000,000 to the endowment for additional research in biology, chemistry, physics, and medicine and enlargement of the scope of activity of the institution.

By the will of George W. Elkins, Abington, Pa., Memorial Hospital, and Hahnemann Hospital, Philadelphia, each \$500,000.

By the will of Jacob Meyer, Jewish Hospital, \$7500 for a free room, and \$2500 to be used by the hospital in any way desired. \$2500 for the Jewish Foster Home and Orphan Asylum, and \$1000 for the Eaglesville, Pa. home for consumptives.

DR. FREDERICK R. GREEN, of Chicago, secretary of the council on health and public instruction of the American Public Health Association attended the meeting of the association held in this city October 27-30. His visit was also to make arrangements for the meeting of the American Medical Association to be held April 26-30, 1920.

The following New Orleans physicians attended the meeting of the Southern Medical Association held at Asheville, N. C., November 10 to 13: Drs. L. L. Cazenavette, Allan Eustis, C. C. Bass, Elizabeth Bass, L. R. DeBuys, S. K. Simon, Randolph Lyons, I. I. Lemann, L. J. Menville, H. Dupuy, O. Dowling, J. B. Guthrie, W. T. Patton, H. B. Gessner, J. T. Crebbin, Isadore Dyer; J. A. Gorman, D. D. S., also attended.

Among the Louisiana physicians who have returned from service since our last list are the following: Drs. W. S. Kerlin, W. H. Hamley, C. A. Bahn, T. T. Batson, W. W. Belden, T. R. Rudolph, W. H. Aiken, R. J. Majlhes, C. H. Sharp, H. T. Simon, J. D. Weis, D. T. Martin, D. H. Trepagnier, C. W. Phillips, V. W. Maxwell, S. B. Lyons.

Among the doctors of New Orleans who have returned from their vacations and resumed practice since our last issue are: Drs. J.

W. Newman, P. Jorda Kahle, H. N. Blum, A. Whitmire, S. F. Mioton.

REMOVALS.—Dr. E. D. Fenner, from 1215 Maison Blanche Bldg., to 1915 St. Charles Ave.

Dr. Hamilton P. Jones, from Maison Blanche Bldg., to Diagnostic Clinic, 3601 Prytania St.

Dr. Robert A. Strong, from Pass Christian, Miss., to 1222 Maison Blanche Bldg.

Dr. William L. Moss, from Athens, Ga., to Harvard Medical School, Dept. of Medicine and Hygiene, Boston, Mass.

Dr. O. H. Burton, from Crystal Springs, to Hot Springs, Ark.

Dr. C. L. Vines, from Crossett, to Pine Bluff, Ark.

Dr. H. F. Harris, from Atlanta, Ga., to Jefferson Medical College, Philadelphia, Pa.

Dr. E. M. Toler, from Alexandria, to Tioga, La.

Dr. C. A. Thompson, Sec.-Treas.-Editor, Journal of the Oklahoma Medical Association, from Surety Bldg., to 508 Barnes Bldg., Muskogee, Okla.

WASHINGTON MEDICAL ANNALS announces its removal from 1115 Clifton St., N. W., to 1244 Eleventh St., N. W., Washington D. C.

DIED.—Dr. A. S. Garnett, at Hot Springs, Arkansas, on October 30, 1919. Dr. Garnett has been indentified for many years with the practice of medicine. Born in Virginia, he was graduated from the University of Virginia in 1855. He served in the U. S. Navy until the outbreak of the Civil War, when he entered the Confederate Navy. He was surgeon of the Merrimac in the fight with the Monitor. In 1874 he located in Hot Springs, Arkansas, where he continued to practice until the time of his death from cerebral apoplexy. The Journal joins in recognition of the long and meritorious life of this gentleman who was beloved by his patients and respected by his confreres.

BOOK REVIEWS AND NOTICES

Symptoms and Their Interpretation, by James Mackenzie, M. D., LL. D.
(Aber and Edin.) 3rd Edition. Paul Hoeber, New York.

It is a matter of sincere regret to the reviewer that he was not privileged to read the first or the second edition of this work; it is all the more gratifying to have read the third edition now in hand. It is not given to many writers to present their material so that the reader may visualize the objects contemplated by the author. Dr. MacKenzie has this gift and to follow him chapter by chapter is almost as if you might be sitting to his speaking elucidation of his ideas, which are so distinctly presented.

"Precision in thinking and observation are among the rarest qualities." "Methods have become so stereotyped that many observers do not realize that they are fettered in the bonds of tradition." "Symptoms, in respect of concepts, are like the materials used in the construction of an edifice." "The construction of a hypothesis * * * stimulates the search." "Ill health, or disease, is the discordant action of one or more organs." "The most striking symptoms in disease are produced by reflexes, sensory, motor and organic." With such and more aphoristic reasoning the author brings his book to its purpose, reviewing the symptoms of affections of the various viscera, and correlating the circulation with the great organ, the heart. The angle of observation of the author is different to other texts and, because of the view point, the whole book is full of interest. It is concluded by a chapter on clinical investigation, which broadly pleads for the study of early symptoms, making for the prevention of later signs, more easily recognized

Every page is an evidence of the author's mastery of clinical observation, and everywhere there is some example of his sound philosophy. DYER.

Quarterly Medical Clinics, by Frank Smithies, M. D. Vol. I, No. 2.
Medicine and Surgery Publishing Company, St. Louis.

Another collection of interesting cases (XVI to XXVIII) is presented, including "Sleeping Sickness," myocardial weakness, peptic ulcer, arterio-sclerosis, etc. Each is given with history, laboratory findings, special examinations, with a discussion of the case, a review of the disease, and treatment where indicated.

The thoroughness of analysis, with the clinical study embodied in these case histories, makes them especially valuable for reference and study of physicians who are removed from clinics. DYER.

Medical Record Visiting List, Wm. Wood & Co., New York, 1920.

This is the usual physician's diary, visiting list and account book combined. For this year it has been considerably revised. The table of dosage has been arranged to conform with the last revision of the United States Pharmacopeia. Other tables have been modernized and some added. It is presented in red or black morocco, for 30 or 60 patients a week, with or without dates, and for 90 patients a week, with dates only.

It offers a compact and convenient means of keeping records and a fund of ready reference information.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the
City of New Orleans, for October, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	2	4	6
Intermittent Fever (Malarial Cachexia)	3	2	5
Smallpox			
Measles	1		1
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup			
Influenza		1	1
Cholera Nostras			
Pyemia and Septicemia			
Tuberculosis	28	22	50
Cancer	19	2	21
Rheumatism and Gout	1		1
Diabetes	3	1	4
Alcoholism			
Encephalitis and Meningitis	7		7
Locomotor Ataxia	1		1
Congestion, Hemorrhage and Softening of Brain	17	9	26
Paralysis	3	2	5
Convulsions of Infancy			
Other Diseases of Infancy	10	11	21
Tetanus	2	1	3
Other Nervous Diseases	4		4
Heart Diseases	47	30	77
Bronchitis	1	1	2
Pneumonia and Broncho-Pneumonia	8	9	17
Other Respiratory Diseases	2	2	4
Ulcer of Stomach		1	1
Other Diseases of the Stomach		1	1
Diarrhea, Dysentery and Enteritis	13	8	21
Hernia, Intestinal Obstruction	3	3	6
Cirrhosis of Liver	4	2	6
Other Diseases of the Liver	7	1	8
Simple Peritonitis			
Appendicitis	6		6
Bright's Disease	9	16	25
Other Genito-Urinary Diseases	12	12	24
Puerperal Diseases	9	4	13
Senile Debility	2	2	4
Suicide	2		2
Injuries	11	19	30
All Other Causes	24	20	44
TOTAL	261	186	447

Still-born Children—White, 14; colored, 15; total, 29.

Population of City (estimated)—White, 283,000; colored, 106,000;
total, 389,000

Death Rate per 100 per annum for Month—White, 11.07; colored,
21.00; total, 13.79. Non-residents excluded, 11.04.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean temperature.	80.00
Mean atmosphere pressure.	30.02
Total precipitation.	4.21 inches
Prevailing direction of wind, south.	



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS :

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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- S. K. SIMON, M. D., Secty. American Soc. of Tropical Medicine..... } *Ex-Officio*
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- W. H. DEADERICK, M. D., Hot Springs, Ark.
- E. M. DUPAQUIER, M. D. (Paris), Tulane University of Louisiana.
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- E. S. LEWIS, M. D., Tulane University of Louisiana.
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- R. MATAS, M. D., Tulane University of Louisiana.
- AUGUSTUS McSHANE, M. D., New Orleans, La.
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Vol. 72

JANUARY, 1920

No. 7

EDITORIAL

THE A. M. A. AT NEW ORLEANS.

When, a few years since, a contributor to one of the monthly periodicals reviewed the progress in the South, he referred to the awakening of a sleeping giant, who, in rising from lethargy, shook his environment into a turbulent force. To those of us who have seen the evidence of this force and its reflexes, it may be worth while to pass commentary on our own local phases, in relation to the A. M. A.

New Orleans saw a regenerated A. M. A. in 1878. Again, in 1903, the inter-relation of local and state organizations and the A. M. A. was consummated and its first evidences developed here. In sixteen years the A. M. A. has grown into the greatest medical organization in the world and its usefulness does not lessen with time.

These years of a decade and a half have seen tremendous scientific advance in medical science to which New Orleans has contributed no small part, Bass's malaria work, the conquest of yellow fever (1905) and the control of plague may be mentioned.

Public Health activities, through the completer state organization and effort have taken first place and where hookworm and pellagra were more than common, these diseases now grow more occasional. The mortality rate in our Southern cities has fallen to presentable figures, notwithstanding the large negro population and its attendant deterrents.

Many remember New Orleans at the time of the 1903 meeting. The glamor of a Latin city, rough jeweled by modern civilization, set apart among the traditions of a people, still mourning its chapters of sad experiences of most a century and hard to rouse. The spirit of hospitality still alive, and ready to welcome, found a Crescent City full of kindness to those who traveled far to see and sense the Old Metropolis of the South.

Our streets were none too clean; our hotels oldfashioned and limited in number; our water supply of uninviting, muddy purity; our sewage still undisposed of in any sanitary fashion, and the vista of pleasant residences marred by unsightly cisterns, upon which many households still relied for their potable and ablutionary water.

Since 1903, yellow fever, plague, and disastrous storm have visited New Orleans and at last the fighting spirit of its people has been aroused.

It will be a new New Orleans in 1920. To those who knew us of old, there will still be the landmarks where culinary feasts may satisfy epicurean appetites. The old French quarter still preserves its architecture and its traditions. The varying patois, argot, gombo and creole French may be heard, mingled with the Italian which has easily been grafted in the quarter. The sightseers may still find the most of the sites of old New Orleans history, which has

been much aided by the Historical Society now exhibiting in the old Spanish Cabildo at Jackson Square. •

But leave the sentimental region and traverse the main streets of newer New Orleans and see how all has changed in these few years.

A "stroll on Canal Street" is a thing of the past—there is the same hurry and bustle as on State Street, or Chestnut Street, or Fifth Avenue, or Charles Street," in our Northern sister cities. Great buildings have risen, banks have stepped into the air; hotels have multiplied, streets have been paved; the sewage has been controlled; the drainage settled and the faucet at the bath, or at the font, brings crystal water as sweet and alive as from a perpetual spring, furnished by our great Mississippi which still rolls by and as ever fondly embraces our old and new city in its crescent fold.

Stop for a few moments and listen to the murmur of the river as it goes by:

Wake, my children, and heed my song. I bring you greeting from many states—from the land of the laughing faces, from the ice bound regions of the high mountains, from the bronze and golden fields of ripened grain, from the multifarious voices of many mighty cities, all sounding the same message—greeting. O! Sister of the Southland, you have wept in sorrow, you have struggled through the years, but the benisons of time have silently rooted in our hearts, waiting for the day of your reward. It is here. The Father of Waters brings our message to you. Prosperity is at your door, the people of these great states love you and will bring their blessings to your gateway that you may speed them to the world to which your door opens. O! City of great purpose and greater heart, be it banker or merchant, workman or clerk, doctor or lawyer, all come with the wish of knowing you and leave with a better spirit of living—learning that even amid the day of weary task there is yet time to sing.

As the moonlight softens the shadows of old New Orleans and the balconies breathe her romance and as the odors of spring flowers season the night in the gardens of the new town mansions, and as the cries of the night sound their notes of discord or of peace—New Orleans will live unique among the great cities of the New World, striving for new ideals, but unforgetfull of those things which have made her great—chivalry, romance, faith, hope and the will to do.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

GASTRO INTESTINAL DISEASE AT CAMP BEAUREGARD.*

By A. L. LEVIN, M. D., late Capt. M. C., U. S. A., New Orleans, La.

The bloodiest war of the ages is now ended and the time is here for our sober consideration of a subject in medicine which merits our attention. Strange as it may seem, that subject which should be of great interest to all of us has been largely neglected by our medical schools. When the country became involved in the great struggle, and a large and efficient army had to be organized, it was self evident that the millions of American boys could not go to the fields of training and battle without adequate provision to take proper care of their physical well being. The medical man was then destined to be the Pillar of Fire on the bloody fields of battle and the Pillar of Cloud in the Cantonments. Every part of the soldier's anatomy was to be taken care of and the Surgeon General of the U. S. Army, in establishing an efficient medical organization, included also a section of gastro-enterology in the division of internal medicine. One of our ablest and most enthusiastic medical organizers, Dr. Seale Harris, took personal charge of that section. He knew well the Napoleonic dictum that an army travels on its stomach, and he issued a call for medical men well trained in gastro-intestinal diseases to join the medical ranks of the army. I considered it a privilege to be one of the thirty-three selected for that particular work. Among the beneficial results which the great world catastrophe has brought forth in its path of ruin and destruction, it should also be included in the new medical history, the recognition by the medical department of the U. S. Army of gastro-enterology as an important branch, among other well recognized branches of medicine. I am convinced that this fact when properly emphasized and brought to the attention of the medical profession, will give rise to a greater encouragement for physicians and medical students to devote more time to the study and investigation, with greater thoroughness than heretofore, of that particular field of medicine,

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

and our medical schools will give greater recognition to gastro-enterology and its ally, dietetics.

In presenting to you an outline of the gastro-intestinal work at Base Hospital, Camp Beauregard, I do not hesitate to admit that it is not as thorough and complete as I originally planned that it would be. You must bear in mind the following facts—(1) Numerous other duties consistent with army life and regulations quite often robbed me of the splendid opportunities to devote my entire time to gastro-enterology; (2) With the departure of Major Seale Harris in May, 1918, for France, gastro-enterology at our camp began to die a gradual death, lacking, it seems, that stimulating force and interest from the man at the head of it. The gastro-intestinal live wire from the Surgeon General's office to the Base Hospital, Camp Beauregard became dormant and almost ceased to operate. My monthly reports remained unanswered and on advice of my military authorities, I discontinued sending them. (3) The painful experience we often encounter in civil practice, namely, the hesitancy on the part of the average internist to admit gastro-enterology into the ranks of specialties, was keenly felt by me also in the field of gastro-enterology at the base. In spite of those impediments, I am able to present to you my gastro-intestinal work, covering a period of six months, from February 8, 1918 to August 1 of the same year. During that period, I treated in my medical ward 922 gastro-intestinal cases and held 258 consultations from Beauregard and other wards of the hospital, making a total of 1180 cases. The number of cases per month were as follows:

	Ward Cases.	Consultations.	
February	39	40	
March	57	45	
April	209	27	
May	101	32	
June	122	45	
July	394	69	
	922	258	Grand total 1180.

The figures do not include all of the uncinaria cases that were treated at the Base Hospital in a separate ward according to an outlined method. The approximate number of those cases were about 2500. A separate most interesting report on uncinaria was compiled and is probably published by now. The 1180 gastro-intestinal cases of a total of 27,000 men who composed the 39th Division

would give us a percentage of 22.2. If we include the uncinaria cases, the percentage would be tripled.

Let us now attempt to classify the 1180 cases into diagnostic groups, and then dwell on the most interesting groups or individual cases.

Achylia, gastric.....	2
Ankylostomiasis	456
Appendicitis, acute.....	6
Appendicitis, chronic.....	17
Auto-intoxication, intestinal.....	68
Abscess, peri-rectal.....	1
Biliary affections.....	23
Cestoda infection (tapeworm).....	4
Cercomonas hominis	10
Colitis	5
Constipation	7
Dysentery, entamebic.....	34
Dysentery, unclassified.....	9
Enteritis, catarrhal.....	8
Entero-colitis, acute.....	184
Esophageal stricture	1
Gastritis, acute.....	42
Gastritis, chronic, alcoholic.....	48
Gastritis, chronic, other causes.....	3
Gastric lues.....	6
Hematemesis	1
Hemorrhoids	4
Hyperchlorhydria, cause undetermined.....	3
Hypochlorhydria, cause undetermined.....	4
Lamblia intestinalis	6
Migraine	20
Nervous eructations, aerophagia.....	5
Neurasthenia gastrica, nerv. indg.....	80
Oxyuris vermicularis.....	10
Pyorrhoea alveolaris.....	61
Rectum, prolapse incomplete.....	1
Stenosis, pyloric (luetic).....	1
Stomach, acute dilatation of (postoperative).....	1
Stomatitis, mercurial.....	1
Strongyloides, intestinal.....	1
Ulcer, gastro-duodenal.....	12
Urticaria	25
Undiagnosed	10

Looking at this picture, one must admit that gastro-enterology is destined to take its place among the important specialties in medicine. If the medical professions will not recognize it, those boys who have returned from the camps to their homes surely will.

In the above work, I have adopted as far as possible, the plan

I have been accustomed to in my private and hospital work, namely—a careful history, physical examination and laboratory findings. The history in an army hospital is of great importance, the great value of which has appealed to me on more than one occasion, and I would cheerfully recommend that the same be adopted in every private institution for the benefit of our patients and ourselves.

We must bear in mind that the classes of patients I have met in the army and those we meet in civil practice differ materially. There were three groups of men, (1) the real sick, (2) the malingerer, feigning all sorts of symptoms in order to be discharged from service, or relieved from duty in line to be transferred to a swivel-chair job, and (3) a very small minority who concealed physical disability in order to get foreign service. The results of treatment were not as easy of success as it often is in private practice, for the following reasons: (1) only drugs sanctioned by the Army M. U. Dept. were obtainable in the dispensaries; (2) the malingerer and neurotic would not admit improvement because it was to his advantage to remain at the base as long as he could; (3) the real sick, in some instances preferred to remain as long as they could under the care of the medical officer and assist in the ward work, when able to do so. Extreme caution was exercised when handling a case; a mistake on the part of the medical officer would have formed a sad chapter in the history of his life. Psychology, good judgment, army life experience, and unlimited patience were the four pillars of the Temple of Safety for the medical officer at the base. The chief of the service was the backbone, the C. O. the brain and the adjutant—pilot and guide; and the routine work went on smoothly.

Let us now taste some scientific fruit of my labor. Whenever a test-breakfast was indicated, the fractional analysis was adopted in a majority of cases. I discarded altogether the one hour test. It is unscientific; unreliable; the large size stomach tube causes more distress to the patient; if an ulcerated area exists in the stomach, we are often liable to cause hemorrhage. It is of decided advantage to train our patients to retain for hours in their stomachs, a fine Rehffuss tube. Duodenal lavage for biliary affections and certain intestinal parasitic diseases, as advocated by Bassler and Rehffuss, is of great therapeutic importance and is destined to be a decided beneficial factor. We should use it more often. The tracing of the acid curve in fractional analysis is certainly a more reliable guide

as to what is going on in our patient's stomach than the one hour test. The motility of the stomach can be more easily recognized. It is not necessary to put the patient to bed as he is quite comfortable for hours sitting in a chair, which I have demonstrated in hundreds of cases. Achylia gastrica cannot and should not be determined by the old method. In several of my cases, the flow of gastric juice, for some reason, started only an hour and a half after the test meal was given. Be more modern and use the stomach pump only in that capacity when indicated.

The case of stricture of the esophagus resulted from swallowing a quantity of strong ammonia solution which was used for cleaning rifles, it being handed him by mistake to quench his thirst instead of water. Immediately after swallowing three quarters of a glass of that solution, he vomited a quantity of blood. When the hematemesis was controlled, almost a constant dribbling of saliva and mucus from his mouth followed, and difficulty in swallowing resulted to such an extent that at times he was unable to swallow water. The X-ray demonstrated plainly the existence of a stricture about four inches from the cardia. He improved greatly under complete rest and anti-spasmodic drugs. A bougie to dilate the stricture was not obtainable at the Base, so after he was discharged on account of physical disability, I referred him to Dr. Rudolph Matas for further treatment.

The increase in the number of cases during April was due to an outbreak of acute entero-colitis, almost of an epidemic form, among the troops who were at that time on the artillery and rifle range practice. There were two groups of cases of entero-colitis; one was very mild with sudden onset, beginning with nausea, headaches, light abdominal cramps, loose bowels, very slight rise in temperature and general weakness; the other group presented a picture of profound intoxication. There was high temperature, rapid pulse, general relaxation, marked weakness, vomiting and purging, stool containing blood and mucus, and severe abdominal pain. The laboratory at that time was overcrowded with work and a thorough investigation of the real cause of the trouble on a scientific basis was not made. The stools of several dozens of cases were carefully examined and only three cases showed the presence of amebæ, but in those cases a history of chronic intestinal trouble was obtained. The rest of the cases showed the presence of colon bacilli; several specimens were cultured with negative results. The water supply

was boiled and chemically purified and the source of infection could not be traced to that origin. In my opinion, the following factors were probably responsible for the outbreak of bowel trouble:—The abundance of flies, sleeping on the ground at night thereby causing a chilliness of the abdominal viscera and the season of the year when there is an abundance of new green vegetables. The latter factor would probably explain the reason of the development of a number of cases of the enlisted personnel of the Base Hospital, where the other causes were lacking. The mild cases recovered rapidly by an initial purgative, castor oil preferred, absolute rest, starvation for 36 or 48 hours and a gradual return to a normal diet with a subsidence of the symptoms. The cases of a severe nature required the greatest care and attention, calling for stimulation, intestinal irrigations and astringents. A few of them ran almost a course similar to typhoid, but without laboratory findings to substantiate such a diagnosis. The bleeding in some cases was quite severe, heroic measures had to be instituted to save life; horse serum was given in one case 3 times before the bleeding was controlled. I am very glad to state that in the entire group of 184 cases treated in my ward, not a single fatality occurred.

Next of interest to me were cases suffering from intestinal amebiasis. I will not go into details of this most interesting subject. A very rich literature on amebiasis has developed during the war. The French writers are inclined to consider even the ameba coli as pathogenic. Time and space do not permit to discuss the pathogenic species of ameba and its treatment. Suffice it to say that in my group of ameba cases, I have adopted the routine treatment, as carried on in our work at the Touro Infirmary. Absolute rest in bed for at least 10 days, or longer if necessary; emetine hydrochloride 7 or 9 doses by hypo. gr. 1 daily and ipecac salol pills; the diet was at first liquid minus milk, then soft food and later on brought up to normal diet. The treatment was followed up with colonic irrigations. The results were satisfactory in the recent infections where the amebæ were found to be in the vegetative state, but the chronic stubborn cases where the ameba is in the cystic stage, the emetine and ipecac were not entirely satisfactory. Personally, I believe that the cystic type of ameba has not been conquered yet, we are never on the safe side of a permanent cure, and here is an important problem for the student of medicine to solve. In this connection, I wish to mention a little

experimental work which I started, but did not have the opportunity to continue, with a freshly prepared Dakin's hypochlorite solution. In four chronic cases, I used the solution for high colonic irrigations with decided improvement. A drop of the solution added to the bloody mucus on a slide containing live amebæ, would cause an immediate shrinking of the organism and all other cells present. I regret exceedingly that the officer in charge of the Dakin ward was ordered for over-sea service, and the solution was not obtainable. The solution must be freshly prepared and it must contain not less than 0.4 nor more than 0.5 sodium hypochloride. The rectal tube should have several openings through which the solution can escape and touch every ulcerated spot in the bowel, as the effect of it lasts only a few minutes. The abdominal cramps which follow are relieved by a saline irrigation immediately afterwards. While on the subject of amebiasis, I wish to bring out the following points of importance:—hemorrhoidectomies were performed when the real cause of the trouble was the *Endameba histolitica*, a lesson of caution to the surgeons; prophylaxis of amebic dysentery should be enforced as advocated by Deaderick.

The group of biliary infections presents the following interesting points:—In 8 cases of cholangitis, the duodenal contents were obtained by the aid of the Einhorn bucket and placed in sterile tubes. Cultures were made and 5 of them contained colon bacilli. Certainly, the presence of colon bacilli is not a phenomenon of normal bile, according to Rehfuß; they are either eliminated by the liver into the bile or it is due to a reverse peristalsis. They all improved rapidly by trans-duodenal lavage, as advocated by Jutte. Five cases of jaundice developed after the second or third injection of anti-typhoid vaccine. No typhoid or para-typhoid organisms could be elicited; the infection probably was hematogenous, the jaundice resulting from hemolysis. They all cleared up in a few weeks under ordinary treatment. Two cases were treated surgically; one was found to be cholelithiasis as suspected on examination, the gall-bladder being literally packed with hundreds of small stones, the co-existence of pthisis-pulmonalis was discovered after the operation, tubercle bacilli were found in the sputum. He fully recovered from the operation, the tubercular condition was then taken care of. The other case was an obstructive jaundice, an indurated mass was found in the region of the ducts affecting also the head of the pancreas; it was thought to be malignant, drain-

age was established between the gall-bladder and a portion of the small intestines. He improved rapidly when anti-syphilitic treatment, as a trial, was instituted, though his Wassermann was negative.

I regret exceedingly that lack of time, proper instruments and assistance prevented me from treating cases of flagellate diarrhea by trans-duodenal lavage.

Cases of ordinary catarrhal enteritis were not easily manageable for the following reasons:—(1) To obtain a special diet from a kitchen where thousands of soldiers are fed according to prescribed standardized diet, is quite a problem to solve. At the base, I instituted special diet for my gastro-intestinal cases, but when those patients were returned to their organizations, the prescribed diet could not be obtained. (2) The lack of suitable drugs was another hindrance in those cases.

To handle neurasthenia gastrica cases was one of those army tasks which leave an indelible impression upon one's mind. Notice the large percentage of those cases on my list.

Ulcer cases, duodenal or gastric, were considered burdensome to the government, and as soon as all the evidences in the case pointed toward the existence of an ulcer, they were ordered to be put before the S. C. D. Board. I had the opportunity to treat the first four ulcer cases before their discharge papers arrived and they improved greatly on a modified Lenhertz treatment.

In intestinal toxemias, with indicanuria, my attention was directed towards cleaning up the indican, as outlined by me in a paper on "Indicanuria," which was read before the Louisiana State Medical Society in April, 1915.

Gastric lues was a subject which interested me considerably. I came across numerous cases of systemic lues with gastric disturbances, but as I outlined in my paper on that subject, read before this society in April, 1916, a case to be classified as gastric lues must present the following cardinal points:—

- (1) History of vomiting, regular or periodic.
- (2) Sharp abdominal pain, not having a direct relation to food, worse at night.
- (3) Deficient or absent acidity.
- (4) Positive Wassermann.
- (5) X-ray, demonstrating the existence of a gastric lesion, or a small and contracted stomach.

- (6) Immediate relief when bichloride of mercury and potassium iodide are given by mouth.

In this group, the following cases were quite interesting:

Case 1. Pr. T. R. was in prisoner's ward on a charge of A. W. O. L. He complained vaguely for a while of gastric disturbances and was looked upon as a neurotic. When he began to vomit and lose considerably in weight, the ward surgeon called for me in consultation. He was transferred, on my recommendation, to my ward and I studied the case in a systematic way. His principal complaint was irregular abdominal pains and periodic vomiting. During the hours of night, he would bring up large quantities of a greenish fluid containing mucus, also some food residue from the day before. He was very anemic, lost considerably in weight, so that he looked more like a human skeleton and his condition was such that a fatal termination was expected at any time. The observation made on him brought out the following points:—There was an achylia gastrica, symptoms of almost complete pyloric obstruction, a palpable mass in the right upper abdominal quadrant, general adenopathy. The laboratory findings were as follows:—Blood picture was that of a secondary anemia, Wassermann was negative on first test, after treatment was instituted a positive Wassermann was obtained. X-ray findings demonstrated pyloric obstruction. Occult blood negative and urine negative. Surgical intervention was decided upon. On operation, a large infiltrated mass was found at the pylorus, blocking the orifice almost completely, the mesentery glands in the neighborhood were also infiltrated. There were points in favor of malignancy. A gastroenterostomy was done and vigorous anti-luetic treatment was instituted. Patient began to improve rapidly, and in about two months time he gained 45 pounds in weight and from a dying invalid, he was converted into a robust and healthy looking soldier.

Case 2. Sgt. W. R. gave a history of noticing a tumor gradually developing in the epigastrium for the past 4 years. The development and growth of the tumor was rather slow and was not accompanied with very great pain or discomfort, except for the last few months when he began to suffer from irregular pains in that region, with periodic vomiting, some loss in weight and constipation. He was very anxious to go to France and with that object in view, he applied for treatment to become a healthy soldier to serve with the A. E. F. in France. He denied any history of venereal disease. On examination, the tumor was about the size of a goose egg, visible and palpable, irregular in outline, and movable with respiration. Gastric analysis showed condition of hypochlorhydria, occult blood was negative, urine was negative, X-ray showed a small contracted stomach with a very irregular outline on the lesser curvature. His Wassermann was doubtful. Anti-luetic treatment was instituted. Pain and tumor began to disappear until finally the tumor was hardly palpable; he gained considerably in weight and his general condition improved so much that he was recommended for oversea service. In Nov. 1918, I received a letter from Sgt. R. dated Oct., 1918, from Somewhere in France, stating that he feels perfectly well, that he has no tumor and no pain, in spite of the hardships he is undergoing with the A. E. F.

The other luetic cases were also interesting and all had evidences of luetic structural changes in the stomach.

Much attention was paid to mouth infection as a common source of indigestion. In the group of cases mentioned in this paper, very little medication was given, but they were all sent to the dental department, where they could be handled properly. All but one showed marked improvement of their gastric disturbances, after a period of treatment by the dentist. The one that did not improve required a plate, the dental department was not equipped for that kind of work. It would be a wise policy for every modern hospital to have a dental department in connection with clinical work.

This brief resume is not full of scientific data, but represents a mere compilation of the gastro-intestinal work done at the Base Hospital for a period of six months. The remaining period of my stay at the Base was devoted to work with the Draft Board, examinations for overseas and promotion, and finally, during the epidemic of "Flu," I was assigned to a pneumonia ward. The work of gastro-enterology was carried at times under the most trying circumstances, but always with the best intentions to help the American boys who were destined to write a new chapter in human history with their blood. We have succeeded, the Kaiser's crown has been transferred to the Statue of Liberty. The Medical History of the war is now being written, every specialty, I am sure, is given a conspicuous place. Lt.-Col. Seale Harris is writing the chapters on digestive diseases; I am sure that he has enough data to demonstrate the importance of gastro-enterology and place it among the well recognized specialties in medicine.

DISCUSSION OF PAPERS OF DRs. FOSSIER, KNIGHTON AND LEVIN.

Dr. A. G. Friedrichs, New Orleans: There is one thing that impressed me more than anything else, and that is in the address last heard, the doctor said no hospital is complete without a dental department. I am especially gratified. I want to say to you, gentlemen, that if you remember I called attention to that fact in 1879, having an article to prove it in the records of this society. I have continually, every session, called attention to this particular fact, and it is a personal gratification to me to know that at last somebody has really found it out.

Dr. E. M. Ellis, Crowley: The paper that interested me the most, not because it was more scientific, but because it involves a condition that the medical men have to deal with every day, was that of Dr. Fossier. Those of us who are confronted with this condition feel absolutely helpless, as it were, to relieve it. We are not interested so much in knowing the etiology of this condition, but what these poor individuals want is relief, and after years of experience I can almost tell when a patient walks into the office if he is suffering from visceral ptosis. Dr. Fossier has painted a beautiful picture and I agree with him in almost every

respect, but he himself admits that there are patients that do not improve under his medical treatment. I have patients who have been under observation for ten years, suffering from some form of this condition. They have a stomach in the pelvis, they have a floating cecum, probably the right kidney is down where the cecum should be. He says if you put them to bed, put on the proper abdominal support, and diet them, under proper medical treatment they will improve. My experience has been to the contrary. You put them to bed, put on the abdominal support, and these poor sufferers will for a few months have hope of getting well, perhaps they will gain twelve or fifteen pounds, but in six or seven months they are suffering as badly as ever, and if you put them under a fluoroscope you find the condition just the same as before treatment. I agree with him that ninety per cent. of the surgeons steer clear of these cases. Why? Because the majority of them seem not to improve under operation and because they are discouraging to the surgeons. They unload them on the medical men—they want to get rid of them. But you will find that twenty-five per cent. of your chronic sufferers among women are suffering from these ptoses. What are you going to do with these sufferers? You cannot put a belt on a patient who has no abdomen, whose viscera is in the pelvis. I have put these patients to bed for weeks, elevated the foot of the bed and all that, and on examination found the viscera within the pelvis. I believe a certain per cent. of these cases can be improved by operation, and I believe the reason operation has been discouraged is that no surgeon has experimented on enough cases. Coffee has done more work along this line than any man in this country. He reports a large per cent. of cases (and we know he is thoroughly conscientious)—he reports 50 per cent. cured, 25 per cent. improved and 25 per cent. no improvement. When he began his work he was discouraged, but he persisted and today he is doing a large per cent. of these cases. But I believe in trying your medical treatment first, and if this fails then these sufferers must have some recourse. I had two cases operated on, one in conjunction with Dr. Carroll Allen, a patient who had been practically bed-ridden for two years. We did a typical Coffee operation, and since then she has been practically well, and that was over six years ago. The other case did not do well, but was improved somewhat. I have a dozen cases I could operate on tomorrow, but I am afraid to operate on them. They are going to stay there and I am going to stay there and I am afraid I will have a bunch of chronics who will haunt me the rest of my days. There were twenty-five operations reported at the A. M. A. last year, with marked improvement after the Coffee operation. These chronics are not cured by medical means. They may be improved, but a large percentage of them go to the grave with the viscera in the pelvis.

Dr. A. C. Eustis: I want to second every word Dr. Ellis has said. No doubt a certain percentage of these cases are amenable to treatment by medical means and a certain percentage are relieved by surgical means only. I saw this woman he spoke of and she certainly was no subject for medical treatment; no support would have been effective in her case.

Another point Dr. Fossier brought out was that these cases are associated with relaxed abdominal walls. In some of the worst visceroposis cases I have seen, the abdominal walls were perfectly rigid, so do not expect to find a relaxed abdomen in all cases. In a large per cent. there will be no evidence in the abdominal walls at all.

I would like to say a few words about Lane. When I was in London in 1911 I was very much interested in these cases. I saw one nurse who had been operated upon several times, and finally Lane did his ileorectostomy. I followed this case after the operation and heard from her subsequently by letter. She put on about thirty-five pounds after the operation and the last news I heard from her, she was still doing well and in active nursing. I followed up two other cases of his and they certainly were relieved.

Being an internist, you might expect me to urge the medical side. If a case is one of visceroptosis there is no doubt you can do a lot of good by proper hygiene and orthopedic appliances, but in a large percentage of cases the visceroptosis is so severe that they are surgical cases, and it requires considerable discernment on the part of the surgeon to know which operation to decide on.

In regard to Dr. Knighton's paper, my experience regarding cases of ulcer of the stomach has been that cases over twenty-five years of age are surgical cases. If Dr. Knighton and Dr. Levin will tell me some way to tell when a case of ulcer is cured, then I will say it is permissible to treat them medically. However, a surgeon doing a simple gastroenterostomy is not doing anything more than the medical man. I looked up one of my histories in 1912 who had been discharged by Sippy in 1906. At the beginning of my history I had not heard of Sippy, but he was free from all symptoms for six years. When he presented himself to me he had a definite ulcer at the pylorus. Dr. Parham operated on him and found a large indurated ulcer which we thought at first was malignant. The reason I feel so strongly about this is that I have seen cases that I thought I had cured back in 1907, 1908 and 1909, present themselves later with well developed carcinoma. Unless you have pylorospasm you will not have symptoms of your ulcer. I have seen a case of carcinoma of the stomach where there was an enormous carcinoma, in which the man had no indigestion and he dated the trouble only two months prior, and the X-Ray showed his stomach emptied practically on time. Yet operation by Dr. Batchelor showed it was an inoperable carcinoma of the lesser curvature that was not involving the pylorus.

I am interested in the observations Dr. Knighton brought out about focal infections. We are, more and more, coming to realize the importance of these conditions.

Dr. A. L. Levin (closing): Dr. Knighton's reliance on the thread test in ulcer cases does not appeal to me as we have tried it out very faithfully at the Touro Infirmary, using a selected number of cases and the results were entirely unsatisfactory. It is true some cases will show a stain of blood on the thread, but the majority of cases do not show any blood stain; if they do, it is problematical whether the blood comes from an ulcer, it might be due to esophageal irritation. If the ulcer is on the lesser curvature of the stomach, the thread, in trying to enter the pylorus, on account of the resulting tension, will naturally follow the course of the lesser curvature; if the ulcer happens to be on the greater curvature, the thread will not touch the ulcerated area and consequently will not show any blood stain. Of course the thread test is a valuable as any other test we have at our command for diagnostic purposes; it might prove of value in some cases, but it is not a reliable test for ulcer of the stomach in the majority of cases.

Concerning the Sippy treatment in gastric ulcers, I do not believe it is superior to any other treatment. I had the opportunity recently of seeing two cases at the Base Hospital, Camp Beauregard, who have gone through the Sippy treatment for gastric ulcer, and while at the Base Hospital, had two hemorrhages. The merit of the Sippy treatment in introducing alkalies into the stomach after lavage is of doubtful value. There was an article recently in the medical literature where experimental work had been done along that line and it was demonstrated that shortly after a dose of sodium bicarbonate, the gastric acidity is rather increased instead of neutralizing it, as we were taught it does.

Personally, I believe that there are ulcer cases which are best treated surgically from the very beginning, but in such cases where we have no absolute reason for sending the patient immediately to the surgeon, we should try medical treatment. There is a very wise rule laid down by a man who has done more work in gastro enterology than any man living, Ewald, and he states that in every ulcer case which is discharged as relieved or supposedly cured, the occult blood test should be watched for months afterwards. This should be done every two weeks, and if at any time after the first treatment, a positive occult blood is obtained, the patient should be sent immediately to a surgeon for an exploratory, the danger of carcinoma being engrafted on the base of an ulcer is too well known to us.

While speaking on ulcer cases, I wish to bring out a point which we should not overlook and that is, that there are cases of ulcer of the stomach luetic in origin; those cases are not cured by an operation, some not relieved by the surgeon. I recall one case where the condition was such that an exploratory laparotomy was urgent and on opening the abdomen, incidentally a perforated ulcer of the stomach was found. An excision was then out of the question on account of the moribund condition of the patient; the ulcer was covered up by mesentery, stitched, the abdomen was closed and after many weeks, the patient was improved. Shortly afterwards, the same abdominal pains, vomiting and other annoying features recurred. Some features in that case were suggestive to me that the entire picture was one of luetic origin, in spite of the fact that the patient persistently denied any knowledge of venereal disease. We made a Wassermann test and it gave four plus positive. On administering mercury and iodide by mouth, the pain and vomiting disappeared in a few days. On the face of such strong evidence, the patient admitted that nine years previous, he consulted a doctor in St. Louis for the same stomach trouble, who recognized then that the trouble was due to systemic lues; the patient admitting a history of primary lesion many years ago. He is doing remarkably well under anti-luetic treatment.

With regard to the focal infections having a relationship to the origin of the ulcer, that has not been determined yet. Rehffuss has been doing a good deal of work along this line.

I wish to remark in answer to Dr. Eustis' statement that achylia gastrica is not a diagnosis; it is true in a number of cases, as a rule there is a factor causing the achylia, but there are cases of achylia of congenital origin. I know of such a case in New Orleans; we have been watching him for years, we cannot find a cause for his achylia, he is in perfect health otherwise and he takes faithfully his HCL drops after meals.

INFECTIOUS DIARRHEA.*

By F. J. KINBERGER, M. D., New Orleans.

During last summer it was my good fortune to spend eight weeks on the Boston Floating Hospital where I had the opportunity to observe types of diarrhea that were the cause of no little concern. In a series of about twenty cases of dysentery, the profound and severe toxic symptoms as elicited by the patients brought to mind the necessity of employing the most energetic treatment in order to save the life of the little patients under charge. The diagnosis of infectious diarrhea depended entirely upon the examination of the stools of these babies, and the bacteriological study to determine the offending organism. The oppressive heat of the summer seemed to have a marked influence upon the increased number of cases noted at that time, and the careful study of the milk supply did not influence the findings in one way or the other. Infectious diarrhea is a definite bacterial infection caused by the dysenteric bacillus, the most prominent being the Shiga and Flexner types. During the summer of 1913, observations were made by Kendall of Chicago on the etiology of summer diarrhea. The material for study being children under three years of age, mostly from the tenement districts whose hygienic conditions at home were anything but satisfactory and this coupled with neglect played a large part in the severity of the symptoms. The intestinal flora of children under three years of age is in a transitional state. The bacterial flora characteristic of infancy is gradually being supplanted by organisms associated with adolescent life. This is somewhat due to the change in diet. The milk diet is being replaced more or less gradually by a mixed diet in which the composition and relative proportion of the ingredients are changed. Of the ingredients the carbohydrates and protein are the most important in determining the alteration of the bacterial type. In the nursling the diet contains about four times as much lactose as protein and favors a flora which to a certain extent is a protective one, producing a certain amount of lactic acid which helps to restrain the development of bacteria which are able to produce diarrheas of marked severity. It has been shown that the fermentative bacteria of which the *Bacillus bifidus* is the most prominent, is of decided value in preventing certain bacterial proliferation

* Read at 40th Annual Meeting Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.

which is harmful to the immature intestinal canal. As the diet is changed, the carbohydrate and protein ratio is altered and there is a readjustment of bacterial types in the intestinal tracts causing an instability in the bacterial content of the alimentary canal. We have a condition more favorable to putrefaction. The prevailing type of bacteria in the cases has not been the same each summer so that one season seems to show the predominance of the Shiga and Flexner type and the next season shows a series of gas bacillus infections. Streptococci have been found and were looked upon as secondary invaders. Many acute disturbances of the gastro-intestinal tract arise from errors in feeding or from temporary inability of the individual infants to digest the food. Various outside causes such as temperature, humidity, environment or acute diseases must be considered, and it is from these disturbances which are usually caused by improper administration of one of the food elements such as fat, carbohydrates or proteid that the bacterial infections being differentiated. A study of the stools will readily show whether or not these factors are the cause of the gastro-intestinal disturbance. It is true that bacteria sometimes play a primary part in some instances and a secondary one in others. It is in these series of cases that the bacteria played the primary role. The term "infectious diarrhea" as applied to these cases is truly an infectious disease. The onset is sudden and the incubation period is variable, probably short and often a matter of a few hours. There are usually no prodromal symptoms. There is a rise in temperature to a 104 or 105 degrees and the fever is continuous for several days. Prostration is present and often shows a picture of complete collapse. This can occur within a few hours after the onset of the attack. The eyes are sunken, the tissues seem dry and washed out and nervous symptoms are common, extreme restlessness and convulsions. Vomiting was present early and severe. The number of stools varied from 20 to 30 in 24 hours. They differ in character from the stool of fermentative diarrhea in that they contain mucus, pus, and blood. Whereas the stool of fermental diarrhea are usually green and contains curds and undigested masses. The prostration and toxic symptoms are directly proportionate to the severity of the diarrhea. The marked loss of fluids leads to a condition of depletion with depressed fontanelles, hollow eyes, dry skin, sunken abdomen and modified breathing. Acidosis exists. By work done in past summers it has become

necessary to determine the particular organism concerned principally as regards treatment. Clinically it is very difficult to differentiate subdivision because of the similarity in the picture produced by the different bacteria. Certain type of intestinal bacteria, particularly the dysentery bacillus, both the Shiga and Flexner types have received the greatest amount of attention. The gas bacillus as a causative factor was observed in about 2 per cent of the cases. The bacteriological examination of the stools were conducted by the laboratory of the Harvard Medical School. Investigations by Kendall has pointed out the fact that dysentery bacilli when grown in media containing an excess of carbohydrates, use the carbohydrates first and only enough proteid to furnish the nitrogen requirements of their living body structure. Since the toxic products are largely the result of protein breakdown we should expect the minimum of toxic products in the presence of an excess amount of carbohydrates. So the treatment consisted in furnishing carbohydrates in the form of dextrose or dextro-maltose solution as high as 8, 10 or 15 per cent strength. In these cases in which the vomiting was not severe, this was administered by mouth. Contrary to this line of treatment the gas bacillus flourishes in carbohydrates, and if given carbohydrates, food will continue to multiply and aggravate the clinical symptoms. The little patient ill with gas bacillus infection would grow steadily worse if fed on high carbohydrate and improve on a diet low in carbohydrates. In the treatment of this type lactic acid milk or Eiwessmilch was fed to these patients, the lactic acid being detrimental to the development of the gas bacillus. The improvement was conclusive. In the severe types of infection there was really a true toxic shock, and the symptoms had to be combatted with by other means than diet. While truly an intestinal disturbances, the treatment was like that of any of the acute infections. A safe diet was a formula of fat free milk, ripened with lactic acid bacilli, a formula low in fat and protein with a sugar proportion of about 5 or 6 per cent. Special symptoms to be treated were pain, tenesmus, marked prostration and collapse, toxic nervous irritation, vomiting and high temperature. Hot stupes were used to alleviate the pain. Purgative was used to check excessive peristalsis. Caffein sodio-benzoate 1/8 to 1/2 grain hypodermically was found to be the best stimulant. Brandy by mouth according to age. For the treatment of collapse, fluid by hypodermoclysis giving from 4 to 6 ounces every 4 hours.

Another method was to give 6 ounces, of normal saline or 5 per cent dextrose intraperitoneally. 28 gauge or lumbar puncture needle was inserted 1 or 1 1/2 inches below the umbilicus in median line at an angle of 45 degrees. The same care should be exercised in preparing the abdomen as for a laporotomy. There is no danger in injuring the intestines and is a quick means of furnishing fluid and stimulation. Fuel in the form of 5 per cent dextrose or glucose given intravenously—in infants under 18 months in the longitudinal sinus, the site of the injection being the posterior angle of the anterior fontanelle. A special apparatus was contrived for this purpose. A three stop cock, connected with a Luer syringe at one outlet, and two leads of rubber tubing, one connected to the solution to be given and the other with the needle to be inserted in the sinus. In all injections a small amount of normal saline was run through first. After inserting needle suction was applied to determine if within vein. Then a slow steady pressure was exerted to give solution. Four ounces of fluid was injected at one time. Sometimes there would be a rise of temperature after dextrose was given. This would fall quickly however. Adrenalin (1-1000) one to five minims at times added to dextrose. For nervous symptoms sodium bromide according to age was found the best drug. Lumbar puncture was also done to relieve intracranial pressure. In conclusion in undetermined cases it is best to give one diet then observe. If results favorable continue, if temperature rises change to protein. The necessity of supplying fluids is urgent, as much as 24 to 32 ounces in 24 hours. The dysentery was treated entirely from a diatetic standpoint entirely. Outside of initial dose of castor oil, very little medication by mouth. In cases passed the acute stage, a small dose of milk of bismuth if stool remained rather frequent. Prognosis should be always guarded.

PICRIC ACID—A PREOPERATIVE DISINFECTANT.*

By O. C. CASSEGRAIN, M. A., M. D., New Orleans.

The thorough disinfection of a patient's skin is not the least important part of an operation. That this is true is proven by the many different methods of preparation and the many different germicides progressive surgeons have used since bacteriologists have

* Read before Orleans Parish Medical Society on October 13, 1919. (Received for publication Nov. 10, 1919.—Eds.)

shown that the *Staphylococcus albus* was ever a potential source of wound infection. Different method after different method, one germicide after another was tried, only to be discarded until the iodine method now almost universally adopted, came into vogue and seemed to fill to perfection the surgeon's every want.

Since my interne days, however, I have always thought that iodine had two disadvantages. The first, that it was incompatible with water and the second, that it not infrequently produced irritation of the skin.

In emergency cases, or in cases which are not properly prepared and who come to the operating room either not thoroughly shaved or even not clean (we have to contend with such conditions not only in charity but also in private institutions, especially in cases of fracture which required surgical interference), the first thing one wishes for is soap and water: Now with the iodine method of preparation one of two alternatives is left the surgeon; either use soap and water with the fear that the skin sterilization will not be complete or scrub away with iodine and benzine and irritate the patient's skin, in either case a very unsatisfactory procedure.

As for the second objection, irritation of the skin, it is not necessary for me to dwell on it. You have seen it more or less often, in fact it has led many surgeons to wash off the iodine with alcohol, as a routine before applying the dressing.

This brings me to a method of preoperative disinfection we have been using in our service at the Charity Hospital for the last three months.

Our chief of service, Dr. Gessner, first suggested our trying it after reading a report of fifty cases operated by Dr. Gibson of New York (*Annals of Surgery* for February, 1919.)

Dr. Gibson first used picric acid as a disinfectant while with the British Army in France. The method we used at first was the Gibson's: (1) Wash the operative area with soap and water. (2) Paint it with a 5 per cent alcoholic solution of picric acid.

Very soon, however, in cases that come to the operating room prepared the way they ought to be, I eliminated the washing with soap and water and modified the original technic:—1st. By wiping the skin with alcohol, then, 2nd, painting it with 5 per cent picric acid. We eliminated the first step simply as a time saver. Dr. Gessner has told you of the various types of cases on which he tried this method, all giving good results.

On my part, for the last three months at the Charity Hospital where I had charge of the service during the summer, I used this method as routine. We averaged during that time four cases a week from appendices to hernias, one umbilical, one femoral and many inguinals, and from exploratory laparatomies (one of which was a large ovarian cyst and another double pus tubes with cystic ovary) to nephrectomy for hydronephroma; in all these cases we had but one infection in an inguinal hernia; this was not the fault of our skin preparation but from a break in our aseptic technic during the operation.

Hernias and fracture cases were satisfactorily operated with our method and did not become infected and every surgeon here knows that there is no greater test of asepsis than either a hernia or a Lane plate. Another argument in favor of the use of picric acid is that it is approximately 40 per cent cheaper than iodine and in these times of high cost of material it should be no small inducement to any hospital management to substitute for an expensive drug one 40 per cent cheaper and as good if not better than the expensive one.

We advocate the use of picric acid as a preoperative disinfectant, because:—

- (1) It thoroughly disinfects and can be used with soap and water.
- (2) It does not irritate the skin.
- (3) It is approximately 40 per cent cheaper than the drug now almost universally used for the same purpose.

DISCUSSION OF DR. CASSEGRAIN'S PAPER.

Dr. Gessner: Dr. Cassegrain has covered the field so thoroughly that there is very little left to say. I think it should be made clear, however, that we are not attempting to drive benzine and iodine from the field. While picric acid is good, we cannot claim it is better than benzine and iodine. There are a number of cases in which I have used picric acid at Touro. In the first case in which I used it, there was a thyroid cyst under local anesthesia; I got a good result in that case which encouraged me to use it further. I think we ought to look at picric acid not as a rival of iodine and benzine but as another string to our bow. It may happen that we cannot get benzine and iodine and then it will be a source of satisfaction to have another reliable means of preparation. The use of picric acid where water has been used is permissible. It not infrequently happens that we have to operate on patients who have not been shaved. If soap and water are used, iodine is not satisfactory. A benzine shave is somewhat difficult. Shaving of the scalp particularly is done better with soap and water. I think that is a good point for picric

acid. In the matter of cost, it is pretty well established that picric acid is cheaper, as Dr. Cassegrain went to two reliable sources and received this information from both. I think another thing that is worthy of attention is that the attendant has to provide you with only one bottle of painting material when picric acid is used.

Dr. Guthrie: I have seen a patient's urine yellow from the use of picric acid, locally applied in treating a burn. It seems to me that picric acid is considerably irritant to the kidney and possibly dangerous on this account.

Dr. Patton: I would like to know whether picric acid can be used in open wounds, or is there danger of absorption? Just how toxic is picric acid? It might be of interest to know that both in England and Italy, in many of the hospitals, picric acid is used almost exclusively. It is claimed the acid is much cheaper than iodine, can be used after washing the surface with soap and water, that it penetrates deeper and lasts longer.

Dr. J. T. O'Ferrall: My understanding is that the laboratory experiments have proven that antiseptis of the skin lasts for a much longer period with picric acid. Another point I heard often discussed in this relation is that iodine is not germicidal where applied to mucous membrane.

My experience is that picric acid is the most valuable skin antiseptic. I use it to the exclusion of iodine. It particularly appeals to me when dealing with the feet and extremities, and I have often had occasion in which fractures occurred to use it. I use picric acid instead of iodine for the reason I can put a cast on and not fear blistering of the skin.

Dr. L. M. Provosty: I would like to ask Dr. Cassegrain to explain the reason why he thinks iodine is incompatible with water.

Dr. Wm. Perkins: We are indebted to Dr. Cassegrain for bringing before us this subject, which is worth while looking into. I concur in Dr. Gessner's point of view, that when we find a new remedy we should not discard the old. It is an unfortunate thing in medicine when a man finds a new thing he so often holds it up as the only thing.

A great many of the troubles with iodine come from lack of care. We have had case reports in the hospital, where the patient was blistered because the knee joint was painted with iodine and bandaged while still wet. If you are going to use iodine it is best to know when and how to use it. Always permit it to dry before bandaging.

Dr. Gessner's remark, that you have another string to your bow, is an excellent summary of the matter.

Dr. Cassegrain (closing): In regard to the question "why doesn't iodine sterilize after the use of soap and water, I think the only explanation is that the epithelial cells absorb water and as iodine is insoluble in water, we have no absorption, therefore no sterilization.

As for Dr. Guthrie's objection to the use of picric acid, it has been my experience that after burns, especially extensive burns, we have nephritis, and the burn and not picric acid, is probably responsible for the nephritis in this case. I have not seen any of our cases develop kidney complication.

PREVENTION AND TREATMENT OF INFLUENZA AND INFLUENZA PNEUMONIA.*

By GEO. A. HOGAN, B. S., M. D., Birmingham, Ala.

PREVENTION OF INFLUENZA.

At the beginning of the influenza epidemic in our city September, 1918, I began using influenza vaccin. I gave it at daily intervals $\frac{1}{2}$ c. c. dose for four doses.

Every pregnant woman who came under my observation in my practice I advised to take the vaccin, and practically every one did so. Up to the present time I have not had a case of influenza to develop in these, or in fact in anyone, who took the vaccin.

As soon as I was able to obtain it I began using influenza-pneumonia vaccin (prophylactic) as prepared by Dr. E. C. Rosenow of the Mayo Foundation, Rochester, Minnesota. I gave this at three days' intervals; first dose for adult $\frac{1}{2}$ c. c., second dose 1 c. c., third dose $1\frac{1}{2}$ c. c. For children the dose was regulated according to the age and weight.

TREATMENT OF INFLUENZA. AND PREVENTION OF INFLUENZAL PNEUMONIA.

In treating influenza with vaccin, it naturally follows that one is preventing a larger percentage of influenzal pneumonia than under ordinary symptomatic treatment.

At first visit to a case of influenza, I gave $\frac{1}{2}$ c. c. vaccin and repeated in twenty-four hours if the temperature was above 101 F. Generally, three to four doses were sufficient. I kept the patient in bed four days after the temperature reached normal. I did not have a case to develop pneumonia where the above line of treatment and prevention was given.

TREATMENT OF INFLUENZAL PNEUMONIA.

The treatment that I wish to describe is one which I shall designate as the "closed" method of treating pneumonia. I have used this method in treating pneumonia for several years, and in the vaccin treatment of different diseases for ten or twelve years. I found that my results in the use of vaccin, in the negro race, were so much better than those in the white that it caused me to think out the difference in the natural way that these different

* Read before Jefferson County Medical Society, April 2, 1919.

cases applied their individual mode of treatment. The negro would be in a tight room, out of draughts, with a good deal of cover, a profusion of poultices, and partake of quite an assortment of hot teas, drinks, hog hoof tea, etc., and would get well with half the attention usually given to the white patients.

The white patient, on the other hand, would be reverse. The "open" method of treating pneumonia would be carried out. Very little clothing on patient, covering enough to make patient comfortable, windows open, cold applications, sponging and cold drinks for fever, and even with double the attention, the time of recovery would be twice as long, and the mortality greater. These facts I discovered a few years ago in treating frank pneumonia, lobar and bronchial.

In treating influenzal pneumonia, I used the "closed" method of treating pneumonia: Windows and doors closed, the temperature of the room 70 F, ice bag to head, hot water bottles, one to feet and one on either side of patient, outing gown on patient, two pairs of blankets as cover, keep patient in bed, quiet; use bed pan, plenty of water to drink, one dram of sodium bicarbonate in pint of water per rectum every 6 hours, using medium sized soft rubber catheter. In some cases one dram of sodium bicarbonate was dissolved in a quart of water and given by the Murphy drip. If patient was very restless, I would add to this solution potass. bromid, gr. xx, and chloral hydrate, gr. x. For cough, paregoric, codein and whisky. To keep bowels opened, calomel, gr. $\frac{1}{4}$, podophyllin, P. E., gr. $\frac{1}{10}$, ipecac, P. E., gr. $\frac{1}{20}$, comp. jalap powder, gr. v, in capsule or powder every two to four hours; castor oil, with 5 drops turpentine, as needed.

Oxygen was used in a goodly number of cases. If circumstances permitted, I ordered a tank of oxygen, just as I did camphorated oil, so as to have it ready for immediate use, not waiting to let these remedies be the forerunner of the undertaker. The timely use of camphorated oil and oxygen is followed by surprising results.

No sponging or changing of bedding until temperature has been normal, or below normal, as is usual, for three days. Digitalis, drops x, every 4 hours for 24 hours, and then 3 times daily for 2 or 3 days. Pneumonia phylacogen every 6 to 12 hours, being regulated, as to time and amount of phylacogen given, by the temperature, varying from $\frac{1}{2}$ c. c. to $1\frac{1}{2}$ to 2 c. c.

When I would give a dose of phylacogen, the hot water bottles were renewed or refilled, and after the reaction, or the sweat following the vaccin and heat, all the bottles would be removed except the one at feet. This would be repeated each time, after each dose of phylacogen.

Any stock commercial preparation of vaccin is good and reliable if prepared by trustworthy manufacturers and properly preserved and properly used. The immunizing and curative stock vaccines are made from selected, vigorous organisms, and are to be preferred to auto-vaccines prepared from an enfeebled patient. Another advantage in the use of stock vaccins in the promptness and readiness with which they may be obtained and given.

RESULTS.

I treated 195 cases of influenzal pneumonia, bronchial and lobar, during the recent pandemic, with a mortality of five deaths, or $2\frac{1}{2}$ per cent. Excluding my first case, in which no vaccin was used until patient was at death's door, the percentage would be 2 per cent plus. In these cases, exclusive of the first, vaccin was used from beginning to end. Of these 195 cases, 14 were pregnant women, from 3 months to full time. All recovered. Twelve aborted or labor was precipitated. All of the children died or were still-born. One gave birth to twins. Two did not miscarry.

A striking contrast to the above are the results obtained by the symptomatic or expectant plan, or the "open" method, of treating pneumonia, which shows a high rate of mortality. Practically every pregnant woman, of three months' gestation, who contracted influenza, aborted and died. The plan I pursued in treating the impending abortion or miscarriage in these cases of influenza or influenzal pneumonia, was to treat the influenza or the influenzal pneumonia and let nature look after the abortion or miscarriage. It is my opinion that, where instrumental delivery was resorted to, or labor was precipitated by artificial means, the resulting shock and exposure of the patient were responsible for quite a number of deaths. In other words, this method of procedure often converted a case of influenza into influenzal pneumonia. The moving of the patient to operating room or hospital had its baneful effects. It might be added that the same thing was true of any case of influenza.

This number, 195, does not include a number of cases that were

so far advanced with influenzal pneumonia that there was doubt about the results. In other words, cases that were treated by other physicians, or not treated at all by physicians, whose condition at first visit was extremely unfavorable. Several of these recovered and a goodly number died. I do not take credit for recoveries, and hence I do not consider those that died as failures, for I believe that if they had been treated as per the "closed" method of treating pneumonia a majority would have recovered. To illustrate, I will report one case:

K. Double influenzal pneumonia, diagnosed by staff of a local hospital and prognosed as unfavorable. When I first saw him he was nervous, restless, a beginning delirium, temperature $104\frac{1}{2}$, pulse 110, respiration 40. I crossed out the treatment that he had been receiving. I began the "closed" method of treating pneumonia. Gave three doses of vaccin at 12-hour intervals, and in $2\frac{1}{2}$ days his temperature was normal and he was on the way to recovery. In a day or so he relapsed from getting out of bed two or three times and being over-examined. My plan is to examine the patient at first visit,—heart, lungs, abdomen, etc., and afterwards to let the temperature be my guide as to the condition of the patient. I had to go back and give him five doses of vaccin and he recovered. I treated a good number of like cases that are not included in the 195 cases.

REPORT OF FATAL CASES.

Case 1. White man. Ran a typical influenza course, three days' fever. On the fourth day I saw this man and directed that he stay in bed three days, and if he did not get along all right to call me. The next day it was drizzling rain and I was crossing from Empire Building to Brown-Marx Building, and this man waved at me as he was going south on 20th Street in a jitney. The next day I was called hurriedly to see him. He stated that he had a chill the night after the jitney ride of the day before. At this visit he was blue, restless, in a great deal of pain, temperature $105\frac{1}{2}$, pulse 100, respiration 45. I asked for consultation and we decided that he had pneumonia and sent him to hospital. I saw him at hospital at about 8:00 P. M. the same day and he was coughing and spraying a watery bloody fluid in every direction and died in about three hours. This was my first case of Spanish Influenza and influenzal pneumonia. He had edema of the lungs—the fulminating form of influenzal pneumonia. No vaccin was used in this case until I saw him at hospital and gave him a dose, believing at the time that it would not do him any good. The "open" method of treating pneumonia was used in this case.

"Closed" Method. Case 2. White man. The "closed" method of treating pneumonia, and vaccin, were used. The patient recovered, or was recovering, from the influenzal pneumonia. He died seven days after symptomatically recovering from influenzal pneumonia, of nephritis.

Case 3. White woman went to bed with a double influenzal pneumonia, she staying up through the influenza on account of there being two others in the same family sick with influenzal pneumonia. She

developed a profound coma suddenly, in three days after going to bed, and died in three hours. She possibly had a hemorrhage into brain.

Case 4. White woman went to bed with a double influenzal pneumonia, high temperature, $105\frac{1}{2}$, pulse 110, respiration 34, at first visit. No nurse, patient very poorly nourished and did not react to vaccine. Could not make her sweat. She died in three days from time of my first visit.

Case 5. White man. Double influenzal pneumonia at first visit. Fat, short man, no nurse, surrounding very bad. Died in two days from first visit.

COMMENT.

In Spanish Influenza the temperature is characteristic: 1st day, A. M., temp. 102° F., P. M. 104° F.; 2nd day, A. M., temp. $102\frac{1}{2}^{\circ}$ F., P. M. $105\frac{1}{2}^{\circ}$ F.; 3rd day, A. M., temp. 103° F., P. M. $105\frac{1}{2}$ - 6° F.; 4th day, A. M., temp. $97\frac{1}{2}^{\circ}$ F., P. M. $100\frac{1}{2}^{\circ}$ F.; 5th day, A. M., temp. 98° F., P. M. $98\frac{1}{2}^{\circ}$ F. to 99° ; 6th day, A. M., temp. 98° F., P. M. 103° F. This P. M. temperature of 103° F., which may occur on the 5th, 6th, 7th, or 8th, but usually on the 6th, is the sign of the beginning of influenzal pneumonia. This I consider typical of the Spanish influenza pandemic that was followed by influenzal pneumonia.

The freer the expectoration, and the sooner it occurred, and if it was bloody, the more favorable the prognosis and the less the pain.

The mortality in general was high. It has been estimated that 2 per cent of those stricken with Spanish Influenza died. This would give about 30,000,000 cases of Spanish Influenza, with 600,000 deaths. Granting that all deaths were due directly or indirectly to influenzal pneumonia, this would give a total, say if the general mortality was 10 per cent, of about 6,000,000 cases of influenzal pneumonia, or one out of every five cases of influenza was followed by influenzal pneumonia, or one out of every 200 people of the United States died of influenzal pneumonia.

In London the general death rate was increased by influenza more than 20 per cent, in Berlin by more than 60 per cent, and in Paris and Brussels by more than 100 per cent. In our city, Birmingham, we had a mortality of 14.8 per cent. of deaths from influenzal pneumonia. This is from September, 1918, to February 15, 1919. Only ten cities of the fifty-eight largest cities in the United States had a lower mortality rate than Birmingham in the recent pandemic of Spanish Influenza. In pregnant women from 60 to 95 per cent died; in the general run of cases, the mortality is from 17 to 45 per cent. Under the vaccin treatment it runs

from 1.3 per cent to 5 per cent. The major portion of these 600,000 deaths occurred between the ages of 18 to 45 years, where human life is of the highest economic importance.

There is no question but that influenza is a specific infective disease like cholera, typhoid and small-pox. And it is my belief that we have at our disposal a specific means of preventing influenza, in prophylactic vaccination.

Drugs that have a depressant action should be carefully avoided. It is my opinion that aspirin and its allies, the salicylates, were responsible for as many deaths in the pandemic of influenza as was influenzal pneumonia. Atropin and its allies are also contraindicated. It was not responsible for so many deaths as it was not so generally used. I saw a good many cases with other physicians, where the "open" method of treating pneumonia was pursued and aspirin, etc., were given. Patient would be blue all over, respirations 50 to 70 per minute, pulse 120 to 160, with a normal temperature, and this temperature had been normal, in several cases, for from 1 to 3 days. They died in a few hours. Comment is not necessary.

Quinin appears to be a preventative of influenza. I noticed that a good many people who were taking a remedy, "666," which contains quinine sulphate, did not have the "flu."

Recurrence next winter has been predicted and it appears reasonable to expect it. If you will study the history of influenza and refer back to the pandemic of 1831, you will see from its appearance, then and later, that there is just cause for study and investigation during the lull. The pandemic of 1831 recurred in 1833, 1837, 1847, and again in 1889-90. After the pandemic of 1847-48 there was a pause before the pandemic of 1889-90, of 42 years. There has been an interval of 28 years, except for some epidemics, since the pandemic of 1889-90.

Congress has been petitioned by the Legislature of the State of Ohio to appropriate an amount not less than \$5,000,000 to be devoted to a study of the cause and treatment of Spanish Influenza, since medical experts are not agreed either as to the origin or the proper mode of treatment (Congressional Record; February 14, 1919, p. 3472.)

CONCLUSION.

I cannot refrain from referring to the first meeting of the Jefferson County Medical Society in November, 1918, after the

closing ban had been raised by the Board of Health, when one of our members, in discussing the "flu" situation, referred to the vaccin treatment in general, and that of influenza and pneumonia in particular, in a scoffing and jocular manner, and was so feelingly applauded by a large number of those present. I shall have to remind you in conclusion that I was called upon to discuss the situation, that I told you of my having used the vaccins for some years and that I was using them with success in the present pandemic. I am wondering tonight how many of you "doubting Thomases" have had to get on the band wagon, as I predicted.

THE EVOLUTION OF A SUCCESSFUL TREATMENT FOR THE COMPLICATED CASES OF INFLUENZA.

By J. FRANK POINTS, M. D., New Orleans.

The treatment of Spanish influenza was no less a puzzle to the medical profession than its multifarious ways of invading the human system was a revelation. Before its whirlwind onset, cyclonic progress, and hurricanic destruction, physicians looked about for a remedy to check the dread monster but without avail, and many times and often did they change their modes of attack in efforts to stop the awful scourge.

During the two flu epidemics in New Orleans, October, 1918 and January, 1919, I treated 433 cases of influenza and 73 cases of flu pneumonia of which I have kept records, and the different therapies I followed in handling these cases I here propose to relate.

I dare say I would have treated twice this number, if I had not been taken sick with the flu myself right at the height of the first epidemic in October, and was confined to my bed for twenty-eight days, and thereby deprived of giving my aid to the multitudes that were appealing for help.

I have divided the 433 recorded cases into three distinct groups, based on different methods of treatment I followed at different periods of the disease. The cases I treated from the outbreak of the first epidemic until the middle of October, when I was stricken myself, I have classed as the Acetanilid-Aspirin group of cases, because my leading prescription to control pain, headache and fever at first contained codein sulphate; gr. $\frac{1}{4}$; acetanilid, grs. 2 and one-half; quinin sulphate, gr. 1; salol, gr. 1; caffeine citrate,

1. Later on this was substituted by a capsule containing two and one-half grains of quinin and two and one-half grains aspirin. With these prescriptions as my leaders, I treated 238 cases. Of this number 31 developed or had pneumonia and 11 died. Of the 11 pneumonias that died, three were moribund when I took charge of them, and four others I had to leave right after they developed pneumonia, because I was taken sick myself, and they either could not get another physician to take charge of them, or were so far gone when they did, that it was impossible to save them. Deducting these seven cases from the others leaves a real mortality of four out of 24 or a loss of $16 \frac{2}{3}$ per cent of pneumonia patients or a gross flu mortality of $1 \frac{7}{10}$ per cent. Amongst these 31 cases of pneumonia were four cases of pregnancy all of which recovered. Of the 238 cases, two had cholecystitis, one gangrenous stomatitis, one hemorrhage of the stomach, three hemorrhages of the bowels, four hemorrhages of the womb, ten hemorrhages of the nose, one empyema, and nearly all coughed up and expectorated blood freely.

The nausea and vomiting were relieved in all groups of cases by 1/16 gr. cocain in 1 drachm elixir lactopeptine. I started out at first by giving all patients a hot mustard footbath, and had them covered warmly and given a cup of hot tea to get them into a perspiration. They were afterwards given the capsules to reduce fever and to control pain. They perspired freely, too freely and were almost drowned in their own secretions. The acetanilid added diaphoresis to an already freely acting skin, and they perspired the more. This left patients profoundly depressed and I sadly began to realize that my old method of treating gripe would not apply here. The footbath and hot packs were discarded, and the capsules tried by themselves with a little betterment of condition. But the perspiration, depression and cyanosis continued, and, in spite of the demand from the family to relieve the fever, I withdrew the acetanilid capsules, and began giving a capsule of aspirin and quinin grs. $2\frac{1}{2}$ each. But this also produced severe perspiration, and depression that was exhausting, and I eventually cut the dose down to 1 grain of quinin and 1 grain of aspirin.

Digitalis was used when indicated. All cases in all three series were given an expectorant cough mixture, and hemorrhages were controlled with adrenalin and morphin and ergot. The most distressing conditions in the severe cases were insomnia and extreme nervousness, running into delirium and often terminating in

temporary insanity. Realizing that the essential aim in treating any disease is to produce rest, I overcame sleeplessness and at the same time nervousness by the hypodermic injection of morphin sulphate gr. $\frac{1}{4}$ wherever it was indicated. By injecting morphin and inducing sleep half the battle was won. Invariably the patient would be better next day after a good night's rest. When indicated, where edema of the lungs was severe, atropin sulphate gr. $\frac{1}{100}$ was added to the dose with remarkable results. To further induce rest and keep up the good results produced by the morphin, bromide of soda, grs. xx, was given every 2 or 3 hours, when necessary.

Drastic purgatives such as calomel, salts and castor oil as a rule made patients worse. I used these drugs in the beginning of the epidemic, but I soon put them aside altogether. Patient's bowels were kept open with enemata and seidlitz powders.

The second group of cases, the Digitalis group, includes all cases of flu treated by me from the time of my recovery in November up to and including January 20, 1919. I called this the Digitalis group, because digitalis was given to each and every case treated in this series from the time of its incipency to such time as I thought it safe to discontinue the use of the drug.

My observations in the early part of the epidemic drew my attention to two main points, the extreme cyanosis, amounting to almost blackness which led me to conclude that there was a paralysis of the pneumogastric nerve centers, and the fact that the pulse remained slow in the early stages of the disease, and that when it got up to 100, it was getting bad, and at 120 it was at the danger mark. I also observed that, if I did not get this pulse below 120 at once, the patient invariably grew worse and died in a few hours. In fact many of those who died, died with a pulse of 120. Hence I conceived the idea that, if I would give Digitalis to all those patients and strengthen the heart, and keep the pulse down below 100, as nature seemed to be making an effort to do, I would do the best thing towards getting them well.

I treated 130 cases by this method, 33 of which had pneumonia, and 4 of which died. A mortality of $12 \frac{1}{8}$ per cent for the pneumonias and a flu mortality of $3 \frac{1}{3}$ per cent. Amongst this number were three cases of pregnancy, all of which recovered, two having had pneumonia. Two cases had cholecystitis, one case appendicitis, and three cases phlebitis. The doses of digitalis were regulated as follows: adults with a pulse of 80 were given 2 drops

every 3 hours, children under 8, one drop; adults with a pulse of 90, three drops, children under 8, two drops; adults with a pulse of 100 were given five drops, children under 8, three drops; adults with a pulse of 110 to 120 were given ten drops, and children under 8, five to six drops. When the pulse reached 120 patient was given $\frac{1}{4}$ grain morphin sulphate hypodermatically and children were treated likewise according to age. The result was that the pulse was kept under control and patient got better. The same expectorant cough mixture was used and the same treatment followed for nausea and vomiting. Aspirin gr. i and quinin gr. i were given every 3 hours for temperature 101° or more and ice caps kept to the heads. The results of this treatment were more satisfactory and encouraging than the other, and there was not the severe depression nor the high mortality that accompanied the acetanilid and aspirin-quinin group.

Along about January 20, I treated a case of flu pneumonia complicated by a ruptured appendix. The patient developed acute nephritis, ran 20 per cent of albumen and passed large quantities of blood from the kidneys. Having had some previous experience with intravenous injections of emetine in renal hemorrhages, I injected $\frac{1}{2}$ grain emetine hydrochlorid into his veins. I repeated this dose in twelve hours and the effect was marvelous. The patient's temperature dropped from 104° to 101° , the hemorrhage ceased, his cough became better, and his pulse slowed down. The following morning, patient's temperature was normal and his general condition much improved. Two injections were given that day with the results that patient's cough subsided, the congestion of the kidneys passed off, the albumen disappeared, his pulse returned to normal and he seemed cured of his toxemia. The physical signs of congestion were still present in the lungs, though not as marked. Seven days later, I opened his abdomen, through a McBirney incision, and drained off two quarts of pus from the region of the appendix. In three more weeks I discharged this patient cured.

Having noticed the beneficial effects of emetine in this case, I resolved to treat all cases of flu from that day forth with emetine, and the cases I treated after January 20 to the disappearance of the disease, I call the Emetine group and have so classified them.

In the Emetine group I treated 65 cases, 9 of which had pneumonia and 2 of which died. All of these 9 cases of pneumonia were given from one to two intravenous injections of emetine per

day. Purposely no quinin and aspirin were given and no anti-pyretic used. The result was the immediate lowering of the temperature from 104° to 103° to normal in from 12 to 24 hours, according as one or two doses of emetine per day were given. The temperature did not rise again and the disease was under control from that time on.

Several of these cases had edema of the lungs and were cyanosed until they were black; some were so nervous until they trembled all over and could not keep their limbs quiet, but the results after the intravenous injections of emetine were astonishing. The temperature became normal, the cough subsided, the cyanosis disappeared, and the fight was won. Of course I used my cough mixture and continued the use of the digitalis as outlined in the preceding group of cases. Morphin and atropin were used hypodermatically for sleeplessness, nervousness, and edema. Basham's mixture was used for cystitis and nephritis. But the remarkable result was the rapid control of the temperature and the toxemia, and the rapid clearing up of the whole picture after the use of emetine. Only two patients with pneumonia died in this group, and they were moribund when I got them. One had already been sick a week, and her family persistently refused to let me use this treatment until the night before her death; and the other had been sick five days before I got hold of her, and was already well advanced in pneumonia when given the first dose. Even then the beneficial effects of the drug could be seen. The patient's temperature dropped, and they seemed better for a while, but the delirium and coma steadily grew worse and they passed off.

I was so encouraged by the good effects of emetine, when given early enough, that I resolved to use it in all the flu cases. But here I met with a new obstacle. People who were not very sick objected to being stuck with a needle, and preferred to wait until they would grow worse to try it. But notwithstanding this opposition and the big demand on my time from numerous calls and office work, I succeeded in administering the drug once a day to seventeen simple, uncomplicated cases with these results: The emetine had no effect whatsoever on the non-complicated cases of influenza, not only not reducing the fever, but not controlling any of the symptoms. The disease in these cases ran a course of 3 to 5 days. But none of these cases developed any complications whatsoever from the flu, whereas some of the simple cases, that at first

refused the intravenous injections of emetine, later on developed pneumonia and were saved by the drug. One of these simple cases, that refused the injections developed a good attack of cholecystitis, which was instantly relieved by the emetine treatment.

My mortality with the emetine series of cases was virtually nil, for the two cases that did die were beyond hope when the drug was given.

It was not always easy to get into the veins, but in such cases I simply gave the injections subcutaneously with the same good results. Some afterwards complained of sore arms from these subcutaneous injections, therefore I would advise that when the vein cannot be entered readily, the injections be given intramuscularly.

Each case treated with emetine received six injections, given from twelve to twenty-four hours apart, according as my time would permit my seeing the patient once or twice a day.

Unfortunately I did not use the emetine treatment sufficiently early in the epidemic to determine its true value. The disease was on the wane when I began to use it, so whether or not it would produce the same marvelous results in all cases as it did in these is a question.

This problem now presents itself to my mind: Is emetine a cure for the complicated cases of Influenza?

INDUCTION OF ANESTHESIA AND ANALGESIA BY ORAL ADMINISTRATION OF VARIOUS DRUGS, WITH A REPORT OF CASES.*

By A. FICKLEN, M. D., New Orleans.

The problem of dressing extensive wounds has always presented difficulties to the surgeon. He must be thorough, but he hesitates to inflict great pain on the patient. Morphin, ether, chloroform, and nitrous oxide have all been used to lessen the ordeal, but each has its disadvantages. Morphin is not sufficient; ether by inhalation causes nausea and is regarded with dread by most patients who have taken it before; chloroform is dangerous. Nitrous oxide is best, but is not always available.

During the recent war I saw dressing after dressing in which

* Read at Meeting of Orleans Parish Medical Society, October 13, 1919. (Received for publication December 16, 1919—Eds.)

the surgeon took advantage of the stoicism of the soldier and inflicted pain that could have and should have been avoided. The removal of packs, the changing of splints, the manipulation of infected joints:—the wounded man feared these more than he had feared the charge of the enemy. When the intoxication of battle had passed, gentleness in handling the casualties became more necessary than ever, but care, hypodermics, and irrigation of bandages beforehand all failed only too often. For this reason I welcomed an article which appeared in the May number of the bulletin of the American Red Cross, on analgesia by oral administration. I found later that this was condensed from a report in the *British Medical Journal* of March 2, 1918, by Dr. James T. Gwathmey of New York and Dr. Howard Karsner of Cleveland. The *Journal of the A. M. A.* of April 6, 1918, also prints this most interesting analysis of experiments on animals, and results in clinical cases.

As this is primarily a summary of experiences with the method I will not go deeply in the animal experiments. Suffice it to say that various drugs were given to rabbits by stomach tube and that 50 per cent ether in olive oil was found to produce the desired effect. The olive oil, however, caused an acute gastritis in rabbits, so liquid petrolatum or Russian mineral oil was substituted. Quinine and urea hydrochloride, trional, morphine tartrate, and paraldehyde were all tested, but the results did not warrant use in man. The fact that ether drinkers suffer no more than alcoholics from gastric irritation and that "a 65 per cent solution of ether in oil has been used in many thousands of cases of oil ether colonic anesthesia without any signs of local irritation to rectum or colon" reassured the authors.

The following formulas were used clinically:

- Formula 1. Ether 4 fluid drams,
 Liquid Petrolatum 4 fluid drams,
 Peppermint water 5 minims.
- Formula 2. Paraldehyde 1 to 3 fluid drams,
 Ether and liquid petrolatum equal parts to make
 1 ounce,
 Peppermint water 5 minims.
- Formula 3. Ether 3½ fluid drams,
 Liquid Petrolatum 4 fluid drams,
 Peppermint water 5 minims.

Formula 4. Chloroform $\frac{1}{2}$ to 1 fluid drams,
 Ether $3\frac{1}{2}$ fluid drams,
 Liquid Petrolatum $3\frac{1}{2}$ fluid drams,
 Peppermint water 5 minims.

Method of administration:

The authors recommend, at the suggestion of Major Lower, that port wine be given before and after the dose. They state that rinsing the mouth thoroughly with the wine disguises the taste of the drug effectively. Our medical supplies did not include port, so I substituted undiluted whiskey. Probably yerba santa could be used to better advantage. The taste of Formula 4, as I know from experience, while pungent, is not as unpleasant as that of castor oil.

Approximately sixteen cases are reported in most of which ether liquid petrolatum was given. One vomited, three fell into a light sleep. The administration of a half dose gave unsatisfactory results. Extensive dressings were done without pain, the patients had no headache and woke with good appetites. The authors also mentioned that Formula 4 was given in approximately thirty cases, and that it is a more satisfactory mixture than the others. Detailed case reports, however, are not presented.

Ether oil by mouth was also used as a supplement to chloroform anesthesia. An extensive operation on the knee joint was performed in this way with the use of only two drams of chloroform.

Since the literature on this subject is so scanty at present, I wrote to Dr. Gwathmey asking if his subsequent experiences had caused him to modify his opinion in any way. I quote from his reply:

“In addition to the inclosed (a reprint from the **British Medical Journal**) I finally used this formula quite frequently:

Chloroform drams 2,
 Ether drams 2,
 Liquid paraffin 4 to 6 drams,
 Peppermint water 5 minims.

If the dressing was very painful I used in connection with this morphine sulphate, grain $\frac{1}{4}$ to $\frac{3}{8}$, by hypo, one-half to three-fourth hours before. With this combination there was no question about the analgesia. Operations with this combination were not entirely successful. I may add that three of the officers and myself took Formula 1 immediately after a very hearty meal, and as a liqueur, and with no bad effects whatever and with analgesia, so it seemed to us.”

Gwathmey's recent experiments have demonstrated that chloroform given by mouth has dangers. Until his report appears I am not at liberty to go into details.

Clinical Phenomena: Approximately half of the patients had a short stage of excitement manifested by restless movements and loud talking. This lasted from three to five minutes and was succeeded by deep sleep and complete muscular relaxation. The pulse was full and bounding and ranged from 80 to 100. Many of the patients fell asleep in five minutes and did not rouse for several hours. The face was slightly flushed or normal in color. Dressing was started in from 5 to 25 minutes. In about one-third of the cases the breathing was deep and stertorous, in the rest it was slow and regular but not snoring. Two of forty personal cases did not sleep but had pronounced analgesia. On questioning these two the next day I found that they had little recollection of pain. This is parallel to the loss of memory following morphin scopolamin administration. In particularly extensive wounds and twenty minutes before operation, I gave a hypodermic of morphin, grain 1/6. This is a useful adjuvant but is not absolutely necessary. Gwathmey and Karsner state that their patients fell into a light sleep. Most of my cases slept profoundly and many of them gave absolutely no signs of pain during the removal of tight packs or the changing of splints. This is due to the fact that I used the following prescription, taken from the American Red Cross bulletin:

Formula 5. Chloroform 5 c. c.

Ether and Liquid petrolatum, each 20 c. c.

With this prescription, which is obviously more powerful than ether oil, I estimated that the maximum effects lasted from one-half to three-fourths of an hour. After an hour the patient rouses easily. Groaning was noted occasionally but had no significance. I did not test the total duration of analgesia, which probably persisted from some time after the anesthesia had worn off. Most cases slept for two or three hours and one as long as five hours. All were drowsy even though they were able to answer questions. Four or five complained of the taste of the mixture but were willing to take it again for its effect. This is the usual attitude of human beings towards intoxicants.

The following case reports will give a more vivid idea of the results obtained:

S. C., aged 23, weight approximately 150 lbs., gunshot wound, high explosive, right frontal and parietal region, extensive comminution skull, loss of brain substance and avulsion eye-ball. Debridement and packing extending deep into cranial cavity. Oral anesthesia third day. 5 minutes after administration patient made a few restless motions and breathing became stertorous. He did not respond to questions. The bandages were cut and the edge of the pack cautiously retracted. The patient did not move. This was my initial case and I proceeded cautiously at first, but grew bolder as I approached the depths of the wound. The pack was removed, fresh gauze placed in the orbit and into the gaping cavity in the skull. The patient showed absolutely no signs of discomfort. He slept all the rest of the afternoon, about three hours, and had to be awakened for supper. Two days later the dressing was repeated with the same technique and the same result. He was then evacuated but I was fortunate enough to see him up and around six weeks later at Base Hospital 24.

J. D., aged 24, weight 145, hemolytic streptococcus infection left knee following injury in R. R. accident. Dressings in this case necessitated reflexion of the joint and were extremely painful. Oral anesthesia was used on seven different occasions. Unconsciousness always followed within 15 minutes. Drains were removed, splints changed and new tubes inserted with no sensation on the part of the patient. There were no after effects whatever. The patient asked for the mixture. He remained six weeks in the hospital and was evacuated much improved. The septic process had been arrested and he had gained materially in weight. This case shows that the ether and chloroform mixture may be given repeatedly without deleterious effects.

H. G., aged 20, weight 130, intensely nervous, circular amputation upper third leg for mixed infection hemolytic streptococcus and B. Welchii, cuff of skin turned up, flaps left unsutured, oral anesthesia, third day after operation. Patient groaned and complained in a low voice during dressings, answers to questions were vague. Had almost no memory of dressings and no recollection of pain afterwards. This case hovered on the border line between analgesia and anesthesia.

The following case shows the advantage of ether chloroform by mouth as a supplement to ether by inhalation:

P. G., aged 20, weight approximately 120, gun-shot wound, right ankle, hemolytic streptococcus infection, compound comminuted fracture tarsus, amputation decided on in consultation with the chief of surgical service. Oral anesthesia in ward. After 15 minutes patient carried to operating room, splint removed, leg shaved and washed thoroughly. Patient slept tranquilly. Ether drop method started during applications of iodine and incision made after a few c. c. had been poured on mask. A modified circular amputation was done with suture of the flaps. At the conclusion of operation it was found that only 90 grams of ether had been used. The patient did not vomit and slept for three hours afterwards.

Case 5. One-half the normal dose was given to this patient. He entered the hospital profoundly septic. His weight was about 70 lbs. and recovery was obviously impossible. He complained bitterly during the dressing, was wide awake and seemed to have no analgesia whatever. He slept for two hours afterwards and did not vomit. 10 c. c. of ether and $2\frac{1}{2}$ c. c. of chloroform was apparently too little.

S. G., aged 21, weight approximately 100. Empyema following pneumonia. General condition bad. Ether chloroform given on operating table. Asleep in 10 minutes. Two syringefuls $\frac{1}{4}$ per cent novocaine injected into chest wall. Resection one inch 5th rib mid-axillary line. Patient did not complain but coughed when pleura was opened. Drainage tubes inserted, binder applied, and patient returned to ward sleeping. Apparently little shock.

The above illustrate the different types of reaction to the lungs. One case vomited almost immediately after swallowing the mixture, and Dr. Philip Carter reported a similar occurrence. The undiluted whiskey was perhaps to blame. Dr. Lacroix used the method on four or five patients with most satisfactory results. Therefore the summary which follows represents the conclusions formed after observation of about forty-five patients. As record keeping was impossible during part of the time, I have underestimated rather than overestimated the number seen personally, judged to be forty.

SUMMARY.

Ether chloroform and liquid petrolatum when swallowed in the quantities stated produce a safe general analgesia, accompanied in nearly all cases by light anesthesia.

Vomiting occurs in a small proportion of cases.

Alarming symptoms have never been observed.

The effects of the drugs are intensified and prolonged by the administration of morphin.

The ether oil mixture is not as powerful as the formula to which chloroform has been added. This conclusion is reached by comparing the case report of Drs. Gwathmey and Karsner with my own.

The field of usefulness of the procedure should be broadened. Enough cases have already been observed to show that it is of value in painful dressings and as a supplement to general anesthesia. It has not been used, as far as I have been able to ascertain, in gynecological examinations where relaxation is necessary, in suspected malingering, in manipulation of ankylosed joints, nor in obstetrics.

Since the method is yet in its infancy, further tests should be made to determine its status in surgery, and the above suggestions are made with this in view.

I am indebted to Dr. Gwathmey for the interest he has taken in this report.

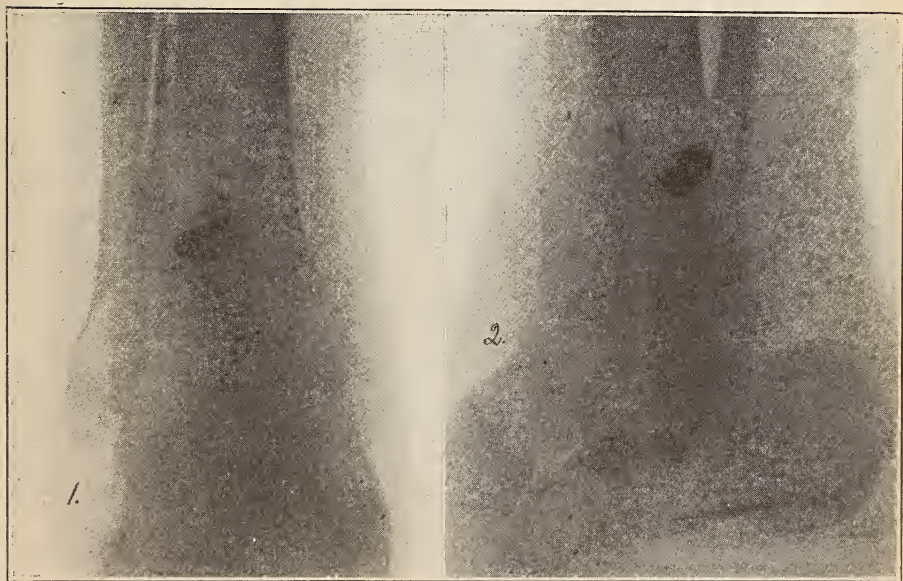
DISCUSSION.

Dr. Jno. Smyth: Charles Baskerville, Professor of Chemistry at the College of the city of New York, in his study of the chemistry of In-

halation Anesthetics and Anesthetics in general, has shown that the rate of evaporation of ether in oil is constant minute by minute (Gwathmey) and as the ether and oil mix perfectly, it would seem impossible for the patient to get an overdose at one time and an insufficient amount at another.

Gwathmey and Karsner state that "only a slight analgesia is obtained which for operative procedures must usually be supplemented in some way," and that the total amount of the oil-ether mixture that may be safely given, has not yet been determined.

As Dr. Ficklen has stated, the mixture he adopted is stronger than the formula finally used by Gwathmey and Karsner and such of his cases as have come under my observation showed slightly more pronounced and more satisfactory analgesia than those which Dr. Gwathmey reports.



In our clinic before the medical students this morning, we removed a bullet (Fig. 1 and 2) from the lower end of the tibia, under supplemented oral analgesia. This patient, colored male, 24 years old, was given a hypo. of morphin $\frac{1}{4}$, atropin $\frac{1}{50}$, at 9.05 chloroform-oil-ether mixture at 9.20. At 9.40, the skin over proposed incision was tested with a needle and seemed to be sensitive. Infiltration with $\frac{1}{2}$ of 1 per cent apothecin, after which a 3 inch incision was made to the bone over lower anterior tibia. Use of Hudson burr to ream out track of bullet in the bone produced apparently some discomfort (patient could see this instrument), whereas Rongeur forceps did not cause any pain unless they snapped. Pressure to dislodge the bullet caused slight pain; one of the three skin sutures seemed to be sensitive to some extent.

After operation was completed, the patient said that he had very little pain but that he was afraid of being hurt. He did not seem to

be able to discriminate between touch and pain. Left the operating room smiling, in possession of the bullet and free from any discomfort.

Dr. J. T. O'Ferrall: I would like to make a few favorable remarks about Dr. Ficklen's paper with reference to oral anesthesia. I had charge of a Carrel-Dakin surgical service for four months and we all know the dressings in those cases necessarily cause great pain. During these dressings, I used this formula originally gotten out by Gwathmey of $3\frac{1}{2}$ drachms ether, one drachm chloroform and $3\frac{1}{2}$ drams of Liquid Petroleum. This was followed by wine. In no case did I have trouble. The majority of patients ate luncheon immediately after waking up. My observations correspond to Dr. Ficklen's in regard to the length of time the patient sleeps. In one case I had to supplement this with general anesthesia. It was because we found the patient had taken a number of drinks every day all his life. I would like to impress upon you the necessity of questioning the patient in regard to the use of alcohol. We used this anesthesia for all types of cases, except for amputation. I think it is very valuable.

Dr. King: I would like to have Dr. Ficklen explain why wine should be administered before and after giving anesthesia.

Dr. Ficklen (closing): In answer to Dr. King, the port wine is used to rinse the mouth before and after the administration of the ether oil mixture merely to disguise the taste. It was suggested by Major Lower, and nicknamed by Dr. Gwathmey "the Lower sandwich." Dr. Parham asked for the formula. It is as follows:

Chloroform 5 to 10 cc.-ether and liquid petrolatum or Russian mineral oil each 20 cc.

PROCEEDINGS OF THE AMERICAN SOCIETY OF TROPICAL MEDICINE

ATLANTIC CITY MEETING, JUNE 16-17, 1919.

BLOOD PRESSURE IN YELLOW FEVER.*

By J. BIRNEY GUTHRIE, M. D., Professor of Clinical Medicine, Tulane University,
New Orleans.

The only recorded observations on blood pressure in yellow fever in the literature previous to 1909, when the author presented before this society, a report of his findings, are those of Ferrari of Brazil (Brazil-Medico, 1903), and Paul Azevedo (Inaugural thesis, Rio de Janeiro, 1903), who quoted Ferrari's work. Azevedo noted a progressive drop in the blood pressure beginning with the first hours of the disease. During the first day, he recorded an average blood pressure of 114 mm (mercury) measured by the sphygmomano-

Read by title. Proceedings of the American Society of Tropical Medicine Meeting, Atlantic City, New Jersey, June 16-17, 1919.

meter of Potain. He found also a gradual fall to as low as 107 mm in the fatal cases. During convalescence, a gradual elevation to normal was observed. Azevedo further discusses Ferrari's statement that during the first 24 hours of the illness a blood pressure of 126 mm or 128 mm, constituted an important diagnostic factor. Azevedo considered blood pressure as of no diagnostic value in yellow fever.

The opportunity for the investigation of blood pressure in yellow fever, came to the writer in 1905, while resident physician in the Emergency Hospital in New Orleans. The hospital was located in the heart of the infected district, and the patients were mostly Sicilians, who spoke little English, being new arrivals from Italy. The hospital was established by the citizens of New Orleans and was retained by the United States Public Health Service, which took charge of the situation in New Orleans. The hospital was opened in the latter part of July, 1905, and operated until November of the same year.

The instrument used by me in this series, was Cook's modification of the Riva-Rocci sphygmomanometer with the 10 c. m. arm band; and the pressure recorded is in all cases systolic. Observations were made twice daily on most of the cases treated during the time of operation of the hospital. This was done as a matter of routine on all patients. Of course, it is to be regretted that the diastolic pressure was not taken likewise in every case; but with the instrument used, it would probably have been a useless labor.

Blood Pressure Chart: In order to study the graphic curves in relation to the curves of temperature, respiration and pulse, I designed a chart in which the blood pressure and pulse beats per minute were put into the same section of the chart, and so arranged that whenever the blood pressure in millimeters equalled the count of the pulse beat per minute, the curves would osculate. Whenever the blood pressure in millimeters fell below the number of pulse beats per minute, the two curves would intersect. Thus platted, the relation of the two curves, blood pressure and pulse, seems instructive.

Observations from the Charts: It was found that the curve of blood pressure to a very great extent paralleled the pulse curve with a distinct interval between, in the male adult. In women and children this interval was lessened. Here touching and interlacing of the two curves was much more frequent. The interval between

the two curves is the most striking fact exhibited on the yellow fever chart of a male adult. Here is a gradual decline of pulse and blood pressure curves, even with a rising temperature. This progressive fall in pulse rate has already been described. Faget's diagnostic point, a rising temperature and a falling pulse rate, is of great value in diagnosis. After some experience in observing these charts, I became suspicious of error in the diagnosis on finding a continued interlacing of the two curves. This circumstance suggested an ordinary septic origin. The paralleling of the two curves constitutes a diagnostic factor of no little importance. My observations confirm Azevedo's findings as regards the progressive fall in the blood pressure from the first day, and contradict those of Ferrari as to the diagnostic value of a blood pressure finding. A complete chart of average blood pressure in 45 cases of mild, severe, and fatal types, shows no elevation above normal on the first day, the average for this series being 118.2 m, a figure a little higher than Azevedo observed. Cases were seen in which on admission the blood pressure during the first 24 hours was above this average normal; but I am convinced that this was due to pain, or to some psychic factor, such as excitement, fear incident to the moving to the hospital, etc.

Summary of fatal cases as regards touching or crossing of blood pressure and pulse curves:

1. Crossing or touching.	Number of Cases.	Percentage.
(a) Crossing or touching day of death.....	3	8.8
(b) Crossing or touching day before death	9	26.4
(c) Crossing some time previous to day before death	4	11.7
(d) Touching at some time previous to day before death	3	8.8
(e) No crossing or touching at any time recorded	15	44.1
Totals.....	34	99.8

Of the above series of fatal cases, 19 or 55.7 per cent showed touching or crossing of the pulse and blood pressure curves.

The highest recorded blood pressure at any stage of the disease was 275 mm, and occurred during a chill. The lowest was 50 mm. Both of these cases recovered.

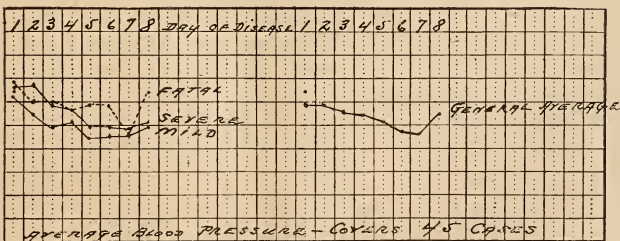
The factors contributing to the lowering of the blood pressure during the course of yellow fever are: vasomotor dilatation;

myocardial degeneration; slowing of heart from vagus stimulation due to jaundice; or due to the effect of the bile substances on the heart itself; low diet; rest and later, hemorrhages from mucous surfaces, the result of fatty arteritis.

The continued hemorrhagic tendency is due to vasomotor conditions and capillary degeneration rather than to any diminution of the coagulability of the blood. This, of course, is increased if the blood pressure elevated. The coagulation time as measured with Wright's coagulimeter was normal in all cases tested by me and by Louis H. Marks, who carried out a series of observations on this subject at my suggestion. (*Am. Jour. Med. Sc.* Vol 132, p. 705). The dreaded black vomit is, in its blood pressure lowering result, to an extent protective. However, the act of vomiting greatly raises the blood pressure, and the more or less diffuse meningeal hemorrhage found in every one of the autopsies in the Emergency Hospital results. The patient dies, not of black vomit *per se*, but as the result of meningeal extravasation.

The thought suggests itself that the occurrence of nephritis, very much more frequent and intense in the severe cases, may account for the higher blood pressure in the severe and fatal cases.

A single observation of blood pressure is of no value; but the record day to day is vastly instructive in yellow fever. I disagree with Azevedo who considered the blood pressure as "of no diagnostic value." Many of my charts show that, taken in conjunction with pulse curve, a characteristic paralleling occurs often. This is not even seen in typhoid where considerable slowing of pulse occurs. I have observed no constant rise of blood pressure on the first day; but rather a progressive fall from this time to a level lower than normal.



To study the average blood pressure curves in a series of cases, I platted three curves, utilizing the chart above referred to; one of fatal cases, one of severe cases, and one of the mild types of the disease, each extending through 8 days, this period being the average duration of the disease in the fatal cases.

A duration of initial febrile paroxysm longer than 48 hours, high fever after first 24 hours, severe albuminuria, hemorrhage from mucous surfaces, severe jaundice, very marked stasis, or cerebral symptoms—any one or more of these served to put the case in the class of severe rather than mild types of the disease. Laid out together on the chart, the average blood pressure curve of the mild cases was lower than either of the other two and did not touch or cross them during the eight days. The curve of the severe cases touched that of the fatal cases five times.

Prognosis: The crossing or touching of the two curves, in the individual charts, is apparently significant as a prognostic sign, but only when the blood pressure curve crosses the pulse curve from above downward. Where the blood pressure was very low to begin with and the pulse, high, the crossing of blood pressure curve from below upward was occasionally seen and was of no import, so far as we could see.

I am forced to the conclusion that a low average blood pressure is a favorable prognostic sign of no little importance, and that platted to the same spaces, the crossing or the touching of the two curves of blood pressure and pulse is of grave significance in a case in a male adult where there is no doubt as to the diagnosis of yellow fever.

The falling blood pressure is a protection to the weakened vessels, and is the keynote to treatment of the disease. Many cases of death from saline intravenous infusion done in ignorance of this fact are recorded. The favorable prognostic value attributed by some of the older physicians to tarry stools, which result from intestinal hemorrhage, may be the expression of an idea that other hemorrhagic accidents are thereby averted.

The axiomatic precautions observed during illness and convalescence find their rationale in the consideration of blood pressure. The prohibition of overeating, exercise, sexual intercourse, psychic factors, such as grief over bad tidings, etc., all of which have brought on black vomit, are justified.

In the writer's opinion, therapeutics must be directed to regulating this blood pressure. I have seen cases die that I believe had received too much fluid. Some of these might have been saved by restricting liquids. It is quite well known that an excess of fluid ingested can bring about a glomerular irritation as well as a rise in blood pressure. However, we are here between the Scylla of hemor-

rhagic accidents from a blood pressure relatively too high for the function through glomerular disease and the plugging of the renal functions through glomerular disease and the plugging of the renal tubules. The choice is difficult, and the issue, usually fatal when this stage is reached.

After discharge from the Emergency Hospital, one of the cases died with black vomit caused by indigestion following eating heartily of pea soup; another died with black vomit after going swimming in the Mississippi River.

The higher average blood pressure in severe and fatal cases as compared with the mild ones, coupled with a consideration of the pathological findings hemorrhagic in nature, forced upon me the necessity of considering the blood pressure in the therapeutic management. I do not advise that drugs which lower blood pressure should be given. Drugs play a small part in the treatment of yellow fever. However, by keeping in mind the important physical means at our command to keep down blood pressure, we can contribute a considerable factor toward the safety of the patient.

BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

By P. T. TALBOT, M. D., Sec'y-Treas.

The following information concerning the approaching meeting of the American Medical Association in 1920 is offered with the hope that it will interest the members of the Louisiana State Medical Society. These items of information have been prepared by Dr. H. P. Jones, Chairman of the Publicity Committee. I would respectfully request that the members of the Louisiana State Medical Society read them very carefully and if there is any further enlightenment on the subject required, communicate with the Chairman of the respective Committee. These Committees are very anxious for the opportunity to give any information concerning their plans or expectations in their arrangements for the meeting.

REPORT.

THE NEW ORLEANS MEETING OF THE AMERICAN MEDICAL ASSOCIATION, April 26th to 30th, 1920, promises to be one of the most successful and satisfactory meetings ever held, and inasmuch as the State Medical Society is to take a very individual and im-

portant part in bringing this happy conclusion about, every effort will be made to keep the members informed as to arrangements and plans.

The Hutchinson Memorial Building, Tulane Medical College, on Canal Street, will be the headquarters and all meeting places will be located as much in this vicinity as practicable, thus making all sections within easy walking distance of headquarters and the clinical centers.

The Commercial Exhibits will be provided for in pavilions to be erected on the Campus of the Hutchinson Building Headquarters, and will occupy about 11,000 square feet of floor space.

At a recent meeting of the various chairmen of the Local Committee on Arrangements, a list of whom is given below, in consultation with Dr. Alexander R. Craig, Secretary of the A. M. A. all plans submitted were approved, and great enthusiasm was expressed.

There will be ample accommodation for all, either at the hotels or boarding houses. Every organization interested in making this meeting a success is actively and enthusiastically engaged in making preparations for the comfort and entertainment of what is confidently expected to be the largest number of attendants ever had by the American Medical Association.

The following list of Chairmen of Committees is furnished for the information and convenience of any interested, and with the assurance that any communication addressed to them will receive prompt attention.

LOCAL COMMITTEE ON ARRANGEMENTS, A. M. A.

- Dr. A. E. Fossier, Chairman, 921 Canal Street, New Orleans, La.
 Dr. T. J. Dimitry, Secretary, 3601 Prytania Street, New Orleans, La.
 Dr. Paul J. Gelpi, Treasurer, 931 Canal Street, New Orleans, La.

SUB-COMMITTEES.

Advisory.

- Dr. Charles Chassaignac, Chairman, 211 Camp St.

Section Meetings.

- Dr. Homer Dupuy, Chairman, 124 Baronne St.

Registration.

- Dr. Hector E. Bernadas, Chairman, 124 Baronne St.

Finance.

- Dr. J. W. Newman, Chairman, Touro Infirmary.

Entertainment.

- Dr. Amédée Granger, Chairman, 830 Canal St.

Halls and Meeting Places.

Dr. William Seemann, Chairman, 830 Canal St.

Scientific Exhibits.

Dr. C. C. Bass, Chairman, 1551 Canal St.

Commercial Exhibits.

Dr. W. H. Block, Chairman, 921 Canal St.

Publicity.

Dr. Hamilton P. Jones, Chairman, 3601 Prytania St.

Transportation.

Dr. H. W. E. Walther, Chairman, 830 Canal St.

Signs and Placards.

Dr. E. L. Leckert, Chairman, 830 Canal St.

Hotels.

Dr. J. J. Wymer, Chairman, 921 Canal St.

Badges.

Dr. J. Birney Guthrie, Chairman, 921 Canal St.

Information.

Dr. Allan Eustis, Chairman, 3621 Prytania St.

Golf.

Dr. John B. Elliott, Jr., Chairman, 931 Canal St.

Membership.

Dr. Wm. M. Perkins, Chairman, 830 Canal St.

Women Physicians.

Dr. Elizabeth Bass, Chairman, 3513 Prytania St.

Printing.

Dr. W. H. Knolle, Chairman, 124 Baronne St.

Clinics.

Dr. Herman Gessner, Chairman, 921 Canal St.

NEWS AND COMMENT

ORLEANS PARISH MEDICAL SOCIETY ELECTS OFFICERS.—The election of officers to serve during the year 1920 was held by the New Orleans Parish Medical Society on December 13, at their home, and resulted as follows:—President, Dr. H. E. Bernadas, re-elected; vice-presidents, 1st, Dr. H. P. Jones, 2nd, Dr. Jerome Landry, 3rd, Dr. J. M. Hountha; secretary, Dr. E. A. Ficklen; treasurer, Dr. F. M. Johns; librarian, Dr. S. Chaille Jamison; additional members board of directors, Drs. M. P. Boebinger, I. I. Lemann, and T. A. Maxwell; delegates to the Louisiana State Medical Society, Drs. Geo. S. Bel, S. M. Blackshear, Allan Eustis, F. M. Johns, L. H. Landry, E. L. Leckert and W. H. Seemann.

The contest was spirited and lasted from 10 o'clock in the morning until 8:30 at night, and the final count was not completed until midnight.

KINGSLEY HOUSE OPENS CLINICS.—A maternity clinic was opened at the Kingsley House on December 16, under the direction of Dr. Philip J. Carter and Miss Grete Judice, nurse of the Child Welfare Staff. This is one of five clinics which will be operated under the auspices of Kingsley House and the Child Welfare Association, as the first step in a health campaign on the preventive plan. Although the canvass of the neighborhood is not complete, 400 patients have already been registered. The next clinic will be for tuberculosis. A complete census of the neighborhood will be taken and will include the number of dwellings, the number of families, the adults and infants in each family, and the dominant racial strain. Following the census, there will be a general examination of all persons in the neighborhood. A series of day and evening clinics will be held. The clinics will be under the direction of a board of specialists, including Dr. Allan Eustis, general physical examination clinics; Dr. R. C. Lynch, ear, nose and throat; Dr. George S. Bel, heart and lungs; Dr. William Edler, venereal diseases; Dr. C. Jeff Miller, maternity service; Dr. Isadore Dyer, skin, and Dr. Haidee Weeks Guthrie, dental clinics. Those found defective will be referred to the family physician with a written report of the examination, or to a hospital or Kingsley House clinics.

THE ST. TAMMANY PARISH MEDICAL SOCIETY met in regular monthly session at Covington, on December 11, this being the annual business meeting, scientific papers and discussions were dispensed with. The reports of the various officers showed the society to be in a very flourishing condition. The exchequer is well lined and out of 24 practicing physicians in the Parish, 21 are members of the society. The society is now considering the establishment of a permanent home, with bright prospects of its accomplishment. The following were elected officers for 1920: President, Dr. A. G. Maylie; vice-president, Dr. N. M. Hebert; secretary-treasurer, Dr. H. D. Bulloch; delegate to State Medical Society, Dr. J. F. Buquoi, alternate, Dr. H. D. Bulloch; official journal, St. Tammany Farmer. By a unanimous vote, the secretary was directed to convey the compliments of the season with its heartfelt wishes for a successful and prosperous New Year to the NEW ORLEANS MEDI-

CAL AND SURGICAL JOURNAL. Immediately following the meeting the following members participated in a luncheon, where, in an atmosphere of merriment and good fellowship, the members, for the moment, forgot their medical cares: Dr. R. B. Paine, H. E. Gauthreaux, H. D. Bulloch, N. M. Hebert, C. W. Davidson, Wallace J. Durel, J. F. Buquoi, B. B. Warren, Fred. J. Jones, A. G. Maylie and Mr. D. H. Mason of the press.

APPOINTMENTS.—Dr. Edward L. Moorhead, professor of clinical surgery, Northwestern University Medical School, has been appointed chief of the staff of Mercy Hospital. Dr. Louis D. Moorhead has been appointed dean of the Medical School of Loyola University, Chicago.

DIPHTHERIA CASES INCREASE.—Exclusive of New York City, 575 more cases of diphtheria were reported in New York State during October, than were reported in September, and 945 more than for October, 1918. One-third of the new cases were reported from Buffalo.

MEETING OF THE NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS.—A meeting of this committee was held in New York City, November 24. Edward M. Van Cleve, managing director, described the accomplishments of the society. The society started in 1915 with sixty-five charter members, and has now enrolled nearly 2,300 members in forty-seven states, in Cuba, Mexico, the Philippines, Porto Rico, China and Canada. Laws for the prevention of blindness have been pushed and have passed in eighteen states. Dr. Thomas D. Wood, New York, Chairman on health problems of the National Council of Education was among those who addressed the meeting. He stated that from 25 to 35 per cent. of the school children in this country have eye defects. All but a small portion of these eye defects can be remedied, but only a few of the five or seven millions of children so handicapped have had the attention they need. He advocated the periodical examination of the eyes of all school children.

NEW OFFICERS FOR SOUTHERN GASTRO-ENTEROLOGICAL ASSOCIATION.—At the meeting held in Asheville, N. C., November 10, the following officers were elected: President, Dr. Sidney K. Simon. New Orleans; vice-president, Dr. George M. Niles, Atlanta, Ga.;

secretary-treasurer, Dr. Marvin H. Smith, Jacksonville, Fla., re-elected.

NEW OFFICERS FOR SOUTHERN MEDICAL ASSOCIATION.—At the thirteenth annual meeting of the Southern Medical Association held in Asheville, N. C., November 10 to 13, the following officers were elected: President, Dr. Edward H. Cary, Dallas, Tex.; vice-presidents, Drs. Henry H. Briggs, Asheville, N. C., and Alfred L. Gray, Richmond, Va.; secretary, Dr. Seale Harris, Birmingham, Ala., re-elected. Louisville, Ky., was chosen as the 1920 meeting place.

SÃO PAULO, BRAZIL, ADOPTS NEW SANITARY CODE.—A new sanitary code, the first of its kind and considered the best in Latin-America has just been adopted by the state of São Paulo, Brazil. The code is the compilation of all previous sanitary legislation with the necessary modification to bring it up-to-date. Dr. Arturo Neiva, one of the most prominent physicians of Brazil had charge of its preparation.

RED CROSS MATERNITY HOME HOSPITAL OPENED.—Through a gift of \$10,000 from the American Red Cross, the American Red Cross Maternity Home Hospital, at Coatbridge, Scotland, was established, and recently dedicated with impressive ceremonies under the auspices of the Town Councils of Coatbridge and Airdrie. Five similar institutions have been founded in Great Britain. These institutions are devoted to helping the mothers and children of England and Scotland, where the death rate of infants, due largely to housing conditions, has been appalling.

THE CLINICAL LABORATORY OF THE DIAGNOSTIC CLINIC is now under the direction of Drs. C. W. Duval and J. A. Lanford. The clinic was established for the purpose of furnishing to physicians without the necessary facilities, all available data in obscure or complicated cases. It is the aim of the clinic to procure this with the least expense and inconvenience to the patient. After the information obtained has been discussed by the various consultants, a complete written report with therapeutic suggestions is returned with the patient to the referring physician. A single charge is made for the combined examination.

NATIONAL TUBERCULOSIS ASSOCIATION MEETING.—The 1920 meeting of this organization will be held in St. Louis, April 22 to

24, with headquarters at the Hotel Statler. As the dates immediately precede the American Medical Association meeting, and immediately follow the meeting of the National Conference of Social Work, both to be held in New Orleans, it will be found convenient to stop in St. Louis, before or after the latter conferences.

PORTUGUESE ARMY FATALITIES.—According to statistics given the *Presse Médicale*, the Portuguese army in France numbered 75,000. Of this number 6,400 were wounded, 2,000 dying and 460 killed outright; 300 died of disease. Only five deaths from typhoid were reported and not a single case of variola.

THE PENNSYLVANIA STATE MEDICAL ASSOCIATION has increased the state assessment of members to \$5 per annum. Indiana and Texas have increased their state assessment to \$4.

WESTERN RESERVE UNIVERSITY ENDOWMENT.—Dr. George W. Crile of the surgical staff of the school of medicine of Western Reserve University has given \$100,000 to endow a chair in surgery in the school. Dr. Crile is professor of surgery in the school.

OWING TO THE H. C. L., Michigan University has increased the salaries of their teachers 25 to 30 per cent. It is stated the new scale of salaries ranges from \$1,300 to \$2,100 for instructors, \$2,200 to \$2,600 for assistant professors, \$2,700 to \$3,100 for associate professors, and \$3,200 to \$6,000 for full professors, to apply to all colleges.

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY will hold its 1920 meeting in Kansas City, which is the birthplace and location of the first meeting of the organization now in its twenty-fourth year. At the recent meeting Dr. Hal Foster of Kansas City was elected vice-president, and Dr. Joseph Lichtenberg, also of Kansas City, was appointed chairman of the committee of exhibits.

THE SOUTHERN SURGICAL ASSOCIATION held its annual session in this city December 16 to 18. The following officers were elected to serve during 1920. President, Dr. Willard Bartlett, St. Louis; vice-presidents, Drs. Edward G. Jones, Atlanta, Ga., C. Jeff Miller, New Orleans; secretary, Dr. H. A. Royster, Raleigh, N. C., re-elected; treasurer, Dr. G. L. Hunner, Baltimore, re-elected. Dr. John Smyth of New Orleans was elected a fellow.

PERSONALS.—Dr. C. Edwin Verdier, recently returned from service abroad, has opened offices at suite 707-709 Maison Blanche Building.

Dr. T. T. Batson, recently returned from service abroad, has opened offices at 1203-5 Maison Blanche.

Drs. W. A. Lurie and David Adiger announce their association, and have opened offices in Suite 1128 Maison Blanche.

Dr. B. A. Ledbetter has resumed practice, after recovery from a severe accident.

Among the Louisiana physicians who have returned from service since our last list are the following: Dr. C. E. Verdier, New Orleans; Dr. S. O. Turner, De Ridder; Dr. H. D. Van Schaick, Elizabeth; Dr. J. H. McCaa, Baton Rouge; Dr. W. L. Stone, Homer; Dr. N. V. Alessi, Independence; Dr. R. P. Evans, Newellton; Dr. C. S. Miller, Jr., Oil City; Dr. I. N. Adams, Selma; Dr. R. H. Fisher, Sulphur; Dr. S. B. Lyons, Sulphur

REMOVALS—Dr. B. F. Gallant, medical director, Belvedere Private Sanitarium, city office from Maison Blanche Building to Suite 701-703 Audubon Building.

Dr. H. W. Kostmayer, from 1203 Maison Blanche to 2117 Tulane Ave.

Dr. A. G. Maylie, from Mandeville, La., to Covington, La.

Dr. R. B. Austin, from Tylertown, Miss., to Knoxo, Miss.

Dr. Paul Osterhout, from Belton, Tex., to 148 Dunning Ave., San Antonio, Tex.

MARRIED.—On December 11, 1919, Dr. William Kohlmann to Miss Hedwige Ritter, both of New Orleans.

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.

Rational Therapy, by Otto Lerch, A. M., Ph. D., M. D. The Southworth Co., New York.

The author premises that all remedies "produce a greater purity of blood and restore a disturbed equilibrium between the venous and arterial circulation in one particular organ or in the whole organism." In the pages of his book he proceeds to demonstrate this idea.

The style throughout is discursive and perhaps might be criticised on that account, although it would have been difficult to have presented so large a compilation of ideas without such a method. Air, light and climate are discussed in their interrelations and particular details are presented to show their therapeutic value. The chapter on diet is particularly complete and has been carefully prepared, giving detail in those diseases where diet regulation is indicated. Rest fills another chapter and the initiative of Weir Mitchell is awarded full credit by the author, who expands this subject. The chapter on massage and exercise is admirably illustrated. The neglect of these valuable adjuncts by the average physician can only emphasize the need of such articles in up-to-date texts on therapy.

Even in hospitals well equipt otherwise the absence of provisions for hydrotherapy indicates that this measure is not taught in medical schools nor practiced by enough men to make it mandatory in hospitals. The author not only discusses commoner wet treatment of diseases, but there are given most of the therapeutic measures employed in disease by the use of water. Ample illustrations are afforded of all sorts of baths, with enough detail to serve as a guide to institutions where such appliances are desiderata. The application of such a remedy is furnished for the treatment of those diseases in which hydrotherapy may be of service. Electrotherapy is also discussed.

The author in his preface states that he is the first "to offer the explanation of the marvels of psychotherapy, regulating the blood supply to organs and tissues through higher centers" and in some thirty odd pages he outlines his philosophy: The function of every organ depends on the integrity of the complex nervous apparatus; emotion governs the functions, and is itself influenced by the will; body and brain cells react to stimulation; habit follows continued expression of repeated action directed by control; volition is the beginning of motion and feeling. Voluntary acts originate in the cortex and as they gradually become habit they are transferred to the lower centers to be transmitted to the descendants as instincts, when they are firmly established. In psychotherapy, we use the stimulants that have produced such acts, and their impressions upon the cortex, to reach the lower centers. The control of mental action in turn regulates or may regulate functions of life in health, and also in disease.

Crile's Kinetic theory and Alexander's deep breathing as a regulator of blood supply and of kinetic forces are similar to Lerch's theory—which entertains the belief that all humans are endowed with a kinetic

control—only needing an outside force to awaken the capacity or aptitude of the sick man to avail himself of such power within himself. Hypnotism, suggestion, or psychotherapy are all one and the same thing and it is a pity that the "Marvels of Psychotherapy" are not within the purview of every qualified physician. Local anesthesia, doubtful analgesics now taken irrationally, would be largely relegated if honest physicians would only learn the simple method of having the patient control the pain centers while the operation is done, or while the stimulus to pain passes.

Serums and vaccins, organotherapy, chemotherapy, are the chapters which end the book.

The volume covers over 500 pages and has been well printed, with all illustrations and cuts clear. The numerous typographical errors which mar the book are explained as a war incident.

As the product of the pen of a New Orleans confrere, who has worked out more than one original problem, this work is deserving of much praise and we congratulate the author on his success in presenting his own ideas in so pleasing a form.

DYER.

Essentials of Surgery:—A textbook of surgery for Student and Graduate Nurses and for those interested in the care of the sick. By Archibald Leete McDonald, M. D. Pp 265 with 46 illustrations. J. B. Lippincott Co., Philadelphia. 1919.

The author a former lecturer on Surgery at the Nurses training school, St. Luke's Hospital, Duluth, Minn. has probably felt the need of such a book for senior and graduate nurses which presents the subject in a clear, concise, simple yet sufficiently thorough manner to enable the nurse to more intelligently co-operate with the doctor in the care of the surgical patient. The author has admirably fulfilled this need as the book is a veritable mine of information and can be heartily recommended to all nurses, and training schools. The text deals principally with the surgical features of the patient as an elementary knowledge of anatomy, physiology and bacteriology is presumed and no attempt is made to cover these subjects except where it is necessary to emphasize the surgical condition.

The book has evidently been written with a view of being useful to teacher and lecturer, as each chapter is supplemented by a table of demonstrations which will be found quite useful and suggestive in illustrating the subject. A thorough index and quite ample glossary complete the volume. In addition to the unquestioned merits of the volume as a text-book for nurses it would no doubt prove of much value to students in reviewing a subject and in preparing for examinations.

The illustrations while few and not always showing sufficient detail can be easily overlooked by the excellence of the text.

CARROLL W. ALLEN.

Complete Index to Vols. I, II and III Warbasse's Surgical Treatment, by W. B. Saunders Co. 1919.

This handy little book is a complete index to Warbasse's Surgery and includes a list of contributors with chapter and page.

It is unquestionably of decided advantage to the work and will be found most convenient.

It is a new departure and will be quite attractive in large works of several volumes.

CARROLL W. ALLEN.

Surgical and War Nursing, by A. H. Barkley M. D. (Hon.) M. C., F. A. C. S. C. V. Mosby Co., St. Louis, 1918.

The author has not attempted to cover the entire field of surgical nursing and has also eliminated such elementary instructions as would seem unnecessary dealing only with such phases of the subject as would be of practical value in the average surgical case.

Some of the chapters are excellent and much valuable instruction and information is given. The chapters on War Nursing could be read with profit by any nurse.

The illustrations are numerous and excellent and many of them should prove very useful.

A rather brief glossary and a thorough index complete the volume.
CARROLL W. ALLEN.

Roentgen Interpretation, by Holmes & Ruggles. Lea & Febiger, Philadelphia and New York, 1919.

This book will fill a long felt want. It is profusely illustrated with very good cuts made from carefully selected X-Ray Negatives, and the descriptive matter is written in a concise and interesting manner. Not only the beginners in Radiology but the general practitioner as well will find much of value in it.
GRANGER.

Physical Diagnosis, by Richard C. Cabot, M. D., Professor of Medicine in Harvard University. 7th Edition, William Wood & Co., New York, 1919.

A new edition of this standard work, thus keeping it up to date, is most welcome. For a long period of years the reviewer has commended it to his students as their guide in working up their cases in physical diagnosis and has required its study as part of the collateral reading. The author's clear cut presentation leaves no confusion in the student's mind and while we may not always agree with him we must have respect for his views and for the grounds on which he bases them. A fair criticism of the present edition is that while Cabot justly says that graphic studies of arhythmias "are not very likely to be used by the practitioner for whom this book is intended" still he does not adequately describe the characteristics by which the various irregularities can usually be recognized at the bedside without the use of any apparatus whatsoever. Nor does he make plain the widely differing diagnostic and prognostic importance and the therapeutic indications of these arhythmias.

I. I. LEMANN.

The Medical Clinics of North America. Published bimonthly by W. B. Saunders Co., Philadelphia and London. \$1.00 per year.

November, 1918, Philadelphia number.

January, 1919, New York number.

March, 1919, Boston number.

May, 1919, Baltimore number.

July, 1919, Chicago number.

These volumes appearing every two months present a veritable cross section of the topics being studied and discussed in the various clinics of the country. The subjects chosen are for the most part live ones and their presentation up to the minute. The lecturers having given special attention to the problems they discuss are entitled to speak authoritatively. Case teaching—the scheme to which these volumes

largely adhere—offers the attractions of easy reading text, stimulation of interest and attention, and clear concrete application of principles to everyday practice. It is this combination of attractions that make the publication worth while to the busy practitioner. I. I. L.

Practical Therapeutics, by Hobart Amory Hare, M. D., B. Sc. Seventeenth Edition, Lea & Febiger, Philadelphia and New York, 1918.

This work has so often been reviewed in this journal that there is no reason for recapitulation. Any text-book commanding a large sale when in its seventeenth edition must be one fulfilling a real demand. The present edition maintains the standard of its forerunners and contains much new and useful material. J. T. HALSEY.

International Medical Annual, 1919, Vo. 37, Wm. Wood and Company, New York.

Laying as it does especial emphasis on discussion of newer and approved methods of treatment this arrival makes an especially strong appeal to the general practitioner. Attempting, and with considerable success, to cover a very wide field individual subjects are of necessity but briefly discussed. Timely and valuable sections are those dealing with influenza, cerebrospinal fever, encephalitis, pneumonia, wound treatment, shock, syphilis, and a number of surgical subjects. J. T. H.

The Physician's Visiting List. P. Blakiston's Son & Co., Philadelphia.

While this physician's companion is respectable with age, coming out now for its sixty-ninth year, it is up-to-date not only through its calendar but having kept up with the scientific progress of the time. Its tables are modern and it is presented in a substantial and attractive form.

It is published in several styles: the regular edition, for from 25 to 100 patients, dated; the perpetual, the same as the former but without dates; the monthly, for keeping accounts for the whole month with one entry of name.

Surgery in War—Second Edition 1919, by Alfred J. Hull, F. R. C. S.

Lient. Col., Royal Army Medical Corps; Surgeon, British Expeditionary Force, France; late lecturer on Surgical Pathology, Royal Army Medical College, Millbank; and Surgeon, Queen Alexandra Military Hospital with a Preface by Lieut.-Gen. T. H. J. C. Goodwin, C. B., C. M. G., D. S. O. Director General, Army Medical Service. Published by P. Blakiston's Sons & Co., Philadelphia.

This book is in a class by itself in that it is a reference book dealing with war surgery as evolved by the best minds in the profession and illustrates the perpetual change and improvement accomplished in the different departments of work

As the author states "The object of this book has been to give to the members of the profession who have not practiced war surgery an account of the treatment which has proved efficacious in our hands. Symptomology and details of treatment, which are found in text-books of general surgery, have not been repeated. The book is not intended to be in any sense complete. Surgical knowledge is presupposed, and our efforts have been mainly directed to recounting methods of treatment of the more common injuries met with in war."

In this effort the author has succeeded admirably and the subjects while limited to the most important are dealt with exhaustively.

The author has been ably assisted by a corps of contributors, Pilcher, Miller, Browning, Petrie, Richards, Jocelyn Swan and Tracy all officers in the British army and each especially qualified by experience to speak on his particular subject. Lieut. Colonel Geo. W. Crile is the only American contributor and grateful recognition is shown him in the preface for his assistance in the chapter on shock.

Few American Medical men have had the experience and can speak with the same authority as our British Confreres, many of whom have been in the struggle since its beginning, this fact and the ability and standing of the contributors makes this one of the best books to be had on this subject.

CARROLL W. ALLEN.

Volume II—General Surgery of the Practical Medicine Series.—Edited by Albert J. Ochsner, Series 1919 by the year Book Publishers, Chicago.

The present volume as would be expected is replete with information gleaned from the military hospitals of Europe, practically the entire field of War Surgery has been reviewed, including reconstruction Surgery and its adaptation to industrial conditions. Much space is devoted to wounds and their treatment by the various methods either brought out or perfected by war conditions, heat, soap and water, Magnesium Sulphate, Flavine, Petrolatum, Paraffin, Bipp, Formaldehyd, Carrel-Dakin method, Dichloramin T. etc. The more recent views on anesthetics are discussed. Under Spinal Analgesia a large part of the text is devoted to Sacral Analgesia which by an oversight is not properly headed or indexed. Such subjects as shock, gas gangrene and tetanus which have been developed as the result of war experience are fairly freely dealt with; war wounds of the several anatomical divisions of the body are reviewed under their appropriate divisions.—An outline is given of the progress of bone and joint surgery. Rather free space and discussion is given to the different types of malignant tumors with the progress made in their study and treatment.

Surgical progress in the cranial, thoracic and abdominal cavities with their visceral contents is well described, also the vascular and nervous systems. Many new instruments, splints, appliances and equipment of various kinds are illustrated and discussed.

CARROLL W. ALLEN.

Diseases of Children.—By H. D. Chapin, A. M., M. D., and G. R. Pisek, M. D. Wm. Wood & Company, New York, 1919.

In the Fourth Edition, the authors of this work have continued their policy of the past of bringing their very valuable book up to date. Several new articles have been added to the text, namely, Acidosis, Food Allergy, Epidemic Encephalitis and Functional Heart Disorders. The subject of Spasmophilia and its allied conditions have been more thoroughly considered than previously. More space and greater consideration has been given to the important subject of the diet for older children. Some of the illustrations added are exceptionally good. Particularly is this so with regard to the cutaneous test in the article of Food Allergy.

The consideration of the various subjects are very concise and thorough. The work is a ready reference and should receive the hearty approval of the profession which it deserves.

DeBUYS.

The Soldier' Heart and the Effort Syndrome, by Thomas Lewis, M. D., F. R. C. P., D. Sc., Physician of the Staff of the Medical Research Committee; Consulting Physician in Diseases of the Heart, Eastern Command. Assistant Physician and Lecturer in Cardiac Pathology, University Hospital, London. 8. vo. pp. 135. Paul B. Hoeber, New York, 1919.

Many lessons of war can and should be carried over into civilian life. The judgment of the efficiency of hearts and especially of those apparently overacting has been tremendously influenced by the study of the condition known as "D. A. H." and "Effort Syndrome," and most of Dr. Lewis' teaching set forth in this little book is applicable to the cases of heart disease we see day by day. There is a great deal of the dogmatic teaching as to murmurs and other findings of physical examination that must be cast aside in the light of newer physiologic and pathologic knowledge. Lewis does some vigorous sweeping away of cobwebs. The average man will take delight in the absence of technicality, the emphasis placed upon simple methods of examination rather than elaborate ones and in the plain everyday common sense of the deductions made. Anyone who has to deal with heart cases, whether as practitioner or as examiner on pension boards and for life insurance companies and the like, will read this book with profit. It is to be regretted that the title may give impression that it is of purely military interest.

I. I. Lemann.

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WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D. C.
U. S. Naval Medical Bulletin, Vol. 13, No. 4.
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Report of the Health Department of the Panama Canal, 1918.

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REPRINTS.

Hospital Service in Rural Communities, by Ernst C. Meyer.

Surgery of the Heart and Pericardium; Radium in the Treatment of Uterine Fibroids, by J. Warren Little, M. D., F. A. C. S.

The Climate of Korea and the Probable Effect on Human Efficiency, by J. D. Van Buskirk, M. D.

Suicide and Civilization, by Tom A. Williams, M. D.

The Identity of Commercial Blue Flag, by Oliver Atkins Farwell.

Influenza—"The Flu," Public Health Reports.

Epidemic Influenza in Foreign Countries, by W. H. Frost, M. D., and Edgar Sydenstricker.

Deer-Fly Fever or Pahvant Valley Plague, by Edward Francis, M. D.

The Malaria Problem of the South, by H. R. Carter, Asst. Surg. General.

School Medical Inspection, by Taliaferro Clark, Asst. Surg. General.

Constitutional Foundations of Federal Public Health Functions, by Frank J. Goodnow, LL. D.

Venereal Disease Control and Activities, by Chas. V. Herdliska.

Summary of Report of Lieut.-Commander William Seaman Bainbridge, by Eliza Mosher, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for November, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever		3	3
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	2	1	3
Influenza	2		2
Cholera Nostras			
Pyemia and Septicemia			
Tuberculosis	36	27	63
Cancer	26	18	34
Rheumatism and Gout	1	2	3
Diabetes	4		4
Alcoholism			
Encephalitis and Meningitis	2	1	3
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	20	10	30
Paralysis	3	1	4
Convulsions of Infancy			
Other Diseases of Infancy	19	8	27
Tetanus	1	2	3
Other Nervous Diseases	3		3
Heart Diseases	48	35	83
Bronchitis	1		1
Pneumonia and Broncho-Pneumonia	14	15	29
Other Respiratory Diseases		2	2
Ulcer of Stomach	3		3
Other Diseases of the Stomach	2		2
Diarrhea, Dysentery and Enteritis	13	2	15
Hernia, Intestinal Obstruction	2	2	4
Cirrhosis of Liver	4	2	6
Other Diseases of the Liver	1	1	2
Simple Peritonitis			
Appendicitis	3	3	6
Bright's Disease	20	18	38
Other Genito-Urinary Diseases	13	11	24
Puerperal Diseases	8	1	9
Senile Debility	7	1	8
Suicide	4		4
Injuries	18	14	32
All Other Causes	35	20	55
TOTAL	316	191	507

Still-born Children—White, 32; colored, 23; total, 55.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000.

Death Rate per 1000 per annum for Month—White, 13.40; colored, 21.62; total, 15.64. Non-residents excluded, 13.60.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmosphere pressure	30.06
Mean temperature	66.
Total precipitation	7.24 inches
Prevailing direction of wind, northeast.	



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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FEBRUARY, 1920

No. 8

EDITORIAL

OSLER PASSES.

At the zenith of a great career, just past the allotted span of life, beloved by a world of disciples, Osler has entered the bourne of eternal peace and has left behind the impress of his genius, which will make him stand out among the illustrious leaders who have made the art of medicine. In this country he had no peer, as teacher, preceptor or exemplar, and his death will be universally mourned. Simple as he was great, Osler met all men with the

same gracious uplifting aid which made of him a sublime friend to all who knew him.

His own life of marvelous usefulness proved a contradiction to the aphorism of Trollope, "so often popularly attributed to Osler himself, that a man at forty has done his best.

Within the past thirty years, the history of medicine has been rewritten; its philosophy revolutionized. The diagnosis of disease has been standardized by scientific clinical and laboratory technics and the knowledge of the newer physicists has made the body in its envelope almost a transparent chart, through more and more exact radiographic methods. Therapy has been crystallized so as to respond to near or obscure etiologic factors and with the growing knowledge of the internal secretions, the background of diagnosis must become more stable. To Osler the prevision of much of these things was permitted. His clarity of perception not only made of him a great diagnostician, but permitted him to put his ideas into form which every man of intelligence might read.

The mere physical history of Osler's life will be written often, but the less material part of him will go on within the memory of those who touched the hem of his garment of wisdom and kindness. His career was crowned with many honors; but in his passing, the best of all things will be in that summum, he lived beloved of his fellows and he died in the illumination of the great light of his example, pointing the way of honor, principle and endeavor to those who follow, to carry on.

THE A. M. A. MEETING IN APRIL.

The A. M. A. New Orleans meeting will soon be upon us. The task of properly providing for the meeting is one which has been undertaken by both the State Society and the Orleans Parish Medical Society. It needs active and energetic cooperation on the part of all to make the meeting a success. The traditional hospitality of New Orleans should suffer none through the profession of medicine.

The A. M. A. has grown to such a considerable size in its membership that practically all of the large cities in which the Association meets have long ago abandoned any idea of general

entertainment; at the Atlantic City meetings, practically all have understood that the individual member must amuse himself.

New Orleans did so much in 1903, it will be a mistake to neglect altogether the social features of the 1920 meeting. The arrangements committee is busy and will do its part, but the rank and file of the whole profession of the state must take a hand.

With the usual attractiveness of New Orleans, as one of the few exotic cities in the United States, many will come who have never been here before. Many who have been here will return.

The hotel accommodations are always limited, even in the greater cities and every effort must be made to have properly indexed rooms to take care of the overflow from the hotels.

The opportunity of attending a great session of a great association will be open to the medical men of this section and to those who are not already members there will be an excellent chance and occasion to join.

The JOURNAL expects a great crowd and is hopeful of a great meeting—such as those gone before have been.

THE ASSOCIATION OF MILITARY SURGEONS.

The Association of Military Surgeons will meet in New Orleans during the week preceding the A. M. A. Meeting. While the sessions of this association are under the direction of the Military Surgeons, the proceedings will be of general interest to all physicians, who are expected to attend. The headquarters and meetings will be at the Grunewald Hotel.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THE MEDICAL ASPECT OF ENTEROPTOSIS.*

By A. E. FOSSIER, A. M., M. D., New Orleans, La.

Enteroptosis, taken in the general acceptance of the term, admits of but one aspect and that is the medical.

The surgeon claimed that the treatment of enteroptosis belonged to his domain, and it was only after many years and many useless operations that he reluctantly recognized his limitation for the cure of this condition. The writing of this thesis was prompted by the great frequency, not only of useless, but even injurious operations found in persons suffering with ptosis of the thoracic and abdominal organs.

Whilst the great majority of the writers on the subject recognize the futility of surgical procedure, their appeals lack somewhat the vigor and enthusiasm this subject demands. Almost invariably their warnings are qualified by the statement that all operations are contra-indicated in the enteroptotics, "unless medical treatment fails." Yet they seem to ignore the fact that failure of medical treatment may be due to lack of knowledge and attention on the part of the doctor, and occasionally to the impatience of the attending surgeon to operate.

All medical progress has passed through three great periods: the first, extreme radicalism; the second, ultra-conservativeness, and the third a logical medium between the two extremes. Today the crest of the first period in the surgical treatment of splanchnoptosis has passed; operations are less common and are frowned upon generally by conservative surgeons. There was a time in the recent past when the palpation of the kidney meant a nephrotomy or a nephrorraphy, a displaced stomach its anchoring, and a woman with her genito-urinary organs intact was a subject of no little curiosity. This has moderated, but there still persists the short circuit operation for constipation and operations for pseudo-appendicitis, pseudo-cholelithiasis and pseudo gastric ulcers.

* Read at 40th Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919. (Received for publication June 10, 1919.—Eds.)

These I wish especially to bring to your attention and to make a plea for more conservatism and also for better diagnosis.

One of the most consistent signs of enteroptosis is the scar of the laparotomist. Rarely do we see a pronounced enteroptotic who has not been operated for something or other. Usually the surgeon's interest ends when the patient is carried out of the institution. The rest after the operation and the suggestion given to the patient by the white aprons, shining instruments, the anesthesia, the preparations and the impressive rituals of the operation room, together with the expectation of a cure, are sufficient to explain the temporary relief felt by these impressionable neurotics.

The temptation to correct by mechanical means symptoms apparently caused by a mechanical condition, is no doubt great, and is responsible for many decisions for operations on these patients. Clark¹ says: "A surgeon who believes that he can make good the dynamic defect by an operation upon the ptosed organs, will find that his energies are badly directed."

An analysis of the pathology of splanchnoptosis will show the symptom complex due to a general condition which is either congenital or acquired. The symptoms are rarely occasioned by dragging of any one or a group of organs, but generally by displacement of all the viscera as well as the thoracic organs. The abdominal viscera sag on account of a lack of proper support following a weakness of abdominal muscles. The congenital type is recognized by the peculiar build of the individual, which is typical of this condition and at times is alone sufficient to make a diagnosis. Usually these persons are badly nourished and frequently emaciated. They have small heads, drawn faces, long necks, narrow and flat chests, the lower thorax contracted and ribs elongated, reaching nearly to the crest of the sacrum; the sternum sunken and the subcostal angle very acute. The diaphragm is flattened and pushed downwards. The heart dropped and movable. The abdomen is long, narrow and sunken in the epigastrium; the belly pendulous. Usually there is a marked disproportion between the upper and the lower extremities, the latter is fairly well nourished, the patient having large legs and hips, but small arms and thorax.

Palpation and Lerch's² method of percussion will reveal the displaced kidneys. If they cannot be felt, which is frequently the case in the obese, they can be made out by this percussion. The stomach is dragged down, its lower curvature frequently found hand wide

below the umbilicus. The intestines are ptosed, and there may be gurgling on palpation of the cecum. The colon is often found contracted, occasionally along the ascending and again along the course of the descending colon, and not rarely the whole course of the intestine may be found hard, contracted and painful to the touch. In these types of cases there is constipation, obstipation, and not rarely intestinal stasis. In these individuals are discovered the symptom complex of hysteria, neurasthenia and the functional neurosis, of which enteroptosis is the etiological factor. This fact alone should be sufficient for the display of more deliberation and conservatism by the attending surgeon.

Hutchinson and J. W. Luther³ emphatically warn against operations in these cases, the former says: "Don't operate because neurasthenics are not proper patients to operate," and also the latter: "Vague general symptoms such as are presented by the neurasthenic can never justify an operative policy." Circulatory disturbances, flushes, clammy extremities, palpitation, dyspnea, anginoid attacks and paroxysmal tachycardia are frequent symptoms in the splanchnoptotics. These patients complain of pains, both fleeting and localized, oft prevailing in the region of the appendix, gall-bladder and in the epigastrium, which occasionally render a diagnosis difficult and make errors unavoidable. These are the oft unrecognized pseudo appendicitis, pseudo gall-stone colic, typhlitis, contracted colon, functional gastric disturbances, prolapse of the womb and menstrual disorders. F. S. Kellogg⁴ writes as follows: "One reason for some definite failure in gynecological surgery is untreated ptosis." Visceroptosis is many times found in the obese as well as the emaciated. It follows too frequent parturitions without the subsequent necessary time spent in the reclining position, and not wearing a proper abdominal support. It is also manifest after long and wasting diseases, due to the absorption of fat in the muscular walls of the belly, and the lack of support by the abdominal parietes. In the obese it can be caused by too rapid reduction of fat in which case the belly becomes flabby and pendulous. Fat having been lost at the expense of the abdominal walls caused the belly to sag and the intra abdominal pressure to diminish. In fact Stella S. Bradford⁵ is apparently correct when she says: "Visceroptosis includes all symptoms known to medicine." Speaking on this subject Russell Kuhn⁶ and Jacob Glass say: "It is most commonly confused with gastric ulcer,

cholelithiasis or chronic appendicitis." Walton⁷ also says: "Visceroptosis commonly stimulates organic lesions of the appendix, stomach and gall-bladder."

Operations for the anchoring of ptosed abdominal organs are generally useless, do not ameliorate symptoms, and as a rule are a source of serious aggravation to the general condition of the patient.

A. J. Ochsner⁸ says: "All operations which serve to fix intra-abdominal organs for the relief of enteroptosis, are bad, because they introduce a condition resulting in much more harm than is done by the enteroptosis itself. The intra-abdominal organs are normally in a floating condition, which insures comfort to the patient and protect these organs against jarring, hence the necessity of maintaining this condition."

Edwin Walker,⁹ speaking of the Rovsing operation says: "Wishes to repeat that these operations are indicated only in those cases in which medical treatment has failed. The mere fact that there is even a marked descensus of the viscera does not justify an operation."

Mackenzie¹⁰ says: "What does it avail the sufferer to have his stomach hooked up in an attic while all his other organs are left trailing downwards in the basement."

Hammeter,¹¹ in a recent article writes:

"In the writer's diseases of the stomach (p. 727), he expresses the hope at that time that it might become possible to treat this condition by surgical procedure. It was twelve years since that was first written and he has kept a very close record of these cases upon which surgical procedures were undertaken. In more than two-thirds of those from whom he could get a record, the stomach when sewed into normal position, in one way or another, did not stay there, but was found displaced again in periods varying from one year to eighteen months after the operation. Reflecting upon this conception of enteroptosis, the writer considers it his duty to emphasize that the surgeons that undertake such operations start from false premises; and in his conception that reports concerning the results that are claimed for such operations are based upon an insufficient period of observation, and are to be taken skeptically. It is deplorable that these patients are so readily persuaded to be operated upon, and it is more regrettable that the true nature of splanchnoptosis is so little understood that there are always surgeons to be found who are ready to perform such operation."

Appendicitis has been very commonly mistaken for and frequently operated for, uselessly, in enteroptosis. In many instances it is impossible to arrive at a correct diagnosis. But in others the error is due to lack of attention, and to insufficient study of the case.

Pain at McBurney's point does not always mean appendicitis, for localized tenderness in the right iliac fossa is frequently found in splanchnoptosis. Lack of rigidity, low leucocytotic count, the absence of temperature and superficial tenderness, the character of the tumor, and typical tongue, together with pronounced visceroptotic manifestations, the peculiar build of the individual, contraction of the colon, gurgling over the cecum, a palpable kidney and a displaced stomach should be sufficient to place us on our guard, and not rush the patient to the operation room before proper time is given to a careful diagnosis. The low mortality and the apparent lack of danger in these operations do not justify the surgeon in operating, unless he is certain as to the cause of the trouble. Whilst the proximate results may not be injurious, ultimately the condition of the patient is aggravated, rendering the life of these unfortunate neurotics unbearable.

The reader has frequently been consulted by patients who have been appendectomized a short time before, having still the same but aggravated symptoms for which they have been operated. Invariably they were relieved medically, and soon were enjoying fairly good health.

Walton⁷ reports that he has found 29 cases of visceroptosis operated for appendicitis with 373 cases of true appendicitis. Of these 29 cases 13 have resembled acute and 16 chronic appendicitis, but this group does not include cases of true chronic or acute appendicitis in which visceroptosis was also present, a combination which is not at all uncommon. He also says that it has probably been the lot of every surgeon to operate on cases which he believed to be acute appendicitis in which the appendix itself was found to be in a more or less normal state. Such cases, however, have not found their way into medical literature, probably because most surgeons have been shy in recording what they have considered a weakness in their diagnostic capabilities, etc.

Walton⁷ found that frequently the operation was not followed by permanent relief, and also that in cases which showed a return of symptoms an abdominal belt and liquid paraffin were ordered, which often gave marked or complete relief.

Lerch¹² says:

“I have observed patients not fully and quickly relieved by medical treatment, insisting upon an operation, where the appendix was found practically in a normal condition, the pain persisting after the appen-

dectomy, which in each case was performed. I have studied this condition for a number of years in patients suffering from an enteroptosis, have a number of cases in my records and used to call it pseudo appendicitis. I never have found it without enteroptosis as the underlying complex of this underlying trouble.”

The theory of intoxication due to intestinal stasis as the etiologic factor of the various phenomena found in enteroptosis is deeply rooted in the mind of the profession. A great impetus to this theory has been given by Arbutnot Lane who attributed these symptoms to a delay in the passage of material along the alimentary tract, and graphically drew a parallel between the human digestive canal and a drainage system and followed his reasoning by advocating his ileosigmoidostomy in chronic intestinal stasis. The brilliancy, fearlessness and the recklessness of this operator startled the medical world, but unfortunately opened a portal that may lead to danger and disaster. It is doubtful in the minds of some if all the ills of the enteroptotics are due to intestinal stasis caused by kinks and adhesions, or whether the stasis is secondary to the splanchnoptosis. The nervous phenomena encountered are better explained by disturbance of the circulation. We usually find a heart impeded by its malposition and increased mobility, the splanchnic veins engorged, and congestion in the abdominal cavity, and all the arteries contracted so that the circulatory deficiency may be overcome. Even Lane,¹³ whilst arguing to the contrary, admits that the pressure by a spring support controlling the lower abdomen on the veins of the splanchnic area keeps the brain better supplied with blood and more capable of carrying on its function efficiently. The reader has never seen a case with symptoms of such extreme severity justifying him to expose the patient to such serious consequences. Generally they improve under medical treatment. The constipation is relieved or cured and all symptoms subside with proper therapeutic measures. From the following quotations we can see that this operation is generally discouraged by the surgeon and deserves the severe censure it has received.

Edwin Walker¹⁴ writes:

“Only a small percentage of cases as they now come to the doctor are surgical and further I concede that in bringing forward the subject of ptosis and stasis we are opening one of the most dangerous fields of surgical abuses that has been open to the surgical ‘confidence man’ who needs no other excuse for performing a surgical operation than the consent of the patient.”

Mackenzie¹⁵ in his article read in the section on surgery of the A. M. A., June, 1912, says:

“The resection of the colon will always have its place in surgery, to a limited degree, perhaps, in relation to these disorders notably the giant colon. But, because, in its general application, it is too radical and dangerous, it does not strike at the cause of intestinal stasis, is not a rational and orderly step in the evolution of the measures that are necessary for the permanent relief of these disorders. It is believed that it should be condemned and placed under the ban of surgery.”

In answer to this paper, and in defense of Lane, W. J. Mayo¹⁶ speaks as follows:

“I want to correct a false impression which seem to prevail in this country concerning the work of Mr. Lane. He is one of the world's foremost surgeons. During the past ten years he has distinctly advanced the surgery of the bones, of the cleft palate and of the large bowels. He is also a great teacher. In order to drive home his point or convey his idea, he may occasionally overstate things, but if one observed his work on the bones, or the large bowels, one does not get the impression that he is a poor surgeon or that half of England is going without a colon. He is doing that particular operation only rarely, but he is doing an ileosigmoidostomy. While I am by no means convinced that Mr. Lane's position as regards surgery of the large bowels is even approximately correct, it is certain that the operation of ileosigmoidostomy is being done with increased frequency by a large number of surgeons.”

Gastric and duodenal ulcers and even cancer of the stomach have been mistaken for enteroptosis. Glenard, in 1882, was the first to call our attention to such a possibility. Walton, in 1915, confirmed these findings and reported many cases operated by him for these lesions and found a normal but markedly ptosed stomach. The diagnosis in these cases is difficult to make; even the X-ray examination may lead us in error, because spasmodic contractions of the stomach and duodenum may simulate the characteristic strictures of these diseases. But the general habitus of these patients, and the ptosis of other abdominal organs, and the absence of clear cut symptoms of these lesions are sufficient to guard against a hasty and faulty diagnosis.

We can now conclude by stating that Glenard's disease must be treated medically. A well fitting abdominal bandage, proper rest, a correct diet and care of the bowels with proper attention to the subjective symptoms, both mental and physical, are the main requisites for the correction of visceroptosis. Francine believes that practically all cases of uncomplicated gastroptosis recover by the use of the bandage. The words of Einhorn¹⁷ are symbolic of the

results reported and admirably expresses the experiences of the reader. He says:

“From my experience I would say a perfect cure of enteroptosis is possible, I know of positive cures, that is to say the stomach has returned to its normal position, and a movable kidney has disappeared in more than a dozen cases of my own.”

The reader knows of cases in which not only the abdominal organs have been normally replaced, but others in which dropped hearts were pushed up and were held in their correct position, the symptoms alleviated and the patient's good health restored. These results are very gratifying to the physician, for the gradual correction of the visceroptosis is the apparent rejuvenation of the patient. These unfortunates in their pilgrimage for health wander from doctor to doctor and from hospital to sanitarium, operation to operation, and are frequently attracted by the promises of the quack or are seeking solace in some healing cult; usually without relief, suffering physical and mental tortures, unless they happen to meet a physician who recognizes and knows how to treat their condition. With proper management the transfiguration is not only rapid but permanent. Life which was once a burden to themselves as well as to those surrounding them is now enjoyable and in many cases they acquire a feeling of well being they never before experienced.

DISCUSSION OF PAPERS OF DRs. FOSSIER, KNIGHTON AND LEVIN.

Dr. C. L. Eshleman: I agree with Dr. Ellis and Dr. Eustis both in regard to surgery and medicine in these cases. There is one point that nobody has brought out, and that is the mental attitude of these patients towards their trouble. I believe that a great many symptoms in enteroptosis are produced by the change in intra-abdominal pressure, muscular relaxation and dragging of organs, but do not lose sight of the mental attitude of the patient toward his disease. These patients need physiotherapy and reeducation as to their symptoms just as much as they need surgery and medicine and abdominal supporters and you will fail to cure them unless this is taken into consideration and given the attention it deserves.

Dr. A. E. Fossier (closing): I wish to congratulate Dr. Eshleman on his cure, and no one is more gratified to know he is feeling so well, especially after being operated twice. The state or mind of these patients experienced by and described by the doctor, is one of the greatest and most persistent symptoms of enteroptosis. We must not forget that the prime factor of these symptoms is physical and not mental. We must improve the general condition of the patient and we also must re-establish the circulation before the mental symptoms will be ameliorated.

I do not quite agree with Dr. Ellis. There are very few of these

cases that need to be operated. Failures are sometimes due to defective treatment and not, because medical treatment of this condition is futile. Very few cases should be operated, and the greatest majority of enteroptosis who are treated correctly and given proper attention and care invariably improve.

I do not wish to appear to be iconoclastic, nor that I depreciate the proper use of surgery, but especially in this field of cases there has been great abuses due to faulty diagnosis.

FOOD CONDITIONS IN EUROPE; WITH REMARKS ON THE ETIOLOGY OF PELLAGRA.*

By Lieutenant-Colonel SEALE HARRIS, Medical Corps, United States Army.
Birmingham, Alabama.

The invitation to address the public session of the Louisiana State Medical Association is one that I appreciate as a great honor, and it is with a keen sense of gratitude and pleasure that I am present at this meeting. The program announces my subject as "Medical Experiences During the War." It has occurred to me that it might interest the physicians and laymen present to hear something of food conditions in Europe with some reference to the disease pellagra, which has been the subject of frequent discussions at medical meetings for the past few years. In this informal talk I shall mention the results of some of my investigations; and if the personal pronoun occurs too often, please remember that I am relating experiences and expressing personal opinions.

During ten months of service in Europe, I had the good fortune to visit France, Belgium, England, Italy, Austro-Hungary (Trent, Trist, Istria, Fiume, etc.) and Germany. The relation of food conditions to nutritional diseases in those countries interested me tremendously, and I made investigations regarding them whenever the opportunity occurred. In practically all of those countries the great majority of the people were living on an unbalanced and a deficient diet. In some of them the diet was deficient in the same ingredients as that which is eaten by the poor in the rural districts of the South, where there has been reported a large number of cases of pellagra in the past fifteen years.

Pellagra is believed by many to be a nutritional, or deficiency disease. It seems to me that if it were entirely a nutritional disease, that with the millions of poorly fed people in the European

* Address before the Louisiana State Medical Society, Shreveport, La., April 10, 1919. (Received for publication June 10, 1919.—Eds.)

countries, there should have been a great deal of pellagra. From the best information that I could get, the contrary condition seems to exist. In Germany, where food conditions are the worst, there is said to be none, and in Italy, where pellagra has been supposed by many of us to be almost a scourge, it is now said to be a rare disease. Every Italian with whom I talked gave it as his opinion that pellagra has been decreasing rapidly in Italy for a number of years, and that during the war, when the Italians have been on a very low diet, the decrease has apparently continued, and there seems to be but little pellagra in Italy at this time.

FOOD CONDITIONS IN FRANCE IN 1918.

Most of my time was spent in Paris. Food conditions among the civil population of France in 1918 were serious, though not so bad as I expected to find them. When I arrived there in May it was not possible, at least in hotels, to get milk, butter or other fats, and sugar. Bread, which was heavy and unpalatable, could be obtained, but not in sufficient quantity. Apparently there was plenty of meat, but all the fat was cut off before it was sold, and it was very expensive, so that the poor could not buy it. The delicious French rolls, cakes, pastries, and other gastronomic delights which are delightful memories to those who had been to France before the war, were not to be had at any price. France was surely on war rations in 1918.

My personal experience illustrates the food situation in France last year. After having lived for three months in what is considered one of the best pensions (boarding houses) in Paris, I weighed and found that I had lost ten pounds. I mentioned this fact at the table, which seated twenty-five or more, where there were a number of American, French, and Italian officers; and found that all of those, who had been in France for sometime, had lost flesh in amounts ranging from ten to forty pounds. We were getting the nicest antifat diet imaginable, but it was typical of what was served everywhere in France. All our food was nicely prepared and none of us realized that we were not getting enough to eat until we found that we were losing flesh.

The French breakfast ordinarily consists of rolls, butter, and coffee or cocoa; but we had only two thin slices of war bread, no butter, no milk or cream for our coffee or cocoa, and it was

sweetened with saccharin. We were, therefore, consuming less than 300 calories for breakfast.

For luncheon we had plenty of vegetables, potatoes, rice, meats (particularly beef, veal, and fish) and fruit, orange, figs, or grapes. Dinner was the same as luncheon except the addition of a thin soup. We had no milk, butter, sugar, or desserts, except fruits—usually grapes. I estimated that we were getting each day about 2000 calories of food a day, one-fourth of which was proteins—not a well balanced diet, or one on which health and efficiency could be maintained for many months. I, therefore, moved to the Officers' Club (Hotel du Palais) in charge of the American Y. M. C. A., which provided us with everything that the French markets afforded, and in addition, butter, sugar, canned milk, and plenty of bread. I soon regained the flesh that I had lost and felt more like performing the work that I had to do.

NUTRITIONAL DISEASES IN FRANCE.

There can be no question but that for two or three years the whole French population has been undernourished, particularly the poor, and as a result the general death rate, especially among children, has increased considerably. Tuberculosis has increased enormously among the civil population of France. The same is true of the anemias. Scurvy, particularly the infantile variety, which was said to be rare in France prior to the war, is now a frequent condition. Epidemics of Vincent's angina, dysentery, and the infections of childhood, are said to have been worse than ever known in France. I could find no one in Northern France who had seen pellagra, but I did not visit the Southern districts, where it formerly prevailed. It should be mentioned that the American Red Cross has saved thousands of lives and has prevented many more thousands of cases of illness by distributing food and in establishing free clinics all over France.

The shortage of fats, sugar, and wheat products in France lasted up to several months after the signing of the armistice. Conditions were improving when I left France in February, but food was still so expensive that the French complained that they could not buy it. Incidentally, the French blame the Americans for raising the price of food and everything else that is sold in France.

FOOD CONDITIONS IN ENGLAND.

I was in England in June of last year, and apparently there was

a more serious food shortage there than in France; and there is no doubt that the British suffered greatly because of their inability to get sufficient fats, meats, and sugars. While there was apparently plenty of meat, everywhere in France, it could not be obtained, except on cards and then only in small quantities, in the hotels and cafes in London. Fish, however, was available. I was in England for only a week and my work was such that I had but little opportunity to investigate food conditions and nutritional diseases, but am convinced that the British suffered more than the French from the shortage of food.

THE ITALIAN WAR DIET.

Food conditions in Italy were worse than in either France or England. I spent three weeks there in January of this year, and from the information that was obtained from Red Cross workers, and from many Italians, I am convinced that there was a very serious shortage of meat and wheat in Italy in 1917 and 1918. Indeed I was informed that the disaffection in the Italian Army, which resulted in the disastrous retreat in 1917, was largely due to the fact that the Italian soldiers, and the civil population of Italy to a greater extent, were not getting enough food. I was also informed that the American Red Cross had much to do with keeping Italy in the war, by furnishing her people with food during the great crisis through which that country passed in 1917.

The meat shortage in Italy was said to have been most serious. Even two months after the signing of the armistice meat could not be had at many of the hotels and it was so expensive that the poor could get but little. The fact that the Italian Government prohibited the manufacture of macaroni and spaghetti is enough proof of the scarcity of wheat. The only macaroni I saw in Italy was in the American Hospital at Vicenza. This hospital, which received wheat from America, had a macaroni machine which was said to have been worked overtime; and partly for this reason the sick and wounded Italian soldiers—the “macaronis” as the American “dough-boys” called them—wanted to be treated by the American surgeons in Italy.

PELLAGRA IN ITALY.

Since the Italians could not get meat and wheat products, their diet consisted of cornmeal (*polenta*), rice (*risotti*), potatoes, and other vegetables. They also had beet sugar. They had no milk,

and eggs were so scarce and so expensive, that only the rich could get them. The Italians for several years have lived on a very unbalanced diet, markedly deficient in proteins, excessive in carbohydrates, and the vitamins contained in milk were not obtainable—much the same food conditions that exist among the poor in the rural districts of the South, where pellagra has seemed to be spreading during the past ten years.

In spite of this unbalanced diet pellagra has decreased very markedly in Italy since the war began. All the Italians with whom I discussed the subject said that pellagra has decreased to such an extent in the last twenty years that it is now a rare disease in that country. Just why this decrease has occurred, no one attempted to explain. All observers agreed that tuberculosis, scurvy, and other diseases in which malnutrition is an important factor, have increased very greatly since the war began. The general death rate, and that from the infectious diseases of childhood have also been excessive, which are accounted for by the low diet which the population of Italy have been forced to live upon.

The doctors in Rome said that there was no pellagra there but that there was plenty in Northern Italy. At Padua, near Venice, where the headquarters of the Italian Army is located, I was informed that there was no pellagra in that part of the country. At Vicenza, near Verona, the medical officers largely from New Orleans and Asheville, in the American hospital, through which many thousand sick Italians have passed, said that they had not seen anything that even remotely resembled pellagra, and that they had not heard the disease mentioned by the Italians. After chasing pellagra all over Italy it seemed that it was like the "snakes in Ireland," but I did not learn the name of the particular patron saint that is driving pellagra out of Italy.

I went to the office of the Surgeon General of the Italian Army, hoping to get some statistics on pellagra, but was informed that only a few cases had been reported among the five or six millions of soldiers that had been drafted in Italy. The only statistics that I could get on pellagra in the Italian Army was the statement that among the eighteen year old boys who had been called in the service in 1918, only thirty-four had been rejected because of pellagra.

The vital statistics division of Italian public health service was also visited, hoping to get some data on the prevalence of pellagra, but the physician in charge said that there were no reliable statis-

tics concerning pellagra in Italy. He said that he was quite sure that pellagra had decreased enormously in the past two decades, but that he had no data to prove it. He promised to send me the statistics on pellagra that could be obtained in his office, but up to this time they have not been received.

ITALIAN THEORIES OF THE ETIOLOGY OF PELLAGRA.

The Italian physicians with whom I talked were familiar with Goldberger's theory of an unbalanced or deficient diet being the cause of pellagra, but they do not accept it. They seem very much divided as to the etiological factors which might account for pellagra. Coni's view that pellagra is due to a toxin elaborated by an aspergillum which grows on maize that has not been dried thoroughly, is believed in by some; and there are still those who believe in Lombroso's theory of its being due to some unknown factor in maize.

Sambon's belief that the *simulium reptans* is the cause of pellagra is not accepted by many Italians. Alessandrini, brother of the tuberculosis expert by that name who will be remembered by American medical officers as having attended the Tuberculosis Conference of the Research Society in Paris, has made investigations which convince him that a deficiency of silicon in the diet is the cause of pellagra.⁴ Most of the Italians, however, from the best information that I could gather, think that the cause of pellagra is yet to be discovered.

CONDITIONS IN AUSTRIA AND HUNGARY.

Food conditions in Southern Austria were much worse than in Italy, but in Trent and Trieste I could find no pellagra. In Coryza around which the Italians and Austrians fought for two years, the inhabitants said that they had not had meat for months, and they showed many evidences of undernourishment. The death rate they said had increased enormously from tuberculosis and children's diseases, but there was no pellagra. In Southern Hungary, at Pola and Fiume in Istria, much the same conditions were found. They had an excess of carbohydrates, particularly beet sugar, and a deficiency of proteins, and the physicians there said they had no pellagra.

⁴ Alessandrini Giulio e Scala Alberto, "Contributo nuvo alla etiologia e patogenesi della pellagra." Roma, Tipografia Nazionale di G. Bertero E. C. Via Umbria, 1914.

STARVING GERMANY.

There has been such a difference of opinion regarding food conditions in Germany that it may be well to go a little more into detail in describing the investigations which I made there in February of this year. The fact that those who think that American food should be sold to the Germans have been accused of being too sympathetic, makes it seem advisable for me to state my attitude of mind towards the people of that accursed nation.

I went into Germany "seeing red:" I had been in Paris in May, June, and July, 1918, in the darkest days of the war, when it seemed as if nothing could keep the Germans from piercing the "heart of France." Night after night I had heard the air raids of the German zeppelins and bombing aeroplanes; and day after day, at varying intervals, the explosion of the shells from their big guns—one of them struck a church and killed 90 people while they were worshipping God; I had seen thousands of hungry and homeless old men, on the brink of the grave, mothers with babes at their breasts, and children of all ages who had refuged to Paris, who were driven from their homes in the spring drive of the Germans in 1918; I had seen hundreds of American soldiers with closed eyes and swollen faces, sick and dying from poisonous gases which the Germans had used contrary to all the laws of nations; I had seen thousands of American and French soldiers, who had been wounded fighting the most treacherous foes that ever gave battle; I had heard British, French, and American medical officers tell of various German atrocities which they had witnessed, and during my nine months service in France, I saw, and heard so much of the ruthless warfare of the Germans, I learned to hate them with a fury that I was ashamed to admit could exist in my heart for any human beings.

On my way to Germany I had gone through the Argonne where thousands of the finest of America's manhood had been killed in that most dreadful of all the battle fields of France, and had identified the body of my nephew, Captain Charles Dashiel Harris, the finest man of my name that has ever lived, who two months before, while leading his company in battle had been killed by the Germans, and had been buried by them in a shell hole. My heart cried out for vengeance for this brave boy's death, and for the thousands of other crimes of the Germans. I, therefore, was not in a sympathetic frame of mind when I went into Germany.

In 1906 I spent some time in study in Berlin, and Vienna, and made a number of visits to the rural districts in Germany and Austria. I am, therefore, familiar with the German customs in eating, and also with the general appearance of the German people. Before the war, the Germans were great gourmands; in fact, the way in which they gorged themselves, the frequency of their meals, and the amount of beer-swilling seen everywhere in Germany and Austria, used to cause the American physicians who were studying in Berlin and Vienna to refer to the Germans and Austrians as "pigs." Incidentally, in my opinion, before the war, the Germans suffered more from the bad effects of overeating than any other people in the world. Conditions are very different today; the corpulent, meat-eating, beer-swilling German is not so much in evidence, and all classes, particularly the children, are suffering from lack of nourishment.

The Germans are large people, with big frames and most of them are blonds, so that anemia in them would not be recognized by the average person unless he knew the Germans before the war and was accustomed to observe the peculiar pallor that is seen in people who are undernourished. I was so impressed with the anemic appearance of many people in Germany, that I began to make inquiries and found that in a number of localities, the names of which are withheld for military reasons, the Germans, as a rule, were getting less than half the amount of the bread, meat and fats needed for normal nutrition—not enough to maintain health and life for a great length of time.

German Rations: I made a number of inquiries regarding food conditions and found that the rations for an adult for the week ending February 1 consisted of: 100 grams of barley; 100 grams of potato flour; 5 lbs. of potatoes (four potatoes average a pound, with half of them rotten, but the people have to accept what is allotted to them by the Government); 2000 grams of bread; 150 grams of meat on Saturday only (this is equal to about one-quarter of a pound and not more than enough for one meal). I asked how often they ate meat, and they all said "once a week." They are allowed only 50 grams of fats (margarine) in ten days. Eggs cannot be obtained at any price, and there is practically no milk. Adults are allowed half a pound of beet-sugar per month and children are given half this amount. Children from one to three

years are allowed half a litre (1 pint) of milk per day, if there is any, but apparently there is very little—none in many places.

I purposely did not discuss food conditions with any of the office-holders or politicians, but talked to men, women, and children on the streets, in stores, shops, and hotels. I also talked to physicians. From ten years old upwards, the German populations seemed to know the exact number of grams that they were to get of all kinds of food, and with few exceptions all those with whom I talked showed evidence of lack of nourishment and complained that they were not getting enough to eat.

I went into a number of stores which had quite an imposing display in the windows, but found inside that many of the shelves had nothing on them, or contained empty boxes from which the contents had been sold. Some of the meat shops and grocery stores make displays of food, but it cannot be sold except by government cards, and at such high prices that none but the rich can buy it. With few exceptions, the girls and women with whom I talked in the various stores showed marked evidences of anemia, and said they had lost weight and in amounts ranging from 10 to 45 pounds. Two young girls with whom I talked had gained since the war, but they were at a growing age when their weight would naturally increase. All classes of people, particularly the women and children lacked energy and vitality. They seemed very different from the German people whom I knew in 1906.

Undernourished Children: A number of children trudging along to school through the snow, wearing paper sandals in cloth shoes with wooden soles, presented a pitiable spectacle. I asked them what they had had to eat that day, and for the past week. All of them replied: "Soup, potatoes, and a little bread." The soup is made of barley or potato flour, and often contains vegetables but no meat. Not one of 30 or more children remembered when they had had milk. The Germans seem to have more vegetables than anything else, but many vegetables are now being eaten that never were before. For instance, the sugar beet, which is extremely coarse, is said to be used quite generally; and a tough tuber, the name of which I have forgotten—a cross between a potato and a turnip—was also being eaten.

The bread that is issued to the Germans, by card, is heavy, black, gritty and tasteless. It is made of flour sold by the Government and no one seemed to know just what is its exact composition. It is

thought to be barley; potatoes and beet root. None of this flour is sold except to bakers and they can only sell a limited amount of bread to each person, and then only upon receipt of a ticket for the daily, or weekly supply.

Bread and Peace: I questioned a number of people as to the reason why the war ended so suddenly, and one very intelligent young man in a stationery shop expressed the opinion of the majority with whom I discussed the subject when he said that the people were starving; that they had to have bread; that there was a great deal of dissatisfaction; that the papers had kept the fact regarding the war situation from the German people and they did not know how badly their army had been beaten; that the papers had talked of victory until September and October, when the Germans made their peace drive. This young man and another said that the terms of the Armistice were considered very hard, yet they were willing to do anything to end the war and get food. The German people then saw that their only hope of getting peace—which meant to them BREAD—was to overthrow the Kaiser's regime. The Kaiser was informed of the dissatisfaction of his people and realizing that his life was in danger he abdicated and fled to Holland. It was the angry cry of his hungry people that reached the ears of the German monarch, as well as the fact that he knew that his armies were beaten and were becoming demoralized, which caused the greatest despot in history to give up his "divine" right to the throne.

Hunger was also the moving power that vacated the thrones in some of the lesser kingdoms of the German Empire. The King of Bavaria before the war affected agriculture, and had a large stock farm to which he gave his personal attention. When food began to be very scarce in 1917 the king sold milk to his subjects at a higher rate than had been charged by the dairymen. The disaffected laborers used this as propaganda in prejudicing the people against their king and the epithet "profiteering milk-farmer" was given him. I was told that this incident helped to make him so unpopular that he was forced to abdicate.

Tuberculosis and other Diseases: Persons who are in a state of low vitality fall an easy victim to tuberculosis, pneumonia, and many other diseases. Tuberculosis and pneumonia are, therefore, increasing enormously among the Germans. I could not get statistics proving this, but doctors and people from all classes told me so.

One physician, a dermatologist, said that there had been a very

great increase in skin diseases, particularly "urticaria" (nettle-rash) and other trophic disturbances. An apparently new skin disease has appeared in the form of nodules all over the body, often with considerable pigmentation of the skin of the face, which is said to be very difficult to cure. These skin troubles are undoubtedly caused by the lack of proper nourishment, and also the lack of soap which made it impossible for the Germans to keep as clean as they should—although they were never fond of bathing. I asked him if he had seen any skin lesions resembling pellagra which is prevalent in the southern states, and which has been claimed to be due to an unbalanced diet not very unlike that which the Germans have been getting; but he said that as far as he knew, there had been no cases of pellagra in Germany, that he had seen no skin lesions that resembled those of that disease.

The severe types of anemia among the women and children are said to occur frequently, and some estimate that more than a million people in Germany have died because of lack of proper food, not from starvation alone, but from infectious diseases of which the predisposing factor is malnutrition.

The surgeons of Germany say that malignant diseases of the intestines are very much more frequent among young people than was ever known before. It is thought that the coarse bread which is given out by the Government is the cause of this. I was unable to obtain any statistical data as to this increase in intestinal diseases.

Increase in Suicides Among the Germans: The suicide rate in Germany has always been high but since the Armistice it is said to have increased enormously, particularly among the professional classes and especially among the doctors. A number of prominent physicians in various lines of work were mentioned as having committed suicide. Among them was Dr. Adolph Schmidt, formerly of Dresden, a colonel in the German Army. Dr. Schmidt was considered one of the greatest authorities in the world on intestinal diseases, and I regarded him as probably the most courteous man whom I had known among the Germans and Austrians. The cause of this increase in the suicide rate is thought to be to lack of nourishment, and the despair of thinking men and women in Germany who see no future for themselves, or for their country.

Compensations to the Germans from a Low Diet: Even starvation has its compensations and German physicians say that since over eating has not been possible since 1916, there has been a decrease

in stomach diseases, but that when a gastric disorder does arise, it is very difficult to relieve, because the proper diet is lacking. I was also informed that the low diet has helped a great many people who were accustomed to over-eating before the war; and that liver diseases, chronic nephritis (Bright's disease) and other chronic ailments which affect men and women over 50 years of age, have decreased considerably. Diabetes, a disease which in many cases is thought to be due to over-eating, and in which the best treatment is starvation, is said to have disappeared from Germany. I asked a physician about gout, a disease formerly much dreaded by the Germans. He laughed, and replied "we don't have gout any more."

I heard considerable complaint about the beer which the Germans are getting. They said that there is no "substance" in it. It was described as "colored, brown water, a mysterious stuff that people can drink any amount of and never get crazy." One man, however, said that the German people were enormously better off because they cannot get their beer.

The Germans have had no coffee for three years. They have prepared substitutes of parched acorns, or burnt barley and chicory, which are not unlike genuine coffee in taste and appearance, but lack the "kick" of coffee because they are free from the stimulant, caffeine, which is the active principle of the coffee bean. Caffeine is really a powerful drug, and, therefore, excessive coffee-drinking, such as was the German habit before the war, is harmful. Since coffee has particularly no food value, except from the sugar and cream with which it is usually taken, the Germans are fortunate to be freed from the caffeine habit. They have tea which also contains caffeine, but few Germans seem to have the tea habit.

FOOD CONDITIONS IN BELGIUM.

I spent only two days in Belgium in February of this year, having followed the route taken by the Germans in 1914, going from Cologne to Aachen (Aix la Chapelle) then to Liege, Louvain and Brussels, I was travelling in an automobile and made stops at only three places, Louvain, Brussels, and in one village, the name of which I have forgotten. The difference in the appearance of the people across the line from Germany into Belgium was quite marked. I did not stop at Liege, but saw children on the streets eating big white "buns" that brought up memories of my boyhood days, when a German baker in the town of Cedartown, Ga., where I was born

and reared, used to make "buns" the size of a small boy's head. The Belgians appeared to be well nourished, and in Brussels, while food was expensive, though not much more so than in New York, plenty of cakes, pies, meats, eggs, and apparently all kinds of food, were obtainable. Belgian rations as allowed by the Government are bountiful when compared to that of the Germans. Apparently the United States Food Commission has been able to supply Belgium with food and clothing throughout the war.

I did not have the opportunity of talking to anyone in Belgium except hotel and shop keepers, but apparently the Belgians, insofar as food is concerned, have fared better than any other country in Europe. I could get no information of value regarding nutritional diseases, but was informed by laymen that tuberculosis has increased during the war, and that the death rate among children has also greatly increased.

GOLDBERGER'S THEORIES.

I desire it distinctly understood that I do not pretend to present a thorough study of food conditions in the European countries that I visited. It would take months to make anything like an accurate investigation of food conditions and nutritional diseases in any one country. Statistics on a large scale in any country are not to be had, and they would be thoroughly unreliable, if there were any, because of the war conditions in Europe. I also recognize the fact that the epidemiological study of a disease is not the best way to determine its etiology; but it is surely suggestive that with much the same food conditions in a number of European countries that exist among the poor in the rural districts of the South, which Goldberger, with many well known medical men concurring in his opinion, has announced is the cause of pellagra in the Southern States, there seems to be very little pellagra—none in Germany where food conditions are worst.

I am sorry that I have never been able to accept without reservation the Goldberger theory of the etiology of pellagra,⁵ because it is the best argument that I know of for diversified farming, and for the general improvement of the living conditions of the rural population of the South. Indeed, I feel that in promulgating his theory Dr. Goldberger, and the United States Public Health Service have performed valuable work for the South.

⁵ Goldberger: The Cause and Prevention of Pellagra. U. S. P. H. S. Report, No. 218, September 11, 1914.

If Dr. Goldberger's experiments had been carried out in Canada, or in Maine, where there is no pellagra, his results would have been more convincing, but they were carried out in states in which the disease was quite prevalent, and under conditions which seem to me did not preclude the possibility of infection playing a part.⁶

The High Protein Diet in the Treatment of Pellagra: Dr. Goldberger has also made a contribution of great therapeutic value in stressing the importance of a heavy protein diet in the prevention and treatment of pellagra, though I must disagree with him in his stated opinion that medicines are of little value in pellagra therapy. Years before Goldberger's theory was announced, I taught the students in the Medical Department of the University of Alabama that, in my opinion, pellagra in many respects resembles tuberculosis; that in both diseases undernourishment is one of the great predisposing causes; and that the most essential agencies in their treatment are rest, and a diet rich in meats, eggs, milk, and other proteins. As far back as 1907 my private pellagra patients and those in my service at the Mobile City Hospital were treated much like our tuberculosis cases were managed, except that our tuberculosis patients were kept on the porches night and day, while the pellagrins were kept out of the sunlight.

In an address before the Chicago Medical Society, in June, 1913,⁷ prior to the publication of Goldberger's work, I urged practically the same treatment that Goldberger advises, plus the use of medicines as indicated. I do not claim priority in advising forced feeding in pellagra, because in the Italian literature on the disease, before it became prevalent in the South, there were a number of references to practically the importance of full diet; and many physicians throughout the South have been using the high protein diet in pellagra for years.

Doubtful if Unbalanced Diet the Cause of Pellagra: Please understand that I do not even yet say that pellagra is not entirely a nutritional disease, due to an unbalanced and a deficient diet. What I mean to say is that the gigantic experiments which the war forced on the peoples of the various countries of Europe was not unlike those which Dr. Goldberger carried out on a small scale, the results of which have not been confirmed by others; and yet,

6 Goldberger: Experimental Pellagra in the Human Subject. Brought about by a Restricted Diet. U. S. P. H. S. Report, No. 311, November 12, 1915.

7 Harris: The Digestive Symptoms of, and Diet in Pellagra. Texas State Journal of Medicine, August, 1915.

in some of those countries, apparently there is no pellagra. Even in Italy, where pellagra was almost a scourge a few years ago, the disease has decreased during the war. It seems to me that the inference of there being possibly some other etiological factor than the unbalanced diet as the cause of pellagra, is justified.

I have no convictions as to the etiology of pellagra, but somehow from the course and symptoms of the disease it seems to me possible that it may be due to an infection taken into the gastro-intestinal tract from some source. Several thoughts have suggested themselves to me as possible lines of investigations in studying the etiology of pellagra and I will briefly mention them.

SUGGESTIONS FOR INVESTIGATIONS.

The similarity of pellagra and syphilis have been noted since the former was first described. The fact that the use of salvarsan, and other arsenical preparations, mercury, and other drugs that have proved helpful in luetic therapy, have also been reported as successful in treating pellagra, is also suggestive. Syphilis is due to a spirochete which was discovered with the use of the darkfield microscope. Recently a leptospira was proved to be the etiological factor in infectious jaundice, and a few weeks ago Noguchi, who is working under Gorgas with the International Yellow Fever Commission in trying to eradicate yellow fever from the world, using the darkfield microscope, discovered a leptospira which apparently is the cause of yellow fever.⁸ It, therefore, has occurred to me that perhaps pellagra may be due to an organism which may be discovered by studying the blood, tissues and excretions of pellagrins, with the darkfield microscope. The only work of that kind that I know of was carried out by Francis in the Marine Hospital, but his experiments were made on monkeys, who may not be susceptible to pellagra. The investigations of Francis in making the effort to transmit pellagra to monkeys were very thorough, and should be studied by anyone who undertakes any research work pertaining to the etiology of pellagra.⁹

The day before I left Paris, on February 14, Major General Sir John Rose Bradford and Captain Wilson, of the British Medical Service were in my office, and told me of their investigation of a number of diseases which have been thought to be caused by the filterable virus group of organisms. Using the Noguchi method,

⁸ Southern Medical Journal, Editorial, p. 169, Vol. XII, No. 3, March, 1919.

⁹ Francis: Cultivation Experiments with the Blood and Spinal Fluid of Pellagrins. Further Attempts to Transmit Pellagra to Monkeys.

they discovered an organism which they believe to be the cause of acute infective polyneuritis. Working along the same lines they isolated organisms from the blood in trench fever, influenza, trench nephritis, mumps, measles, and typhus fever. These organisms will all pass through the Berkfeld filter but they present certain cultural characteristics which are distinct and definite in a number of experiments. Investigations of the blood in pellagra following the methods of Bradford and Wilson, on the assumption that it might be due to a filterable virus, may give positive results.

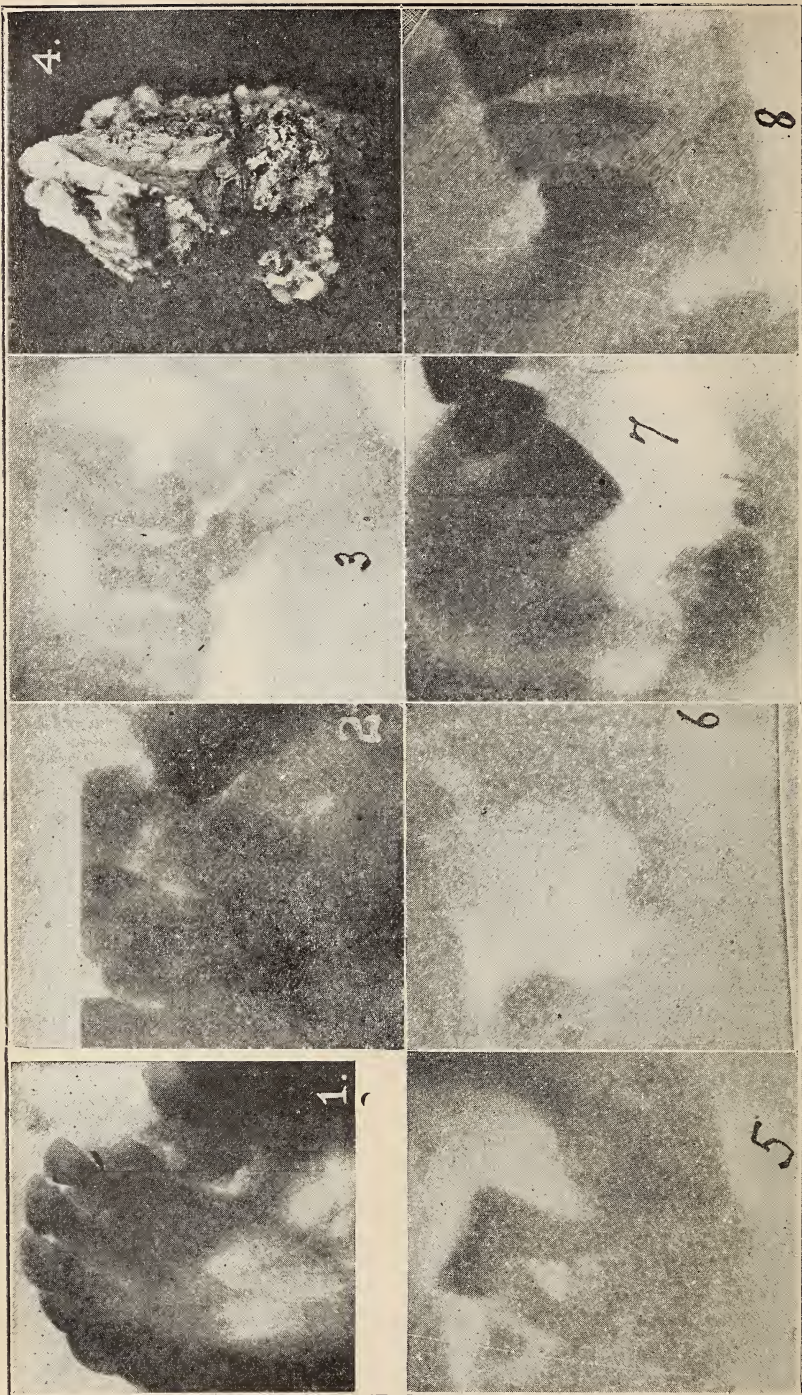
The South has borne the stigma of having much more pellagra than other sections of the country. We have as able and well trained medical men in the South as there are in the world; and if pellagra is due to a micro-organism of some kind, I hope that some good Southern doctor will discover it. It will be a great contribution to the science of medicine from a section of the United States that has suffered most from the ravages of the most dreadful disease that is endemic within our borders.

OBSERVATIONS UPON THE RESULTS OF UNERUPTED AND IMPACTED TEETH IN THE ADULT IN REFER- ENCE TO NEURALGIA AND OTHER LESIONS.*

By A. G. FRIEDRICHS, M. D., New Orleans.

Among the many pathological conditions which affect the human organism, there is none more distressing to the patient or which baffles the skill and efforts of the physician to cure, or even alleviate, than neuralgia. I, however, do not intend to treat of this malady in its entirety. I shall rather confine myself to that form of the disease which more frequently presents itself to my view in the practice of my specialty. I am the more inclined to do so, daily convinced that the hidden springs of irritation causing neuralgias of the trifacial nerve in the majority of instances, are unsuspected by the general practitioner. In the vain pursuit to alleviate suffering so intense at times as to engage his sincerest sympathy, he resorts to many expedients in the hope that his remedies will cure, only to be disappointed by a return of the disease in the same ratio as the effects of his narcotics wear off.

* Read at 40th Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.



It is most superfluous to remark that in many instances the failure to properly diagnose or rather locate the seat of trouble is the most fruitful source of failure to effect a cure. Neuralgia merely means nerve pain: it is the symptom indicative of a lesion at some point, and that the pain is due to some morbid condition or to some irritation of a nerve. Unfortunately, every one is apparently oblivious of the fact that one of the commonest and most powerful causes of reflex nervous disturbances arises from dental irritation. Dental irritation gives rise to neuralgia of the face, of the eyes, ears, stomach, neck, shoulders, and it would really seem that there is occasionally, and in some individuals, a special and exceptional communication between the fifth nerve and those of the arm. A recital of cases in point will more clearly illustrate to your minds the importance of directing your attention to the consideration of teeth as powerful factors in making up your diagnosis, more especially so as reflex nervous irritation, dependent upon dental diseases, is most uncertain and capricious.

Case 1. A patient 22 years of age. Began suffering at 12 years of age. Was a sufferer at intervals for five years. Consulted physicians without relief. This pain continued to become less intermittent, so he was unable to keep permanent employment and pay his doctors' bills and sustain himself. How this patient did not become a dope fiend I do not know, as the patient informed me that he almost lived on dope in order to get any relief at all. His story of misery and misfortune would fill a volume of considerable proportions. It is horrible to think that any human being could be permitted to go on so long without relief. Dense ignorance or monumental stupidity furnishes the only excuse.

The attached skiagraph explains his lesion, an impacted cuspid tooth.

The offending tooth was chiseled out and in twenty-four hours afterward he left the hospital entirely relieved. Saw the patient several months after, and he reports that he has had complete relief.

Case 2. This patient 34 years of age. Began suffering in 1912 intense pain in head and face; this continued and in a little while arthritis developed affecting his feet and ankles, and as a consequence was unable to walk. This condition continued until 1918 when an X-ray was suggested, and disclosed antrum trouble; this was in June of that year. This condition was treated and relieved, the arthritis disappeared and he began to walk with difficulty. In July another X-ray was taken—the one shown above. While the trouble in feet, ankles and knees improved the pain in head still continued, and as he expressed himself to me, if he did not get relief soon he would go mad, and begged me to do anything to get him out of his misery; that he could stand it no longer. He was allowed to go on till October, when I saw him and showed him the above X-ray. The whole cause of his trouble was clear. The impacted wisdom teeth in the upper jaw on

either side were the offending members. These teeth were extracted—the sockets of these teeth were probed. I passed the probe following the extension towards the base of the brain, it went so far back that I stopped fearing to go any further back toward the base of the brain. Complete recovery followed operation. I saw him several months ago, has had no more trouble.

Case 3. This is a lady, married, 24 years old. Began suffering about two years ago, off and on, until about eight months ago when the pain in her head became constant. Being a lady of means she was able to consult various and many practitioners here and elsewhere, with the same results. Finally her eyes seemed to become affected. This frightened her considerably. An examination of her blood, or her urine, her throat proved negative. During this period an osteopath was included in her selection. He, it appears, out of all consulted was satisfied with his diagnosis. He proclaimed with an authority, born of presumption and ignorance, that her case was one of dislocation of the spine and all she needed was general rubbing so as to get the spine straightened out. I might say in passing, this might be considered an improvement on the dope treatment she had been receiving before. The treatment caused her no harm, did her no good but, was rather expensive. She then consulted a physicial movement director—with the same results. Her eye trouble began to prey upon her so she consulted an oculist. He found no trouble and it was he who directed her to me. Her mouth showed no evidence of lesion, but I noticed in the upper jaw a wisdom tooth was missing. The X-ray showed it as an unerupted tooth. After extraction the pain was relieved and her eye trouble disappeared.

Case 4. Colored female, age thirty, married, with two children, about two years ago, began suffering with a severe pain about the face; this followed with swelling of the face on the left side, the pain continuing all the time. When the patient presented herself to me I found a dense, hard, bony mass; the growth was slow. Upon examining the mouth I found an abscessed tooth and concluded that the swelling was due to this abscess. The tooth was extracted. I thought this would have explained the condition. The socket was cureted and the abscess drained. The patient was discharged and I thought that the trouble would be relieved. She came back a few weeks later, with no improvement in her condition; the pain still very severe, especially at night. I might mention that I had an X-ray picture taken before I extracted the tooth, as it is my custom never to proceed with any unusual condition without one. The skiagraph gave no indication of anything unusual. I made a further investigation and found the swelling to be an enlargement of the bone. I then concluded that it might be an odontoma, a dentigerous cyst, as both the bicuspid and cuspid were missing in the arch, and had not been erupted. I had another skiagraph taken, with no better result than the first. The patient complained so much that it was necessary for me to make an attempt to relieve her. I concluded that I would chisel into the bony mass, through the aveolar process and superior maxillary bone. I found the bicuspid tooth imbedded in the bone. Position of the crown: The lower part at about the ala of the nose, extending upward towards the inner canthus of the eye; the position of the tooth is shown in the piece of bone which has been removed. The operation was performed on the 25th of last February, the wound healed up, and she has been

free from any discomfort since, excepting the loss of the bone in the mouth, which has left a large hole in the upper jaw. Her phonation and mastication were interfered with; she ate with difficulty and could hardly speak. Being responsible for her condition, it behooved me to make her comfortable, so I have restored the removed parts with the missing teeth by an artificial denture. Her future existence will be without trial or tribulation, as she can now phonate and masticate and swallow as well as she ever did.

Case 5. Old negro. Said that he had suffered so long he "done forgot when." He gave his age as 50 but he seemed to be much older. This condition must have continued over a long period as the bone was necrosed and a sinus had formed, opening on the outside of the cheek. Tooth was extracted and a part of the jaw that was necrosed was removed. The sinus and the jaw healed, and our old friend was out of the hospital in thirty-six hours.

Case 6. Male, 25 years old. Suffered a number of years, and finally suffered so intensely an X-ray was taken: In this case tooth was covered entirely with bone and had to be chiseled out. After extraction relief followed.

Case. 7. Male, 50 years old, with a long and painful history. With extraction came relief.

Case. 8. With similar history as Case 7, with similar treatment came relief.

This summary is but a few of the many cases which might be collected, demonstrating the powerful influence exerted by dental irritation in the production of nerve pain, and it is about high time that the specialist should take this "facial neuralgia" theory in hand and expose its errors. Ignorance in this regard has sometimes resulted in fatal consequences.

It is not diagnosis, but simon pure unadulterated charlatanism to tell the patient who consults you for relief of facial pain that he has neuralgia, that his symptoms are his disease, and by a confident manner assure him that even if he does not understand the meaning of neuralgia, the doctor knows all about his case. Upon this self-sufficient theory a system of drugging is resorted to, apparently oblivious of this fact that no pathological condition can exist without a cause; yet so-called facial neuralgia is regularly treated as if it was sui generis and not dependent upon any definite cause, or if from some cause, that cause is so hidden and remote as to escape the closest scrutiny, while in the mass of cases the origin of the pain stares one in the face the moment the mouth of the patient is examined, and almost invariably is only obscure to the inexperienced or superficial observer. It is not an uncommon occurrence to find patients treated for weeks and even months for neuralgia, the description of whose symptoms

alone would indicate to the specialist that they arose from odontitis, or from inflammation of the lining membrane of the antrum, and this apparently without the least suspicion on the part of the medical practitioner that they could have any such origin.

I do not desire that my language should convey the impression that dental irritation is by any means the sole cause of facial reflex pain, as you are well aware that other potent factors enter into the production of this condition. Syphilis, malaria, uterine disturbances, tumors, etc., frequently induce this distressing malady. What I wish to bring prominently forward is the fact that the teeth should not, in the making up of a diagnosis, be entirely ignored, as has been too often the case, and that they should come in for a due share of your consideration.

We must not forget that the ramifications of part of the fifth pair of nerves end in the dental pulp, and that inflammation (increased circulation) is denied expansion by the osseous walls of that dental canal, and the whole pressure is transmitted back through that branch to the brain and every sense. Can there be found in the whole system a more facile arrangement for the taking on of neuralgic influences than the nervous connection of the teeth with the very seat of sensation and vital functions? Is there another parallel in the whole structure where the nervous filament is thus exposed, unshielded, to the common attack of external disease, that it stands as a sort of thermometer of health, showing the first signs of deviation from the least physical depreciation or imperfection. It is as though the tender flower that drinks in genial air and lives in the warm sunlight should, on the first withdrawal of the genial rays, upturn its tender root point from the shielding earth to be exposed to the coming storm.

Neither do I wish the teeth should be made the fools for the other organs, and because of failure to find a cure in other directions that they should be condemned without thorough examination. Even in cases where there is pain in a tooth indicated as the offending member by the patient himself, such testimony should not always be received as conclusive evidence that the tooth is at the bottom of the trouble. It not infrequently happens, after a careful examination, that the source of pain is discovered, not in the tooth pointed out by the sufferer, but in some other tooth which he had no reason to suspect, probably in the opposing

jaw and several teeth removed, and this tooth should be extracted rather than the one he had made up his mind to lose.

In closing I am borrowing the language of an article I read before this same body in 1882. I offer no apology in so doing for the reason that it fits the time so well and is so appropriate.

“It is to be deplored how little physicians as a rule know about the teeth and their ailments, and yet the fact is easily enough explained. Medical institutions, in their course of instructions, ignore dental pathology, and medical text-books barely indicate its importance. Still, the responsibility to suffering humanity remains unchanged. It is an obligation we owe to the community that we thoroughly qualify ourselves for the duties of our profession. A person submitting himself for relief necessarily entrusts himself to the judgment and honesty of the physician. If he understood the nature of his disease and how to combat it, he would cure himself, but he does not, and he must trust to the skill and integrity of the doctor.

“It will not do, therefore, to administer medicine or proceed to an operation without first considering every element as cause and effect which might enter into the case, any other procedure is disreputable. Who would not brand with infamy the man who would pass upon the blind man a worthless piece of paper for a bank note? The veriest savage will see to the safety of a guest who commits himself to his hospitality. The wild beast of prey will scarce molest the victim cast upon his mercy. More unprincipled, savage and ferocious is he who will betray the trust in him professionally.

“From the most primitive times the mission of medical science has always been one of benevolence; its disciples the very type of humanity’s “friends in need.” Time has not changed the nature of their sacred mission, nor diminished the lustre of their deeds. But time has changed that profession in one particular at least—the division of labor. Formerly the physician was considered a perfect walking apothecary shop, a pharmacist, practical botanist, aurist, oculist, and what not. Now, though a part is entrusted to other hands, yet he is supposed to know all theoretically, that he may be able to direct to the skilfull. In other words, he must know the “Balm of Gilead” from the “deadly upas.” Who, then, but the physician should scrutinize all who direct “the daughters of our people” to avoid the “upas and choose the balm.”

DISCUSSION OF DR. FRIEDERICH’S PAPER.

Dr. L. L. Cazenavette, New Orleans: I have had at my neurological clinic at the Charity Hospital patients suffering from facial neuralgia. It has been a pleasure to me to send them to Dr. Freiderichs’ clinic for examination of the condition of the teeth. In many instances he has found unerupted teeth as the cause of the trouble. This subject is one of great interest, i. e. the examination of the teeth in neurotic conditions. I want to impress upon you the necessity of not only a general physical examination, but also an examination of the teeth and mouth in cases of neurasthenia. It has become a rule with me when I diagnose a case as one of neurasthenia or even of mild depressive psychosis, to insist upon the examination of the teeth and mouth

particularly with regard to blind abscesses, to make sure of the existing condition there. I refuse to treat the patient unless he has attended to this. I have had a number of cases of what we would ordinarily have diagnosed as neurasthenia and have found the cause in some toxic condition due to the teeth.

Dr. R. McG. Carruth, New Roads: Early in my professional career I was impressed with the many evils arising from defective teeth, and I always make it a rule to examine every mouth, especially in those with dyspeptic troubles, and insist upon oral hygiene. I have told many patients that they needed to go to a dentist rather than to a doctor,—that it was useless to put medicine into their mouths when with every glass of water and every piece of bread, they were swallowing poison.

THE EYE EXAMINATION AS A FACTOR IN THE DIAGNOSIS OF TRANSMITTED HEREDITARY LUES.*

A case report from the files of the Diagnostic Clinic.

By T. J. DIMITRY, M. D.

The presentation of this interesting case report is for the purpose of showing the great advantage of unit work, as practiced at the Diagnostic Clinic, in arriving at a diagnosis in a doubtful consideration that otherwise would have been overlooked.

The practice of medicine as usually conducted to-day, is truly the practice of drug administration and surgical interference, while the means at arriving at a careful diagnosis are neglected. Many are striving at thoroughness but these few are working alone and are greatly handicapped either by not being associated in unit work, or in not having the assistance of such work.

In concrete, this case report shows clearly that this diagnosis would have been impossible had not the eye examinations been made and the pathology found, thereby having raised more than a suspicion of lues, which diagnosis was clinched by the results of the therapeutic measures advised.

In this case there was not one single indication pointing to the necessity of making an eye examination, for the evidence presented pointed to a condition apparently demanding an abdominal section by the surgeon. The stomach examination, the radiological examination and the blood work, all deemed highly necessary, practically offered no other solution than surgical inter-

* Read at meeting of Orleans Parish Medical Society, October 27, 1919. (Received for publication December 10, 1919.—Eds.)

ference, while the apparently irrelevant eye examination alone cleared the way for a rational therapeutics.

And here it is pertinent to digress and remark that it is no longer a rare incident to find a large number of cases with primary optic atrophy diagnosed as tabetic who have had some abdominal operation performed with more than doubtful benefit, or who at least have been insistently advised to undergo such surgical procedure. These errors would not have occurred had careful ophthalmological examinations been made, and proper deductions drawn therefrom.

Ophthalmology is directly associated with neurology, and the trained and careful ophthalmologist can assist the clinician to a better diagnosis in many instances. This science should never be relegated when such exact evidence may be obtained through the little window to within.

August, 1919.

Report of examination of * * * * *

referred by * * * * *

PRESENT COMPLAINT.

Pain in epigastrium, and gall-bladder region. Feels worse after eating. Is constipated. Is losing weight. Complains of toothache at times. Can hardly stand to have pants buttoned snugly. Complains of rapid heart action. Notices himself very nervous and feverish at times. Suffers with headaches and backaches, mostly at night. Some pain over left shin bone, with paresthesia, at times. Memory not as good as formerly. Gets very much worried about his condition. Dizziness when he stoops over. Stabbing pain in left side which runs up to shoulder blade.

Past History: With the exception of the usual diseases of childhood, patient was apparently healthy until time of marriage. His present complaint has its beginning within the last twelve years, starting with periodic attacks of indigestion with pain after eating. Soda and asafetida gave temporary relief. Not subject to vomiting and has never been jaundiced.

In January, 1917, he had a most severe attack of pain over epigastrium which caused him to double up. This occurred while he was pulling on a line while fence building. A diagnosis of gall-stone was made and an immediate operation was performed in Baton Rouge. He states that a ruptured gastric ulcer was found. Simple drainage was resorted to. Following this he still suffered from "indigestion."

In May, 1917, he was operated by another surgeon. This operation consisted in a removal of the appendix, gastro—and enteroenterostomy and drainage of the gall-bladder. During the following year the patient's condition was greatly improved. During 1918 a recrudescence of his "indigestion" was relieved for six or eight months by dieting.

For the last six months patient has again been suffering from the same "indigestion" symptoms. During this present attack patient was examined by X-ray for stone in the kidneys with negative results.

Family History: Father still living, age 66 years. Is subject to "rheumatism," has had pneumonia three times and at one period of his life was under diet treatment for diabetes. Was healthy as a young man.

Mother still living at the age of 70 years. Was healthy as a young woman; unhealthy after marriage—womb trouble and "rheumatism," from which latter complaint she is now suffering. All of her family have died comparatively young—40 to 45. She has had seven children and one still-born child. Two children died in infancy and one son was accidentally killed. Five sons living, ages 34-44. One son is ruptured, one son in good health at 36 years, one 39, in fair health, the patient and remaining son being twins. Patient's twin brother is in good health.

Conjugal History: Married at 21-23 years. Four children, one miscarriage. This miscarriage was the first conception, eldest child 21, youngest 8. He states that his children are not healthy, but, on the contrary general appearances are very good.

Wife had iritis in left eye during infancy. There are now to be seen multiple posterior synechiæ and cataract. Pupil of right eye is 7 M. M. in size and optic nerve is dull grey. Teeth are rachitic, and there is a degree of deafness. One of her brothers is subject to epileptic fits; three others are healthy.

Personal History: Patient is a man of 44 years—apparently a little older—5 ft. 9 in. in height, slender, sunburned and slightly stooped. His weight is 132 lbs.—usual average 145 lbs.

The negative blood findings for malaria should not exclude this infection as the patient has suffered with feverish attacks at various times.

Examination: Skin—Dark over body generally. Abdomen shows three scars. 1. Result of punctured wound, in nipple line about two inches below right costal margin. 2. Ragged linear scar, 2½ inches beginning about 2 inches below costal margin and extending downward along edge of right rectus. There is a slight weakness at its upper and lower angles. 3. Strong linear scar in median line extending from a point 2 inches below ensiform to umbilicus. Legs show scars. One on anterior surface of right leg, about 1 x 3 inches. Other anterior surface of left leg, about 1 x 2 inches.

Glands: Cervical and epitrochlear lymphatics not palpable. A chain of two or three are palpable in inguinal regions. Thyroid negative.

Bones and Joints: Both shins rough. Ingrowing toenails, moderate degree. Callouses under large and small toes, both feet. Two small bunions.

Abdomen: Wall thin. No hernias. Tenderness and rigidity on pressure along the right costal margin, especially over the gall-bladder region and below the ensiform. Liver dullness extends above to the 8th interspace; below to the costal margin. No nodules palpable. Tenderness on pressure over the posterior surface of liver. (Boa's Sign) Right kidney not felt.

Left upper Quadrant: Kidney not felt. Spleen enlarged and tender, extending to level 2½ inches below costal margin.

Lower Quadrants: Nothing of note.

Genitalia: Negative.

Rectum and Prostates: Negative.

Oral Examination: Nothing of note.

Chest: Chest flat, emaciated with expansion good and equal. Inter costal spaces marked.

Lungs: Percussion, palpation and auscultation elicit nothing abnormal either anteriorly or posteriorly.

Heart: Normal position and size. Beats of proper rhythm. No evidence of peri—or endocardial trouble. No evidence of pathology of pleura, mediastinum or blood vessels.

Temperature: A. M. 98 $\frac{3}{5}$. Pulse rate 96. P. M. 98 $\frac{3}{5}$. Pulse rate 84.

Blood Pressure: A. M. Systolic 95. Diastolic 65. P. M. Systolic 95. Diastolic 70.

NEURO-PSYCHIATRIC—Head: Normal in size, no tenderness over sinuses or other portions of skull and no evident abnormalities.

Eye: Pupils equal, react to flash and daylight and to accommodation.

Ears: Hearing normal.

Nose: Sense of smell normal; no discharge.

Mouth: Sense of taste normal.

Extremities: Normal, excepting old scars over right and left tibias. Gives histories of traumatism. Tibias rough along edges.

Voluntary Motor System: Attitudes—No spinal curvatures, no deformities of extremities, no abnormal attitudes. Gait—Walking in all directions with eyes open and closed is normal. Co-ordination—No swaying in any direction with eyes open or closed. Skilled Acts—Performed naturally, excepting those involving the muscles of the abdomen.

Muscular Strength—Medium over entire musculature. Involuntary Nervous System—Twitchings, tremors, choreiform movements or spasms, negative, present and past.

Reflexes—Superficial and deep, are present and equal. Muscular Status—Normal, excepting over abdominal area where the condition is one of semi-contraction. Nerve Status—Irritability normal.

General Sensory: Touch—Acuity, localization and discrimination normal. Pain—Normal, except over abdominal area. This is due to trauma of lower intercostal nerves at previous operations.

Miscellaneous—Facial nerves, and face subjective and objective normal. No asymmetries.

Pharynx and Larynx. Uvula situated in median line, palate and pharyngeal reflexes normal. No difficulty in swallowing. Phonation and quality of voice normal.

Spinal Accessory—No weakness in either sternomastoid or trapezius.

Tongue is protruded in midline without tremor. Moves in all directions in normal excursions.

Psychiatrically patient is clear and orientates in all spheres well for an individual of his grade of intelligence.

Eye: History—Negative. Examination—Lids free from blepharitis, not swollen, no enlarged superficial veins and no inflammation. No paralysis. No accumulation in lachrymal sacs, which, with glands are normal. Corneas show no inflammation, no old scars or irritation; sensibility normal. Lens and vitreous clear in both eyes and free of pathology. Pupil reflexes perfect, respond to both light and convergence, directly consensually and accommodatively. Size of pupil right and left, 5 m. m. Movements of eyes, up, down, in and out is satisfactory. There is 3 prism diopters of esophoria; there is no hyperphoria.

Ophthalmoscopically: Retinæ, choroids and optic nerves:

R. E. Scleral ring around optic nerve is indistinct, vessels are tortuous and nerve head is relatively of a dirty grey color. There is a low degree of neuro-retinitis. L. E. Same conditions obtain with the addition of an accumulation of pigment at optic nerve. In macular region there is a choroiditis with atrophic changes.

Visions: Without lens—R. E. 20/30. L. E. 20/40. With a minus 0.50 Cyl. X.180 vision is improved but slightly.

Supplementary Examination of Wife's Eyes, Ears and Teeth: R. E. Pupil 7 m. m. in size. Media clear. Optic nerve is of a dirty grey color. L. E. Infantile iritis with secondary cataract and multiple posterior synechia.

Teeth poorly developed. Hearing slightly faulty.

Conclusion: In consideration of the above findings the ophthalmological examinations would strongly indicate lues.

Laboratory Reports: Urinalysis—Quantity 16 oz. Physically—Light amber, clear, no sediment, slightly acid, characteristic odor. Specific Grav. 1029. Chemically—Negative for albumin, sugar, indican and acetone. Microscopically—Negative for blood cells, pus and casts. Few epithelial cells and salt crystals.

Blood. 9:30 A. M. No breakfast. Reds. 4,570,000. Hemoglobin 90% (Sahli). Whites 7,920. Differential—Small Lymphs 5%. Large Lymphs 17%. Polys. 71%. Large Monos. 5%. Eosinos. 2%.

Negative for malarial parasites. The above is the average for three differential counts.

Wassermann of blood negative for both Mr. and Mrs. * * * * *
Cerebro-spinal fluid—Wassermann negative up to 1.5 c. c.; Colloidal Gold shows slight reduction in high dilution.

Globulins increased. Cells 5 per c. m. 100% Mononuclears. Physical—Very slight increases in pressure over normal. Fluid colorless. No pellicle formation.

Gastric Contents—A test breakfast of shredded wheat, 30 gm., and wafer, 250 c. c., with approximately one-half of the shredded wheat undigested. The contents were tinged slightly with blood and contained a small amount of mucus.

Total Acidity 27 degrees. Free Hcl. 17 degrees. Lactic Acid a small amount. No Boas-Oppler Bacilli were found, and the small trace of blood was accounted for by the retching during the passage of the tube.

X-ray Report: Our radiologist furnishes us with the opinion that the stomach picture and that of the left tibia are characteristically luetic.

CONCLUSIONS.

Considering the persistent symptoms referable to the right upper quadrant of the abdomen, the history in toto, the eye findings, the X-ray pictures and the gastric analysis, the last of which is, at least, not incompatible with a luetic condition of the stomach, we believe that vigorous anti-luetic treatment should be instituted for a reasonable period of time. To this end we would advise three (3) intravenous injections of one of the standard preparations of neoarsenobenzol in full doses, 0.9 gm., to be given at weekly intervals,

and two intravenous injections of the same product in smaller doses, 0.45 grm., at two weeks intervals.

At the same time daily inunctions of mercury should be carried on, to be followed by increasing doses of potassium iodide to tolerance.

Should this treatment not promote improvement, then surgical exploration is justifiable, with the idea of doing a cholecystectomy if the gall-bladder be found at fault, severing adhesions if these should be found, excising or burning of gastric ulcer if present, or other surgical interference if found indicated.

(Report Signed) DIAGNOSTIC CLINIC,

By

Secy-Treas.

Chairman.

CONCLUDING REMARKS.

This patient has taken inunctions of Artt's salve, and potassium iodide internally, and has improved remarkably. He has gained in weight, feels fine and his abdominal pains have practically disappeared.

The X-ray findings of the stomach and shin bone may not be considered for, although apparently characteristic of lues, their value was negated by the fact that the patient has previously had a gastro-enterostomy and had been kicked by a horse on the shin with resulting periostitis.

The probable source of infection was his wife who as a result of inherited lues, showed the triad of Hutchinson. He had never been exposed to any other source of infection.

DISCUSSION OF DR. DIMITRY'S PAPER.

Dr. F. M. Johns, New Orleans: I do not think that too much stress was placed on the spinal fluid findings by Dr. Dimitry. The presence of increased globulins is absolutely pathological and if otherwise unexplained and in the presence of any scientific symptoms is a good deal more diagnostic of spinal lues than a Wassermann.

Dr. A. C. King: We have reports of a thousand cases of tabes operated upon for various conditions. Of this number, ninety-seven were unnecessarily operated for some abdominal condition which did not exist, the operators having been misled in the diagnosis by tabetic crises. Remember that tabetic pains begin in the thighs, radiate up the groins and into the abdomen. Again pains begin in the back and radiate around the ribs and downward.

In the majority of these ninety-seven operated cases, a diagnosis of appendicitis or some gall-bladder disturbance, either stones or inflammatory condition, had been made. Among the thousand cases all those bearing scars were omitted from the tabulation.

This statement simply goes to show the importance of endeavoring to make a definite diagnosis. Dr. Dimitry's paper brings out the necessity for a clinic in this city where people in moderate circumstances can go and have a routine and complete examination made at a moderate cost. As it is now, if you want a urinalysis made, you send the patient to one man, for gastric analysis to another, for blood examination to another, and so on. It requires about a week or ten days to make a complete circuit. We ought to have a clinic for the working man. It is one of our greatest needs.

I wish to mention a couple of cases coming to my attention. One of these occurred in the Touro clinic some twenty-four years ago. A clinical diagnosis was made of sarcoma of the right thigh. He was advised his limb would require amputation but the patient begged so hard for us to save it that a temporary prescription of iodide of potash was given. At the end of four months time, the enlargement had disappeared and the leg was perfectly well. This was before the day of Wassermann reaction. We based our diagnosis on clinical symptoms.

The second case,—this man came to me complaining of gastric disturbances, including pains, vomiting, and so on. I had a complete gastric analysis made. The report received recommended surgical interference for gastric cancer. We thought at the time of the operation the tumor of the pyloric end of the stomach evidently was cancer. However, the man recovered and has been well ever since. Not long since, he applied for treatment for weakness of his legs and bladder disturbances at night. I had a Wassermann made which came back strongly positive. So far he has had one dose of salvarsan and is now getting hypodermics of mercury. This man denies any venereal trouble as a young man. His children are all healthy. His wife is healthy. It seems now this is a case of inherited syphilis and possibly this stomach tumor was of a syphilitic character.

Dr. T. J. Dimitry, (closing): I wish to thank Dr. Walthers for his remarks. In answer to Dr. Genella, I would like to state that the work of the Diagnostic Clinic is not for advertising its individual members. Our work is team work, and our conclusions are joint conclusions. The clinic is not designed for the aggrandizement of any of its members, nor is it intended to be, nor will it be, a "feeder" either for its members, or for any other person or institution.

The purpose of the clinic is to make a clear and definite diagnosis for the assistance of our confreres at a cost to the patient commensurate with the class of work done and with the upkeep of our equipment. We, as individuals, or as a body, do not treat the cases referred to us. That is done by the referring physician, and to this end, we furnish recommendation with our reports.

The names of our personnel are available in the advertising pages of the Journal of this Society, but as the question of individual names has been brought up, there is no objection in stating them here.

Until the last week, we have had the valuable assistance of Dr. Johns as head of our clinical laboratory department. Since then, Drs. Duval and Lanford have charge of the laboratories.

Our neurologist is Dr. Otis, who is comparatively a new man, a Bostonian, and a psychiatrist of some note. Our surgeon and gynecologist, purely in a diagnostic capacity, is Dr. Maurice Gelpi. Our stomach work, formerly in charge of Dr. Wimberly, who was compelled to leave on account of his health, is now being done by Dr. Nicolle.

Dr. Hamilton Jones succeeds Dr. Marchand of Philadelphia, as internist, the latter now devoting his attention to blood work in connection with the infectious process and immunology. Dr. Gore is our dental surgeon, and we have several other local men of note in the capacity of consultants.

As well demonstrated in this case, the X-ray cannot be depended upon for a definite diagnosis, for, while the stomach and shin bone pictures were here said to be characteristic of lues, a previous gastro-enterostomy and a former periostitis, the result of a horse kick, negated this interpretation. However, for the sake of thoroughness, the X-ray is not an unimportant part of our equipment.

Had the X-ray examination not been made here, a diagnosis of lues would undoubtedly have been arrived at practically from the eye findings alone. Next to the eye findings, the strongest factor in the diagnosis was the globulin increase in the spinal fluid, which, as Dr. Johns has just stated, was significant, and inclined him to believe that lues existed.

All former conclusions in this case were that it was surgical, and our physical examinations, excepting the eye, all uphold this view. It is then with emphasis that I point out the necessity of greater care in examination, and the importance of a more minute detail in arriving at a diagnosis.

Regarding Dr. King's statement, that 10% of his tabetic cases had either undergone operation by surgeons or had been advised to undergo operation, as well as Dr. Walther's remarks, I might say that it has always surprised me that the prevalence of lues is not appreciated.

SYPHILITIC FIBROSIS OF PENIS (KELOID TYPE) IN A NEGRO; REPORT OF A CASE.*

By H. W. E. WALTHER, M. D., F. A. C. S., New Orleans.

In a casual review of the literature on tumors of the penis, recently made by the writer, it was rather surprising to note that fibromata are considered rare. Having had the opportunity of observing several such conditions within a limited urological experience, extending over nine years past, I had considered the condition fairly common. Cases of elephantiasis have frequently been shown to us by Prof. Rudolph Matas at his clinic and malignant tumors of the male genitalia present themselves at Charity Hospital with fair regularity. It was only after submitting sections of this case to three pathologists that it was thought to be of sufficient interest to report at this time.

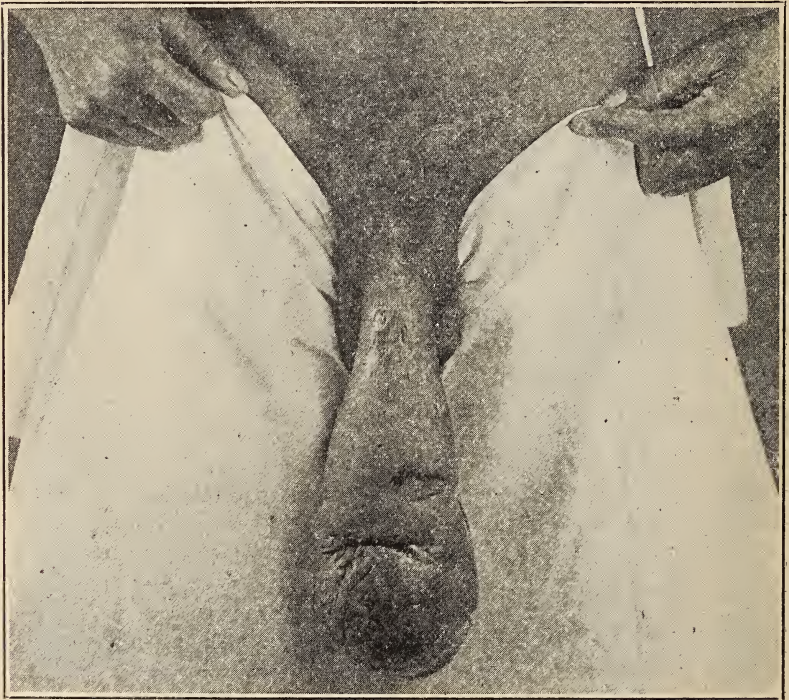
Not the least interesting phase of the case was the differential diagnosis. The patient, at first, gave a misleading history of his

* Read at Meeting of Orleans Parish Medical Society, October 27, 1919. (Received for publication December 10, 1919.—Eds.)

condition. We therefore attempted to diagnose by elimination. Elephantiasis, fibrosis, malignancy, tuberculosis, syphilis, and adenoma were all considered. However, the physical examination, study of the blood, the usual microscopical aids and a truthful history finally obtained from the patient permitted us to handle the case intelligently.

The case-history follows:

E. D., negro male, age 47, single, porter by occupation, was admitted to Genito-Urinary Service No. 3, Charity Hospital, on June 25, 1919, complaining of a markedly enlarged, painful penis. Patient stated that he had come to hospital to have penis amputated. The family history was negative for tuberculosis, cancer or bleeders. He had had the usual



diseases of childhood. Had Neisserian infections on numerous occasions. Nineteen years previous he had a single venereal sore on penis which a physician told him was syphilis. He did not take any treatment for this sore. The sore did not heal as it should, so he states. The glans began to swell within a few months and from this point the swelling slowly extended upwards, most probably into the trabecular structure of the corpora cavernosa at first, finally involving all the structures of the organ. Patient had been seen seven years ago by Dr.

A. Nelken at Touro Infirmary and amputation was then advised but patient refused. The general examination showed poor teeth and all glands palpable but not markedly enlarged. The patient was well developed and nourished.

The penis was abnormally large and mis-shapen. From the peno-pubic juncture to the urinary meatus it measured 11½ inches and at its most dependent portion the circumferential measurement was 13 inches. The skin surface was glazed and broken here and there with ulcerations and sinuses. The meatus was perfectly patent and the patient voided a fair sized stream. There was almost a stony-hardness to the feel of the tumor. Patient said that he would get erections occasionally in that portion of the penis nearest the pubes, and that such erections were very painful due to the weight of the tumor in the organ lower down. Then too the penis was of such a size as to be uncomfortable in walking and patient begged that it be removed. The scrotal contents were normal.

The prostate and seminal vesicles were not enlarged at rectal examination but the secretion shows a few pus cells. Urinalysis of second glass of urine negative. Blood-count normal; blood negative for young filaria. Wassermann: four plus. Phenolsulphonephthallein for two hours collection gave 65%. Blood-urea 0.381 gm. per liter. Hemoglobin: 80%. Scrapings from ulcers: negative for spirochæta pallida. Smears from sinuses: negative for tubercle bacilli.

On June 29, 1919, assisted by Dr. Jones (Intern), amputation of penis was done, the technique being that of Guiteras, with long skin flap and long urethral stump. Spinal anesthesia was employed, using 1 1/4 grains of apothesine in 1 cc. of saline solution.

Following operation the penile stump became infected and despite the liberal use of the modern antiseptics, the wound would not heal. On July 10th the first dose of nearsphenamine 0.9 gm. was given intravenously in 20 cc. freshly distilled sterile water. He had no reaction from the injection, but the wound began healing rapidly. This was followed by six more injections of nearsphenamine and two months of mercurial rubs.

The patient was last seen on Oct. 23. The stump is completely healed. The anti-syphilitic treatment will be continued.

The tumor was submitted to the pathologist of the Charity Hospital, Dr. G. B. Adams, and he reported the growth to be a fibroma of the keloid type. Sections of the tumor were presented to Dr. A. Lanford, pathologist to Touro Infirmary, and to Dr. M. Couret, pathologist to Hotel Dieu; both corroborated the diagnosis made by Dr. Adams.

PROPHYLAXIS, PATHOLOGY, TONGUE CLEANSING, TONGUE INDICATIONS.*

By JULES J. SARRAZIN, D. D. S.

Prophylaxis of the mouth is prophylaxis of the body. "The mouth is the gateway of Life;" keep it pure.

Even in the absence of any suppuration around teeth roots, or

* Read at Meeting of Orleans Parish Medical Society, November 10, 1919. (Received for publication December 10, 1919.—Eds.)

at their apices, whence metastatic effects are readily understood, the mouth may harbor the etiology of disease to tonsils, larynx, bronchi, stomach, intestines and the appendix.

As long as the diet of primordial man consisted of uncooked food only, the creamy mouth residue which remained between teeth, in their sulci and at their gums lines, was readily soluble in oral fluids, and was therefore gradually eliminated by active secretions, expectoration and deglutition. The teeth required no care, and the dorsum of the tongue accumulated no deposits made up of inspissated mucus, dead epithelial cells and decomposing vegetable and animal matter, breeding germs.

Conditions began to change when the Cro-Magnon man discovered the use of light and fire, twenty-five thousand years ago, and started the cooking of food. The effect of cooking food stuffs is well illustrated by the coagulation of albumin by heat. Starting with its advent, creamy remnants from mastication began to leave an insoluble residue at teeth necks, between them especially, and on the dorsum linguæ, as boli of food brushed over, which became an ideal pabulum, helped by animal heat and moisture.

Of course, such a change was extremely gradual, habits of life maintaining active circulation, causing the lingual papillæ to secrete actively, thus carrying away residues which would otherwise become dangerous pabula, while a large proportion of coarse, hard, fibrous food, and copious alkaline saliva from glands, still protected against caries, and if some streptococci and staphylococci lodged at gum margins, phagocytes backed by an active circulation of arterial blood left no opportunity for any serious damage to be done. However, from that time on, skulls do show occasional caries and dental periclasia, no doubt due to intense infection at small areas, but no general alveolar atrophy from dystrophia, which has since become a habitual condition. Exceptionally, however, we still see mature individuals whose lingual papillæ and mucus glands are so active that accretions do not occur at the dorsum of their tongues, although they may not be free of gingival infection leading to pyorrhœa. It is also noticeable that such exceptions occur in men who lead a very active life in the open air: farmers, laborers, lumbermen. The rule is, on the other hand, that it only requires smelling the semi-liquid or creamy foul deposit which may be removed from the dorsum of the tongue to prove that a most intense and dangerous infection is there going

on, unheeded, and ready to afford favorable symbiosis to any germs entering, from influenza to tuberculosis, or typhoid bacilli.

Bacteriological tests made from patients, and with classes of students, with the most careful technique, ages ranging from twenty to fifty years, show that the dorsum of the tongue is hardly ever free of staphylococci and streptococci, and that, in the very great majority of cases, such deposits contain both those germs, frequently running as high as ninety per cent of the mass. In fact, in some instances, there seemed to be nothing but germs, all parts of the creamy films removed yielding the same generous mixed growth of staphylococci and streptococci, frequently including streptococcus viridans, and of course other germs habitual to the oral flora.

It should also be noted that filmy deposits at the tongue's dorsum are seldom found in *healthy* children, unquestionably due to the greater activity of secretions of papillæ and mucosa, as a result of more energetic arterial circulation.

The tonsils are practically in contact with the back of the tongue while at rest. They are highly vascular, but also easily permeable, and due to lack of muscular contraction, may frequently contain less arterial than venous blood; and phagocytic leukocytes lose activity in the latter. It is therefore easily understood that tonsillar infection would occur by contiguity; and more tongue cleansing would lessen tonsillectomy. Tonsillitis, not follicular, or which has not reached the suppurative stage, responds to rigidly enforced germicidal mouth treatment, backed by tongue cleansing and gargling.

The microscopical moisture globules gathered in the mouth and in the pharynx, as well as in the nasal passages, will carry germs by respiration, if there be intense infection at gum lines, at the dorsum linguæ, at tonsils or at Schneiderian membranes, causing laryngitis, bronchitis, bronchial catarrh.

Food which has been masticated where pus exuded from sockets, or where it gathered infection from films on teeth, brushes over the back of the tongue, leaving more germs there, with pabulum for their growth, and goes down the alimentary tract. Some germs are destroyed by digestive secretions, all staphylo and streptococci, if they be comparatively few; but, if infection of the bolus of food is intense, enough germs escape and lodge in tissues to cause such disturbances as gastritis, septic gastritis, gastric erosions and

ulcers; and lower down: diarrhea, intestinal toxemia, appendicitis. Lack of tissue resistance to a milder infection also counts.

The metastatic effects of oral infection cannot be traced directly to an infected tongue, or to infectious films on teeth, or to pus admixed to food in mastication; although, indirectly, germs which have escaped the destructive digestive cataclysm, and have found a habitat in alimentary tissues, could be brought elsewhere by circulation; but the prolific cause of metastatic manifestations may be found even more in pyorrheal pockets, where pus is in direct contact with diploetic bone and mucous tissues, than in granulomas at root apices, around which nature has built a protective membrane. However, pyogenic bacteria frequently break into tissues surrounding granulomas, and large adjacent necrotic areas are frequently formed there. Still, infection absorbing areas in pus pockets about roots are, as a rule, considerably more extensive than at their apices.

Wherever circulation is less active, liability to infection and its effects are increased. Arthritis, in all its forms, and gout, are frequent metastatic manifestations of alveolar and apical infection, while rheumatic fever expresses the effort of the organism to rid itself of the toxins thrown in circulation.

As the spleen destroys blood cells, which, as a result of constant infection reaching the blood stream, have become unfit for circulation, because infective germs were too numerous to be disposed of by opsonins, agglutinins, bacteriolysins and phagocytes, anemia results as cells are destroyed faster than they can be derived from the bone marrow, and simple anemia, in the presence of intense infection, may become pernicious anemia.

Fundamentally, resistance to infection depends upon the quality of blood and its circulation. When quality is impaired by chronic infection, phagocytes and adjuncts exhausted in the fight, some erythrocytes destroyed, the individual readily succumbs to any extraneous specific infection encountered.

Neurosis, which in turn disturbs bodily functions, results from the effect of vitiated blood on nervous tissues.

Blood may bring infection to kidney or liver, causing nephritis or abscess.

The heart which is constantly filled with infected blood develops endocarditis.

Cerebro-spinal disturbances have resulted from intense chronic

infection, not corrected early enough, and even, in time, impairment of the cerebellum, causing death.

The above are frequent results of oral infection. Of course, the infection may come from some other focus in the body, nor is it intended to convey that pathological disturbances may not have had another cause, but other infective etiology in the body is not apt to be carried for years, like in the mouth, in complete ignorance of the fact. Medicine tolerates the presence of pus nowhere in the body; in the mouth it is simply overlooked, because its dangers are not fully realized.

It should be the routine of every physical examination, and a prerequisite to treatment, that careful probing be done all around every tooth in the mouth to discover the presence of the slightest and slenderest pus pocket, and that the apices of all teeth bearing large fillings or crowns, or place where the absence of teeth may mean a hidden root, be all radiographed.

This is the dawn of the blessed age of prophylaxis, and as already said, prophylaxis of the mouth, for the reasons just mentioned, is prophylaxis of the body.

Caries of teeth, leading to the eventual infection and death of tooth pulps, the infection from whose decomposition and putrefaction reaches through foramina into the fundus of alveolar sockets, is, in a great measure, preventable by proper and faithful home oral prophylaxis. At least, the most dangerous type of cavities is preventable, those which weaken the teeth the most, and reach tooth pulps the faster: those cavities which start on the surfaces of contact between teeth. Cavities developing as a result of faulty enamel fissures on morsal surfaces are not preventable, but but they are less dangerous, and can easily be detected before tooth pulps are threatened.

Infection at gum margins is preventable; and there, again, the greater danger is located at the necks of teeth, approximately, in films of inspissated mucus into which lodge dead epithelial cells, bacteria and thin creamy exudates from mastication, to form an ideal culture medium with the help of warmth and moisture. Lime salts lodge into the infectious films thus formed and concrete into hard deposits. Whether it be films only, or films into which calcium has deposited; with more films over, and other layers of chemical masses of lime salts gradually superimposed, matters not. The important fact is that either contain the same

pyogenic infection, of course including strepto and staphylococci. At first, their toxins irritate and congest gum margins, opening cells to the penetration of streptococci, which are followed by the destructive staphylococci, and as minute capillaries break, leukocytes exude, phagocytes now helpless, which decompose to form pus, while the phosphates and urates, from the liberated plasma, mix with bone cells disintegrated by the pus to deposit on to roots, starting into cemental pits bared by the suppurative destruction of the pericementum.

Fundamentally, it is the same old and unchangeable etiopathological march of infection, congestion, inflammation, supuration, and manifests in the mucosa of the mouth exactly like it does anywhere else in the body; except that roots, with exposed cemental pits on them, are present to retain the foundation layer of phosphate and urates of lime and soda to build serumal calculi; which, in their turn, are irritants, since they are built of infection; just ordinary etiology and pathology, and the process reaches deeper and deeper until dental periclasia leaves no bone to support roots.

Of course, this local pathology takes no account of tissue resistance and of mandibular maxillary diploetic dystrophia and atrophy, which latter are habitually present in individuals inclined to sedentary habits, but such fundamental considerations and their remedy need not be dwelt upon to physicians. That systemic part of the prophylaxis against tissue infection needs no emphasis, but details covering the local aspect of it may prove interesting.

The point of greater danger is between teeth, because germs there are left undisturbed. Properly constructed brushes can reach somewhat into embrasures between teeth, but, even worked from both sides, do not penetrate deeply enough to thoroughly break up approximal films, especially if teeth are nearly as wide at gum lines as at biting surfaces, and this is unfortunately frequently the case. Waxed silk tape, preferably manufactured with powder incorporated in it, entered between teeth with a sliding motion, and separately rubbed gently against each tooth, is an un-failing means of scattering infectious material and exposing it to germicidal powder and mouth wash. Constant repetition of that technique polishes contact surfaces of teeth, and thereby reduces their tendency to retain infectious films.

A fresh charge of dry powder, on a dry brush, taken by plung-

ing in powder poured into a small glass, should be repeated for each few teeth, so that all get thorough scouring and polishing. Every time saliva drenches the brush, it should be wiped. The lingual sides of teeth should receive even more attention than the outer surfaces. This is particularly true of molars, the lower ones especially, because difficulty of access tends to cause baneful neglect in such locations; and the wider the teeth, the more infection they may accumulate. In all positions, brush bristles should move from on the gums, opposite roots, to biting surfaces, both inside and outside, above and below. Cross brushing injures both teeth and gums, and fails to push bristles into embrasures between teeth to complete the good work of the powder-charged-waxed-silk tape.

Tongue cleansing need seldom be done more than once a day, unless infectious filth is plentiful. The best time for it is in the morning on an empty stomach, so that no vomiting ensues, if gagging occurs. Infected teeth at gum margins infect tongue dorsal deposits, and the latter re-infect teeth and gums within a few minutes after cleansing with tape, brush, powder and mouth wash, if tongue deposits are thick, and therefore readily liberate some of their material. A vicious circle if thus formed unless infectious material at the back of the tongue is also removed. It is noteworthy that when tongue cleansing has been practised for a few weeks, in faithful conjunction with taping, brushing, flushing and gargling, it can usually be dispensed with, or its frequency lessened, clearly showing the inter-action mentioned.

The frequency of taping, powder brushing and mouth flushing, is a matter of bacteriology. In a reasonably clean mouth, fermentation of cooked starchy creamy material, resulting from a meal, begins about two hours later. Decomposition of vegetable and animal matter starts in three hours, and putrefaction follows in about another hour, thanks to the ideal incubative conditions present. In a filthy mouth, those processes are hastened, because mastication has added fuel to the fire already existing, and, in an unusually clean one, they are retarded. In other words, the more germs already present to start processes, and the more intense they become. Hence the safe rule of taping, powder brushing, and mouth flushing just as early as possible after each meal, repeating them at bed time also, and tongue cleansing only upon rising in the morning.

During sleep, mouth secretions are suspended, and germs in the mouth are left undisturbed. Moisture and heat favor their rapid development, and the smallest traces of starchy, vegetable or animal matter offer ideal pabulum for their growth. Therefore, unless not a morsel of food, solid or liquid, has passed the lips since the last meal and bed time, and the most thorough mouth cleansing has been done after that last meal, it must be repeated at bed time. If the mouth has been used for water and air only, following cleansing after the last evening meal, then, germicidal mouth wash flushing and gargling will suffice.

Making bed time mouth cleansing the "sine qua non," the greater the lapse of time following a meal preceding it and itself, and the greater the infective danger leading to caries and gum lesion. Hence, after bed time cleansing, the next in importance will be *after* breakfast, while a safe compromise measure, in a clean mouth, will allow a few hours delay after lunch, and waiting until bed time after the evening meal. However, to safely allow such a compromise, without danger, requires that conditions favorable to the maintainance of cleanliness be established by scaling away every vestige of frosty infecto-calcareous deposits, at and slightly beneath gum margins, approximately especially, followed by the most thorough leveling and smoothing of all fillings and crowns, which might retain infection beneath edges, especially at approximal gum margins, and finally, the most searching polishing of all surfaces of all teeth, giving particular care to gingival teeth necks and approximating surfaces between them, just where accurate polishing to facilitate personal care is most difficult. Safety calls for the thoroughness of the patient's technique besides.

Once a patient is trained in tongue cleansing, it need not be repeated by the operator. Protrude the tip of the tongue as far out as possible. Pass some clean cloth under it, and wrap to afford grip, while nasal respiration is established at the same time, to reduce motion and gagging. Repeat cleansing, *not scraping* strokes, with a tongue cleanser, avoiding papillæ, until no scum shows at the dorsum lingue.

It is common practice to neglect mouth personal prophylaxis, while simply ailing, or during illness. While the system is already the prey of some specific infection, which has gained entrance through favorable incubative conditions in the mouth, more frequently than by other channels, it is not time to throw upon

the resisting elements of the blood more infection of the same kind, or from other symbiotic germs which thrive in the mouth. Mouth neglect at such times amounts to re-inforcing one's enemy. It is excusable to only mop teeth and gums with a germicidal solution while the patient must not be moved at all, but the solution should be positively germicidal, and swabbing should be repeated every hour, except during quiet rest, the nurse observing periods when it is apt to occur in order to make mouth cleansing precede it. Moreover, such mopping should be thorough, including both inside and outside surfaces, above and below, and extending to and around all rearmost molars. If wooden applicators be wet for a few minutes, it becomes possible to curve them at one end, so that a wad of cotton, previously wound on them securely by the thumb nail, will have ready access to all parts of the mouth. As soon as conditions allow, the patient's mouth should be cleansed by the nurse as thoroughly as might be done in health. Nurses should be practiced in entering waxed-floss-silk-powder-charged tapes between teeth, with a sliding motion that does not snap down on gums, and in the proper vertical motion of brush bristles dipped in dry powder. It is no wonderful performance, by simply turning patients on their side, to cleanse all the left teeth, both above and below, in and out, while the patient lies on the right, and vice-versa; tongue cleansing done in either position, and mouth flushing in both. When the patient is unable to work tongue and cheeks, the nurse may use a Moffat Syringe, or any other suitable one, for mouth flushing and irrigating between teeth. Unfortunately, nurses are not trained in proper mouth cleansing, and a very important aid to patients' comfort and recovery is neglected, considering the depressing influences which result.

Objection is sometimes raised to tongue cleansing on the ground that clinical indication may be removed which should be preserved. Nothing is more deceptive, because what is removed is infection, which is always a menace to health, and because important tongue readings do not depend on the dorsum linguæ, whence infectious deposits are removed. The main instance of tongue dorsal reading is the usually accepted indication of costiveness by such deposits, but there are surely more accurate evidences of constipation. Nor is it logical to assume that boli of food, in deglutition, scrape and cleanse the back of the tongue. This would be true if we swallowed masticated grass, or flesh with fur; but the thin creamy

exudate expressed from an ensalivated bolus of pappy cooked material happens to supply pabulum-deposit, instead of removing it.

This so called geographic tongue shows in patches, at lateral margins and over the entire surface, as well as near the base of the tongue; the painful tongue of acute glossitis, accompanied by dribbling of saliva, rare dryness, pain at angles of the mandible and at sides of the neck, the tongue red and swollen, with deep fissures on its upper surface, and notches marked at lateral margins by contact with the teeth, would not be diagnosed by dorsal deposits.

Chronic glossitis, with roughness and dullness at some spots, and glazing at others, with surface fissures that do not bleed, and are not sensitive to contact, is not blurred by tongue cleansing.

Mouth infection is usually responsible for both forms of glossitis.

The impeded motions of the tongue, which indicate cerebral or hypoglossal nerve disturbance, are not affected by tongue cleansing, nor are the dark brown deposits covering the entire lingual surfaces, noticeable in severe acute disease, especially in typhoid conditions, when, by the way, the care of the mouth becomes impossible beyond the swabbing already described, until systemic improvement allows more.

The epileptic, who bites his tongue, leaves marks which may not be hidden. The dry and bright red strawberry tongue of scarlatina is not confined to the rear dorsum. Neither the bluish tongue of cyanosis, nor the dangerous lead colored tongue can be disguised.

A black coating spread on the lingual surface is often a fatal indication in dysentery and small pox. Tannin in a mouth wash, which is of great value in pyorrhoeal conditions, because it acts indirectly as a pus solvent by retaining more blood in tissues, will leave small black patches or streaks, but such streaks are quite unlike the black coating of dysentery or small pox.

Dorland Medical Dictionary, eighth edition, page 1013, describes a coated tongue as "a tongue covered with a whitish or yellowish layer consisting of desquamated epithelium, debris, bacteria, fungi, etc." Should they be left?

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DISCUSSION OF DR. SARRAZIN'S PAPER.

Dr. H. M. Moore: I have nothing to add to Dr. Sarrazin's paper. It is certainly the most vital question of the dental profession today and I am thoroughly convinced that those of us who have been making every effort in the last few years to keep abreast of the time, and to do the best possible for humanity, feel that it is not only the greatest part of dentistry but also of general medicine. We feel that as far as preventive medicine is concerned, that early prophylaxis holds first place, and I am very glad to see that many of the leading physicians are seeing the situation as we do. Dr. Charles Mayo stated as far back as four or five years ago that he was thoroughly convinced that the medical profession could not make further desired progress without the assistance and co-operation of the dentist and that one thing I believe, had more to do with the waking up of the dental profession than anything else that has happened, because almost all of the dentists got busy after that and we feel that we have accomplished a great deal in the past three or four years along those lines. We feel that it is the most important thing today in both professions, and Dr. Sarrazin is certainly the leader in the South.

Dr. T. J. Dimitry: I feel that I might be out of order as I did not hear the beginning of Dr. Sarrazin's paper, but as it relates to the teeth it might be that the questions I am about to ask are correct. I had a very curious case of a young girl who suffered with an eye condition. An X-ray picture of the tooth showed an abscess, yet when the tooth was subjected to the electrical test the tooth was said to be alive. Is it possible for a tooth to be alive from an X-ray standpoint and have an abscess? I dare say the condition can exist because each and every root may not be dead and as a result, I believe that this tooth, in spite of its electrical test, is a dead tooth and should be removed and the X-ray picture correct for an abscess.

Another question:—Is it not a fact that little attention is shown to the value of the Hutchinson teeth in the diagnosis of inherited lues? As ophthalmologists, we value the teeth dystrophies in association with deafness and eye lesion as of extreme value. The dentist merely passes up this important subject and says little—might I ask why?

Dr. Sarrazin (closing): Just like metastasis may carry infection to distant parts of the body, it may be carried to the apex of a vital tooth, either from some nearby roots, or from some more remote focus. Therefore, it is possible, and does sometimes happen, although seldom, that a granuloma may be present at the apex of a vital tooth. Medicine nowhere tolerates the presence of pus, and whether the abscess be due to a particular tooth, or whether it be due to an infection carried from some other part of the body, or from a neighboring tooth, the same treatment must be followed; the infection must be reached, by first extracting a tooth, if necessary; and the sacrifice of a tooth, in such cases is much wiser than risking that of an eye; nor should we rest until positively ascertaining that there is no focus of infection anywhere else in tooth sockets, or, for that matter, anywhere else in the body.

I have practiced quite long before we had radiographs to help us, and there was a time when I attached a great deal of importance to Hutchinson teeth on questions of luetic heredity. It is also a fact, however, that these malformations may be due to other dystrophies.

The reason why the tendency of late years has been to attach less importance to Hutchinson teeth is that more of it has been given to the Wassermann test. As we go along however, we begin to realize that the Wassermann test is not always reliable, and this will tend to restore the Hutchinson clinical indications to their former importance. I am perfectly in accord with the discussor. We should not overlook luetic clinical indications, and should combine them with blood tests.

PERSISTENT OCCIPITO-POSTERIOR POSITIONS.*

By H. E. MILLER, M. D., New Orleans.

The brief space which this subject has received in most of the recognized text-books, necessarily precludes the amount of serious attention which one, other than a specialist in obstetrics, would devote to it. Yet to review the tables representing the fatal mortality and maternal morbidity, one is immediately impressed with the seriousness of such a condition. The primary essentials in a thorough understanding of a pathological state, is a diligent search for the cause and the apprehension of any factors which may contribute to its establishment.

Since we are to consider the persistent occipito-posterior positions only, an explanation for the failure to rotate anteriorly, as most of them do, is important. The primary cause may be summed up briefly in stating that all posterior positions are a result of interference, directly or indirectly with the normal amount of flexion of the head. Conditions which alter the normal degree of flexion, and contribute to the persistent posterior positions are many.

The more important ones are flat pelvis, brachy-cephalia, pendulous abdomen, uterine and ovarian tumors, normal pelvis, small child, large pelvis, average size child, perineal lacerations, etc. The conservative estimate of the relative frequency of posterior positions, is fallacious when applied to private practice, as these estimates are taken from large maternity hospital records, where the patients possess a better muscular tone, lower tensioned nervous system, and other features which are conducive to a marked degree of endurance. While on the other hand in private work, these essential attributes are more or less absent. In such instances an apparent exhaustion will lead to fetal embarrassment,

* Read at Meeting of Orleans Parish Medical Society, November 10, 1919.

prolonged pressure on maternal soft parts, and cause other incidents which necessitate an early operative interference. Should this not be the case, a large percentage of these cases would ultimately rotate anteriorly, and terminate normally.

The clinical courses of occipito posterior positions may vary with each individual case, depending principally on how near there is the normal co-relation of all the forces which terminate the particular case. One is to be suspicious of the condition where the labor is prolonged, coupled with weak and irregular pains, and early rupture of the membranes. Subsequent observations by abdominal palpation, will reveal little other than the absence of the fetal ovoid anteriorly. Fetal heart tones are muffled as a rule, and displaced to flank. By vaginal examination, the true state of affairs is readily disclosed. The head is found high up in the pelvis, the normal relation of the fontanelles and pelvis landmarks is reversed, flexion is disturbed, and does not tend to correct itself with descent. The sagittal suture may be found in one of three places, anterior posterior, oblique or transverse. The latter notations should be made early, as they may be almost entirely erased by the formation of a caput later on.

The moulding of the head in all cases is extreme, the mento occipito diameter is very much elongated at the expense of the sub-occipito frontal (*dolico-cephalia*). The overlapping of the cranial bones is marked, and as a rule, a large caput forms over the anterior fontanelle.

The sources of morbidity for the mother are a state of exhaustion bordering close on to shock, sepsis resulting from frequent examinations, and lowered resistance from prolonged pressure. Post-partum hemorrhage is not uncommon, as a result of exhaustion of uterine muscle. Lacerations of varying degree are inevitable with the frequent use of instruments. DeLee states that more children are lost from this complication, than are lost from contracted pelvis, the danger being from asphyxia and injuries incidental to forcep deliveries.

When the occiput becomes posterior, and in what particular plans of the pelvis the condition presents itself, varies. It is not infrequent to find the occiput presenting posteriorly at the superior straight, even before engagement. The majority however enter the brim through the transverse plane of the pelvis,

and due to some of the conditions afore mentioned, rotate posteriorly.

Should conditions prevail interfering with the ultimate rotation anteriorly, the occiput may assume one of three positions. (1) remain as posterior in oblique planes, (2) rotate to transverse plane, and become arrested on the ischial spines, (3) by super-rotation the sagittal suture presents in the anterior posterior diameter of the pelvis with small fontanelle posteriorly. It is not very amiss from an absolute fact, to state that 95 per cent of cases terminating as R. O. A. have been at one stage of the labor in one of the three above mentioned positions.

When and how are we to assist the normal forces in the completion of labor under such circumstances? In all cases our attitude should be that of watchful waiting, until positive indications arise for interference, assuming of course that the case has been thoroughly studied, and all possibilities of contracted pelvis, or any condition which would not permit of delivery through normal passages, have been eliminated.

Should the conditions arise for interference when the head is still floating, dilatation of cervix and manual rotation to a more favorable diameter is effected. This maneuver may be further augmented by applying forceps, forcing engagement in the new diameter, and then left to nature. By no means is a version and breech extraction to be attempted, as the "waters" have long since drained away, and the cervix very likely not fully dilated.

Probable dangers for the mother when version and extraction are done under such circumstances are, rupture of uterus, dangerous lacerations of cervix and vagina. Injury is almost inevitable for the fetus.

Persistent posterior positions recognized after engagement, have several possible terminations.

- (1) Remain posterior.
- (2) Brow presentation.
- (3) Face presentation.

In either case it is the best rule to wait for a possible natural termination of the labor if the condition of the mother and fetus is satisfactory. Should we have to resort to artificial means however, forceps is the undisputed method of choice. For the face and brow presentations suffice it to say that with a proper

application of forceps, the case is delivered as nearly according to natural mechanism in these cases as possible.

When the occiput remains posterior, we have different positions to deal with, and one which often times taxes the skill of the obstetrician. The completion of these cases is again by means of forceps. A special forceps maneuver, the Scanzoni method, is particularly a happy solution to the problem, if properly conducted. Indeed, it has been so satisfactory that it will be presented here as the one method of caring for these cases, attempting to interpret the few mooted points which have caused it to fail in some instances.

I can not do better than to outline in a, b, c order the steps of this forcep maneuver here, as each one explains its own motive.

(1) The forceps are applied to the head in O. P. position, according to certain scientific rules, and not haphazardly, with the sole idea of getting a grasp on the head. There is no excuse for getting other than a true cephalic application, except in cases where the landmarks have been obliterated by a large caput.

(2) Proper application having been attained, gentle traction in direction of pelvic canal is made, without any attempt to manually rotate. Too much stress cannot be laid on these two points, as a failure to appreciate their significance will lead to disastrous results, or a failure in the attempt to deliver.

(3) Further traction is made until head is brought down on pelvic floor. Mind you, the occiput is still posterior. Here slight upward traction is made to favor flexion. Continued traction now brings the natural rotating forces of the pelvis (Levator ani, ischial spines, double inclined plane of pelvis) into action, and one is rewarded in seeing the occiput rotate anteriorly of its own accord. So serious is any attempt to rotate the head with forceps at this stage, that it is best to sacrifice the perineum and deliver the head in posterior position, should the head fail to rotate as above described. The latter happily fails to do so, in very remote instances.

(4) The occiput having rotated anteriorly, causes the forceps to be applied upside down. They are now released, removed, and reapplied according to technic required by anterior position.

The essential points to remember in this summary of treatment, is that forceps are to be used solely as traction agents, and that the natural mechanics of the pelvis will accomplish the rotation

if the head is brought far enough down. Frequently the head will bulge the perineum, and look as though delivery is about to take place before this natural rotation occurs.

DISCUSSION OF DR. MILLER'S PAPER.

Dr. C. Jeff Miller: Dr. Miller's paper does not deal with occipito posterior positions in general, but only with that small percentage of cases in which rotation does not occur, and must be delivered with the occiput posteriorly, or corrected by some special procedure.

It is difficult to estimate the incidence of primary occipito posterior position. My experience justifies the belief that it is much more frequent than statistics would indicate, but fortunately as labor proceeds the occiput rotates anteriorly and is delivered usually with no more difficulty than the increased time of delivery, which averages about three hours.

The points of practical importance in handling these cases are mainly; (1) whether interference of any kind is rational when the condition is recognized early in labor, (2) how long one should wait before interfering, and (3) the best method of dealing with the cases where the head rotates into the hollow of the sacrum.

The fact that all but a small percentage ultimately rotate satisfactorily should deter us from attempting any assistance in the early stage of labor without specific indications. The length of time assistance should be withheld would depend upon the progress made and the condition of both mother and fetus.

Correction of cases that fail to rotate may often be accomplished by manipulation with the hand, failing in this I favor the Scanzoni method or double application of forceps. This method of delivery is not approved by all authorities, but I believe some of the objections raised are attributable to the fact that the method is misunderstood. One objection that has been raised is that serious damage to the soft parts of the mother is likely to occur by the rotation of the forceps. The method does not call for forcible rotation with the forceps. The forceps should be used at every step of the procedure as a factor and never as a rotater. When the head is pulled well down on the perineal floor, it should be allowed to rotate, carrying the forceps blades with it.

Cesarean section is frequently resorted to, but in my opinion it is seldom indicated, and if at all, only in cases that have not engaged. In neglected impacted cases when rotation is impossible and there is serious doubt as to the child surviving the delivery, craniotomy should be considered.

Dr. H. E. Miller (closing): In this paper I intended only to lay stress on the persistent occipito-posterior positions and not the ones which early rotate and become anterior.

The failure in the use of the Scanzoni maneuver is in most instances a result of misinterpretation of the various steps, particularly the latter, when the head is to be brought down to where the natural rotating forces of the pelvis will accomplish the rotation without attempting to force same with the forceps.

The question as to what harmful influence the average X-ray exposure would have on a fetus in utero, is one on which I am not well versed. I would say however, that only prolonged exposures are apt to produce deleterious effects, and that the average one for diagnostic purposes would result in no harm.

PROCEEDINGS OF THE AMERICAN SOCIETY
OF TROPICAL MEDICINE
ATLANTIC CITY MEETING, JUNE 16-17, 1919.

CONSIDERATIONS SUGGESTED BY PUBLICATIONS OF
DR. NOGUCHI ON EXPERIMENTAL YELLOW FEVER
—WITH APPENDIX.

By DR. MARIO G. LEBREDO.

Director of the Research Laboratory of Health, Havana, Cuba.

(Translated from the Spanish by Dr. Augustus McShane, New Orleans.)

The recognition of an etiological organism of a disease transmitted by an insect can only be based on the principles laid down by Koch.

The experimental findings with the parasite should, moreover, coincide at every point, with the natural epidemiological mechanism of the disease.

In yellow fever, to which we confine our attention, more than in any other disease, such an assertion should be maintained.

The American Commission by confirming in 1899 and 1900, the transmissibility of yellow fever by the *Stegomyia calopus*—the epochal discovery of Carlos Finlay—as the sole natural mode of propagation, synthesized the laws of epidemiology with such certainty that it became unnecessary to recognize the causal agent in order to institute precise sanitary rules. These measures in a very brief space of time, enabled Gorgas and his collaborators to obtain the brilliant results in Cuba and the Canal Zone, and everywhere they have been applied.

From a sanitary point of view, the discovery of the causal agent of yellow fever could have practical value only if it could be recognized and demonstrated in time to make an early diagnosis by direct hematological examination during the first three days of the disease. To undertake to make a diagnosis by indirect processes—e. g., inoculation of a guinea pig—would take as long as to avail the natural evolution of the disease.

Although every method of investigation in the search of some new scientific knowledge, practical sanitarians—particularly if they are at the same time laboratory-biologists—accept with reserve the announcement of etiological discoveries in yellow fever. Although, in order to combat disease successfully, it matters little to know its cause, it does greatly matter that the pretended dis-

coveries should not disturb the sanitary discipline established against the disease, since, if this were to happen, it would upset the absolute success which has been obtained until now.

Skillful investigators have claimed, from time to time since 1899-1900, to have discovered the causal organism of yellow fever.

There has been no disturbance of the classical data accumulated by those who based their etiological conclusions on investigations made on the infected *stegomyia* (Parker, Beyer and Pothier, Vera Cruz, Mexico, 1902.) Although mistaken from the standpoint of the discovery of the causal agent—on the contrary, the experiment they made—viz., production of a case of severe yellow fever by the bite of an experimentally infected mosquito—to confirm fully that principles established by the American Commission, proved that in their search for the parasite in the mosquito, they proceeded according to the most suitable method.

That commission also showed good judgment in availing itself of the skill of local experts—Drs. Matienzo and Iglesias, and of Dr. Rosenau, at that time Director of the Laboratory of Hygiene in Washington—in order to assure the correctness of the diagnosis, which is so delicate and necessary to confirm experimental facts, both in original and reproduced cases.

The pretended discovery, by Seidelin, of the causal agent of yellow fever, in Merida², never even gained momentary acceptance among many investigators and hygienists; and, even before seeing his preparations, we discussed his claim in a negative manner. We knew that, to accept certain biological facts of the organism in question, we would have to turn our back on some incontrovertible convictions. (See the writings of Agramonte³, Cartaya and Guiteras.⁴)

Seidelin's error, which came near establishing a school of thought in Merida, might have given rise to serious international sanitary problems if they had been accepted in other localities, by causing the abandonment of existing practices, which have proven their efficacy in the United States, Canada, and Cuba, which, with Mexico, compose the important American Public Health Association.

At the present time, the announcement of discoveries *that are not justified in fullest manner*, might be a serious matter, because it might interfere with the grandiose conception of Gorgas⁷ to extirpate yellow fever from off the earth, a resolution adopted by

the Second Pan-American Scientific Congress, and the practical resolution of which already begins to show itself among other places, in Guayaquil, in the footsteps of Gorgas, Guiteras, Carter and others, and, more recently, Kendall and I have declared, as members of the International Board of Health of the Rockefeller Foundation, that it is more than ever necessary to give full and unquestioning adherence to the classical methods that always lead to victory.

In July, 1918, there was formed, under the auspices of the International Board of Health of the Rockefeller Foundation, a commission of an experimental character, the object of which was to make investigations on yellow fever in Guayaquil, where the disease prevailed. The experimental lines laid down were of two kinds: (a) studies in the metabolism in the cause of yellow fever, by Drs. Arthur I. Kendall, Charles A. Elliot, and Mr. H. E. Redenbough; and (b) investigation of the causal agent by Dr. Hideyo Noguchi. I had the honor of being added to the commission in the capacity of clinician. When Dr. Kendall, the president of the commission, ordered the return of his companions—and myself among them—Dr. Noguchi remained at his work until November.

From this last date until May, 1919, in which I write, in the six months that elapsed, outside of personal impressions received when I left Guayaquil, and the news-dispatches in the lay press, I know of no other authentic references to the success of the investigations except the note published by the learned investigator in the *Journal of the American Medical Association*, according to which he infers that he has encountered the causative organism of yellow fever. Here are some extracts from the published data:

In guinea pigs inoculated "with blood from yellow fever patients," *it is not stated on what day of the disease the virulent blood was extracted*—a pyrexia was set up, with albuminuria, jaundice and hemorrhages; and, at the autopsies, congestive and hemorrhagic changes were found in the viscera, and, in "the liver and kidneys, evidences of degeneration." *The nature of the degeneration is not indicated.*

He found in these guinea pigs an "organism the morphological characteristics of which bore strong resemblance to those of the leptospira previously described in cases of infectious icterus."

(Inada, Ido), etc.,⁹ Noguchi.¹⁰ Moreover he found some organisms that also resembled the leptospira of infectious jaundice of Inada and his associates, in some cases, by direct examination on a dark field, *in the blood and liver of victims of yellow fever.*

In fine, "characteristic symptoms and lesions were produced in susceptible animals by inoculation with filtrates obtained by passing through Berkfeld filters V and N the blood of animals infected experimentally, and the emulsions of the liver and of those animals, as also cultures of the organism. Leptospiras were found in the blood and some viscera of animals inoculated in this manner.

When we remember how much labor other skilful investigators have given to the task of discovering the causal agent of yellow fever, we will be surprised to learn that the organism in question can be discovered by such a simple technique—although it must be borne in mind that Schaudinn found the *Treponema pallidum* where many others had failed in the search; and we cannot refrain from asking three questions on essential points that were not touched on in that preliminary note: (1) In the tests of experimental transmissibility by inoculation of infected human blood to the guinea pig, does the definite and indisputable law hold good that the causal agent in the blood in yellow fever is transmitted only during the first three days of the disease? (2) In those cases in which the alleged discovery was made, was the diagnosis above suspicion? (3) Have any tests of the epidemiological experimental reproduction been made, that is by way of the mosquito?

Our attitude in this matter is not that of criticising, but a reflex of expectancy excited by the before-mentioned article and the anxiety with which we await fuller and clearer statements.

Let us make a brief survey of some analogies and differences that are found in the two diseases which, both clinically and epidemiologically, act in very distinct ways, although they both belong to the group of more or less hemorrhagic yellow pyrexias: yellow fever and Weil's Disease of *spirochaetosis* (*Leptospira ictero-hemorrhagica* of Inada and his collaborators.

It is clearly seen that, in the investigations noted, all the steps were unflinchingly adopted in yellow fever, one by one that were followed as by rule in the Japanese disease of Weil; and it is marvelous to see the success which covered the analytical study, this methodical computation, as appears from that note and from

notices personally received; at the end of which the veil seems to be completely drawn aside which covered the mystery of the morphology and cultivability of the organism, the susceptibility of experimental animals, and vaccination, and perhaps leading up to the questions, glimpsed by older investigators, of possible passive immunization and serotherapy.

The first notable point, which breaks with all previous teaching, is the "visibility in the blood and liver of patients of yellow fever," of its causal agent.

The American Commission, referring to the experiments on propagation by injection of virulent blood, says: "Although these experiments have demonstrated that the agent of yellow fever is present in the blood, we can say that the *prolonged search which has been made* by other investigators as well as by ourselves, both in fresh blood and in stained preparations of blood taken in various stages of the disease and during the beginning of convalescence, *has been entirely negative.*"

The French Commission, in the 30th conclusion of its First Report,¹² says: "Neither in the mosquito, nor in the blood have we succeeded up to the present, in demonstrating the agent of yellow fever."

The German Mission,¹³ apart from their investigations with the ultra-microscope, with which we are not concerned, since they worked with the first instruments made for solar illumination, said categorically: "In fresh preparations, made during the daytime as well as at night, in stained specimens, both in the beginning as well as during the last days of the disease, from the blood of the cadaver, and finally from the bone-marrow, *we have not found anything* that could be regarded as the causal agent of the infection."

The investigations of Seidelin are also negative—discounting the criticised *Paraplasma flavigenum*. In 1912, with the parabolic condenser, he found nothing notable, since the "peculiar filaments" which he describes, were also found in the blood of healthy individuals."¹⁴ He must certainly have been dealing with the filaments that are frequently found when the corpuscles undergo disintegration; Seidelin found these half an hour after the preparation was made, and became more numerous as time went on.¹⁵

However these results of Seidelin are not to be taken into account, because at that time investigations were not confined to the

first three days of the disease, which is the only period that interests us in considering negative results of observations on the blood.

It seems quite curious that an organism that has been so long and so assiduously sought, and which nowadays reveals itself in the blood of a yellow fever patient on a darkfield, should have escaped the observation of previous investigators who eagerly looked for it both in experimental study and in the daily routine of clinical hematology.

In regard to the discovery of spiroidal organisms in the tissues of yellow fever, there is in medical literature an interesting note from Dr. A. M. Stimson of the Laboratory of Hygiene in Washington in 1907,¹⁶ which possesses a present interest. Stimson says the "spirochetic origin of yellow fever had been suggested by Schaudinn and Novy," but that he knew of no organism belonging to the spirochetic genus claimed to have been found in the tissues in yellow fever. The investigation of material: brain, liver, heart and kidneys, of a single case of yellow fever, studied according to the method of Levaditi, showed him, in the *renal tissue*, well defined organisms, with the characters of spirochætæ, with extremities often in the form of a hook of varying length, 14 micra or more, half a micron in width, confined to the cells and lumen of the renal tubules, but not found in the blood vessels, glomerule, or interstitial tissue; and very numerous in some fields. He suggested the name of *Spirochæta interrogans*.

What shall we think of these spiroidal organisms? Do they belong to the genus *Leptospira*? Were the visceral fragments studied really from cases of yellow fever? Are there not some analogies in their morphology dimensions and renal grouping, with the *Leptospira* studied by Inada and his companions? The silence that has lately fallen on the subject suggests the idea that confirmation is lacking. A request was made for tissues from yellow fever fixed in ten per cent formalin, in order to follow up this study. With this end in view, Dr. H. A. Stansfield, of the Maritime Sanitation Service at Havana, asked me, on May 25, 1907, fragments of viscera from yellow fever, which Surgeon General Walter Wyman, U. S. P. H. and M. H. S., had requested. At the time we were grappling with a rural outbreak in Union de Reyes and Alacranes.

The manifest invisibility of the germ of yellow fever was always

explained on the ground of its extreme smallness, as demonstrated by filtration.

Reed and Carroll¹¹ were the first to observe, in 1901, that the blood-serum in yellow fever, during the infecting period, diluted fifty per cent and filtered through a Berkfeld tube, "contains the specific agent of yellow fever which passes through the filter with the filtrate."

The French Commission likewise declared (5th and 6th conclusions of their First Report¹²) that "in the serum of the patient, the virus of yellow fever passes through the Chamberland filter F, without dilution," and that "under the same conditions it seems not to pass through filter B." Also, the Second American Commission "confirmed that the specific agent of yellow fever easily passes the Chamberland filter B, when diluted 50 per cent." Three experiments were successful.

These results were always interpreted in the sense that *all* of the causal elements that were in the serum passed through the filter. But the fact signalized in the investigations of Noguchi, of the visibility of the causal organism of yellow fever, could only be confirmed by proving that of the organisms found in human blood in the infecting period, that is to say, when the disease can be transmitted experimentally by means of a syringe filled with the blood *not all are filterable*. We must admit various sizes of the organism, from the very small that pass through the finest filters, to the non-filterable which must reach a visible size.

The visibility, and, therefore the existence of extreme sizes, filterable and non-filterable, which cause so much surprise at having attributed to the organism of yellow fever, are characteristics of the causal organisms of Weil's Disease; and the perplexity produced by the above reflection increases when we recall that it was the same Noguchi, to whom we owe the clearest and most scientific classification of spiroidal organisms,¹⁰ dividing them into six genera,* who finally says of the organism found by him, that "its morphological characteristics bore a close resemblance to those of the *Leptospira* previously described in cases of infectious jaundice" (Inada, Ido, etc.).

The phenomenon of Pfeiffer for the organism of Noguchi, and the tests of immunization and experimental biotherapy with the

* *Spirochaeta* (Ehrenberg, 1838); *Saprospira* (Gross, 1911); *Cristispira* (Gross, 1910); *Spirochaeta* (Vullmin, 1905); *Treponema* (Schaudinn, 1905); and *Leptospira* (Noguchi, 1917).

serum of human cases, or with that of experimental animals among themselves, signalizes a specific correlation between the organism found on the disease from which it was derived.

The existence of antibodies has been proved for yellow fever and of the ictero-hæmorrhagic spirochæta. Marchoud, Salimbeni and Simond suspected that from the beginning of their investigations. After noting that there "are no microbes in the blood after the fourth day of the disease," they say¹²: "such a brusque disappearance of the microbes could not occur without leaving active antibodies in the blood serum." Passing from theory to practice, they applied bloodserum from patients at the eighth day of the disease, and from convalescents, in prophylactic and therapeutic tests, from which they deduced that certain sera "possessed clearly defined preventive properties," and a "curative value."

In the ictero-hemorrhagic spirochætosis of Inada, it has been proved that, after the infecting period of the blood—which, in yellow fever, lasts three days, and, in Weil's Disease, seven days—the leptospira disappears from the blood; and this disappearance is attributed to the pressure of antibodies which, from that date, are easily demonstratable by Pfeiffer's method. The experiments in immunization and biotherapy have advanced very far in ictero-hemorrhagic spirochætosis.

Such chemico-biological analogies, which are differentiated only in the distinct period which offers them, emphasizes the importance of an accurate diagnosis in the investigation of the cause of yellow fever. When the disease is investigated in a healthy, susceptible population, such a diagnosis is easy; the difficulty is greater when the investigator has to work among people infected by various endemic diseases, with which yellow fever may be found in symbiosis, or intercurrently. In these latter circumstances, in order to ascertain positively the nature of the disease under investigation; to learn the dates and symptoms of the disease, for the purpose of determining, not only the diagnosis of the intercurrent affection, but also the day on which it was first seen, which is important to know when investigating diseases with a definite period of blood-infection. In those cases, the differential diagnosis is made more difficult by the possible existence of *leptospiricidal* and *leptospirillocidal* substances formed prior to the actual attack of the disease under investigation, by

a previous attack of the one corresponding to the organism being studied.

With Noguchi's note, the study of spirillosis received a considerable impulse in America. Weil's Disease, which has served for the admirable studies of Inada and his associates, is the form usually found in Japan. The leptospira of the rat has been found in the United States by Noguchi, with characters identical with those of the leptospira of the rat in Japan, and with those of two cases of Weil's Disease in Japan. But we do not know its distribution among the rats of the North American continent; nor has there been, up to the present time, an extensive and complete study of the clinical mortality of the American form of Weil's Disease—either endemic or epidemic—by approved experimental methods.

Noguchi claims that the guinea pig is one of the animals susceptible to yellow fever as much so as to Weil's Disease. We will await confirmation of this statement in his forthcoming complete report.

"All attempts to infect the most diverse laboratory animals, and even five species of monkeys—three of the old world and two of the new¹²—by the French Commission, failed; and Marchoux and his associates already knew that "yellow fever could be transmitted by the subcutaneous injection of blood taken from the general circulation on the first and second days of the disease." In their second report, they insisted that "neither those who were healthy nor those in which the vital resistance was artificially diminished, showed any susceptibility to the yellow fever virus."

Neither the experiments of Seidelin in 1912, in Merida, on guinea pigs¹⁷ injection of blood from the fifth to the seventh day of the disease—nor those of J. W. Scott Macfie and J. E. L. Johnston during an epidemic of yellow fever in Lagos (Africa) in 1918¹³ have any value, for or against, since the most intense febrile reaction obtained by the last named, in guinea pigs, was in those inoculated with blood from cases from the fifth to the eighth day of the disease, without jaundice or hemorrhages.

But the guinea pig is not the only animal susceptible to the leptospira. He says:⁸ "When guinea pigs, monkeys (marmosets), and little dogs were successfully inoculated with cultures of the organism, whether derived from the inoculated animals, or directly from the blood of a yellow fever patient, symptoms

and lesions were produced like those described as occurring when guinea pigs were successfully inoculated directly with blood from yellow fever patients. The organism which was recovered from pure cultures retained all of its original characters."

We can ascribe no value, up to the present time, to what has been done, in an experimental way, on dogs, by some experimenters, Scott, Johnson and Thomas¹⁹ among others; nor the statement enunciated by Castellani and Chalmers,²⁰ who confine themselves to repeating a declaration, without proofs, to the effect: "It may be stated that in epidemics of yellow fever, *people assure us that dogs and chickens* are supposed to get sick, though it is *not known from what cause.*"

With the exception of a single case of a dog²¹ that took sick in a suspicious manner, in the middle of a localized outbreak of yellow fever, the epidemiological history of yellow fever in Cuba furnishes no proof of the susceptibility of the dog, which, if it exist in experimental cases, ought to respond to the natural mode of inoculation by the mosquito.

Finlay and other investigators in Cuba, at the time when the work of eradication of yellow fever was in progress, sought in vain for the possible existence of the disease in the domestic animals as a source of danger of its endemic perpetuation.

It is strange that, during centuries of deadly endemic, exposed to the human virus and its transmitting carrier (*stegomyia*) in its work of propagation in a favorable environment, if the dog had been a suitable host, he would not have suffered as signally as man.

Neither can we fall back on the argument that yellow fever is milder in dogs, like infantile yellow fever in man; since, besides the experiments of Noguchi, they show intense symptoms of jaundice and hemorrhages—which are easily demonstrable. In the history of the campaigns to wipe out yellow fever, there has never any good reason to incriminate the dog; and it suffices to day and tomorrow, as it sufficed yesterday and today, to deal solely and exclusively with the human element and the *Stegomyia calopus* in our sanitary labors.

We end with the hope that, in his definitive conclusions, Dr. Noguchi will give us proofs that are exigible in regard to his leptospira, as for any organism that is put forward as the causal

agent of yellow fever, namely, *that it behave completely in accordance with the natural laws of the propagation of the disease.*

He who has at his disposal the clinical material, and finds the cause, and the susceptible animal in yellow fever, holds in his hands the decisive test. This decisive test is the experimental epidemiological reproduction, whether by *transmission from man to guinea pig, by the Stegomyia calopus, observing the classical times of inoculation of the disease—five days in man, and twelve days in the mosquito; and having regard also to the classical time of infectivity of human blood—the first three days of the attack of the induced disease.*

APPENDIX.

On leaving Cuba for this congress, I received Number 6, Volume XXIX, June first of the Journal of Experimental Medicine, which contained three papers on the Etiology of Yellow Fever, by Dr. Noguchi.

In the first paper a clinical report is made on the yellow fever at Guayaquil, coming to the conclusion that the normal characteristics of the disease were encountered. This may not be denied. I have in my notes numerous clinical sheets showing the disease with classical precision; though at the same time I have others from the same locality, that are anomalous and difficult to accept as pure cases.

Papers II and III, under the title of Experimental transmission, symptomatology, and pathologic manifestations in animals experimentally infected, present a more detailed account than that found in the "preliminary note," but equally disconcerting in that facts are brought forward that are contradictory with our present knowledge of the disease.

Of 27 cases diagnosed by Dr. Noguchi only 6 produced in the guinea pig "symptoms which resemble those of human yellow fever." The said cases were: 4 fatal cases, followed by death on the 6th, the 8th, the 9th and the 10th day respectively; one grave case of 13 or 18 days duration; and one moderate case, terminating favorably on the 9th day. All had well marked hemorrhagic symptoms.

Cases 1 and 2 were seen by me; not so the others.

Case 1, a woman, Asuncion A, took sick on July 14, 1918, presented herself at the Observation Pavillon of the General Hospital, three days later on July 17th she was sent without a definite diagnosis to one of the wards of the hospital. On the 19th, during my visit to this ward she was returned with a diagnosis of yellow fever. She was in the 5th day of the disease, with fever, intense jaundice of eyes and skin, and severe nausea. Whilst I was insisting to obtain some urine, she had abundant coffee-ground vomit. She was then transferred to the Isolation Hospital, where she was seen on the same day by Dr. Noguchi. In the afternoon I examined the urine and it contained large quantity of albumin. Subsequently she had repeated hæmatemesis and melæna. The pulse continued frequent, 90-100 throughout the observation. She was admitted into the Isolation Hospital, therefore, already in a grave condition, icteric and hemorrhagic.

Case No. 2, whose thermic curve, with pulse and albumin curve, presented characteristics of a pure type, showed, however, the anomaly of a free epistaxis, on the 4th day of the disease, and a free hemorrhage from the gums on the 7th day, two days before the defervescence; hemorrhages observed and noted by me, and not mentioned in Dr. Noguchi's narrative.

The other fatal cases were admitted: the 4th case in the third day of the disease, with slight icterus, herpes labialis, and sufficiently well advanced to present on the following day melœna, and anuria, and to die on the following day, that is, two days after admission. Case 5, was admitted on the third day of illness, with albumin and casts, followed later by hemorrhages of the skin, gums, and black vomit. The 6th case was admitted on the fourth day of the illness, with slight jaundice and marked albuminuria; later had black vomit and profuse hemorrhage from the gums.

With regard to Case 3, which will be later analysed, it was admitted on the second day of the illness.

By this summary it will be seen that two of the six experimental cases were admitted well beyond the period which, from a sanitary point of view, we have considered as dangerous with respect to propagation. Other three cases were admitted at the very boundary line of said period, and with symptoms sufficiently advanced to suggest a grave prognosis.

To speak more precisely:

The experimental successes were obtained with blood secured from the elbow veins on the following days: on the fifth day (Case No. 1 already with black vomit); on the third day (Case No. 2); on the second day (Case No. 3, to be discussed later on); on the third day (Case No. 4, already in a grave condition, having died two days later); on the sixth day (Case No. 5, two days before death with profuse black vomit); on the fifth day (Case No. 6, in a grave condition.)

Or more briefly: in three of the six cases the blood from the vein was found to be infected respectively on the fifth, the fifth and the sixth day of the disease.

There is, therefore, what we may term a clinico-epidemiologic contradiction. Also an experimental contradiction with the classic experiments of human transmission by the inoculation of virulent blood.

I have twice stated that I was to treat more especially of Case No. 3. It is rather atypical, even accepting as possible, since it may occur occasionally, the albuminuria on the second day.

The fever which appears to terminate on the 7-8th day, after a distinct intermission, presents a slight secondary rise during several days. This thermic curve really might be accepted as yellow fever, though not without some scruples when we consider the non-typical course of the jaundice and hemorrhages. It is on the seventh day, precisely at the time of a frank terminal remission, that the jaundice makes its appearance. Furthermore the gums bleed on the seventh day, and on the eleventh day we have hematuria which continues until the fourteenth day, diminishes on the fifteenth, and ceases on the seventeenth day.

This symptomatic grouping presents a notable analogy with the picture of Weil's Disease in Japan. Inada says: "The febrile period continues until the sixth or seventh day of the disease. The clinical symptoms are: fever, headache, muscular pains, hyperemia of the conjunctiva and albuminuria." "Period of jaundice: from the seventh

or eighth day to the twelfth or thirteenth the jaundice is at its height.”

The experimental reproduction in the guinea-pig also coincides, with respect to the date of appearance of the icterus, and the fatal termination, with the results obtained by Inada in the Weil's disease of Japan.

In 17 of Noguchi's cases the date of manifestation of the jaundice in the guinea pig after inoculation is fixed for the sixth day in 3 cases, for the seventh day in 3 cases, for the eighth day in 2 cases, for the ninth day in 3 cases, for the tenth day in 1 case, for the eleventh day in 4 cases, for the thirteenth day in 1 case; in other words the icterus appears between the sixth and the thirteenth day.

Let us now see what is said by Inada in page 381 of his original paper. “The time required after the inoculation for the appearance of jaundice is from seven to eight days. The shortest period is six days; the longest 13.”

Likewise, with the exception of one case which lasted 48 hours after the apparition of the icterus, in the six which were allowed to run their course, out of the seventeen above mentioned, the same results were obtained as in Inada's cases of ictero-hæmorrhagic spirochetosis, namely, the guinea pigs died within 24 hours after the appearance of the jaundice.

These coincidences are remarkable. It is true, however, that Dr. Noguchi assures us, besides, that the organism he has discovered can only be distinguished from the allied organism of ictero-hæmorrhagic fever, by immunologic reactions.

There is a new fact pointed out in these later papers of Dr. Noguchi, namely, the possible transmission by the “smearing of the infective material.”

The success obtained by percutaneous inoculation, and by “superficial scarification of the skin” with emulsions of the liver and kidney, from one guinea pig to another, are remarkable. Such results, besides bringing to life again the possibility of danger from the handling of fomites, will throw doubts upon the security we have felt in the practice of autopsies by non-immune persons.

It is evident that the discovery made by this great investigator who has all my admiration, as we study such discovery in the publications thus far made, should place us in an expectant attitude.

It may be that the *Leptospira icteroides* is the causative agent of yellow fever, but it is to be regretted that, in giving it out as such, as we said in the paper to which these lines are appended, the crucial test by mosquito inoculations has not been applied; I mean the transmission from man to guinea pig, and from the guinea pig to man by the *Aedes calopus*, with maintenance of the classical periods of incubation, five days in man and twelve days in the mosquito; and maintaining likewise the accepted period of infectivity of the human blood—namely the three first days of the disease.

It may be that the contradictions pointed out in these publications are merely the result of experimental work with the hypodermic syringe, and that such contradictions would disappear in the field of experimentation with more natural processes through the mosquito. At all events it is of great importance that final proof should be forthcoming in order not to perturb in any way the altruistic labor undertaken by Gorgas and his co-workers—the complete eradication of the yellow fever from the world.

Habana, June of 1919.

DR. MARIO G. LEBREDO.

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BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

By P. T. TALBOT, M. D., Secy-Treas.

AMERICAN MEDICAL ASSOCIATION MEETING, APRIL 27 TO 30, 1920. New Orleans, La. Very unique and delightful forms of entertainment are being planned for the time set aside for that purpose, besides full opportunity to visit the harbor and other points of interest in the city. Reservation for over one-thousand attendants has already been made at the hotels. As the State Society, as a whole, is acting as host it is requested that all Louisianians make arrangements for rooms in private homes and boarding houses. This will leave the hotel accommodation, as far as it is practicable, for our out-of-state guests. In addition to ample hotel and rooming space there will be arranged ample hall and meeting spaces within close proximity of hotel and General Headquarters.

TO NEW ORLEANS BY BOAT.

Inquiries received from various parts of the country indicate that a number of physicians would like to make the trip to New Orleans by boat. These prompt the suggestion that physicians conveniently near to the Atlantic Sea Board and Gulf Coast ports, as well as those at different points along the Mississippi and Ohio rivers, might arrange boat parties which should provide a pleasant and restful journey. It has been suggested further that if boats were chartered to go to New Orleans from different points and were docked there, these "house boat parties" would provide cool and delightful quarters for those who prefer to stay on the boats during the session.

**HEADQUARTERS FOR THE REGISTRATION BUREAU
AND THE EXHIBITS.**

The Josephine Hutchinson Memorial Building, the home of the Tulane University College of Medicine, will house the Registration Bureau, the Information Bureau, the Association branch postoffice, and the Scientific and Commercial exhibits. It will also provide meeting places for three of the sections. Thus, the coming annual session will center at Tulane. The Hutchinson Memorial Building is near the business center of the city on Canal Street, between Villere and Robertson. This convenient location, the attractions of the exhibits, and the assured hospitality of the Louisiana pro-

fession extended through the Tulane Medical College assure a hearty welcome to those who attend the annual session at New Orleans, April 26 to 30, 1920.

HOTEL HEADQUARTERS.

The following hotels have been designated as the general and the various section headquarters for the New Orleans Session:

PRACTICE OF MEDICINE: St. Charles.

SURGERY, GENERAL AND ABDOMINAL: Grunewald.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Grunewald.

OPHTHALMOLOGY: Monteleone.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Monteleone.

DISEASES OF CHILDREN: St. Charles.

PHARMACOLOGY AND THERAPEUTICS: Planters.

PATHOLOGY AND PHYSIOLOGY: Planters

STOMATOLOGY: Lafayette.

NERVOUS AND MENTAL DISEASES: Lafayette.

DERMATOLOGY: De Soto.

PREVENTIVE MEDICINE AND PUBLIC HEALTH: De Soto.

UROLOGY: St. Charles.

ORTHOPEDIC SURGERY: Grunewald.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Lafayette.

GENERAL HEADQUARTERS: Grunewald.

The above information has been furnished the Louisiana State Medical Society by Dr. Hamilton P. Jones, Chairman of the Publicity Committee.

According to the present outlook furnished by the coming of the American Medical Association meeting in April, we are planning to give the members of the Louisiana State Medical Society one of the greatest opportunities of their lives; that of attending a National Medical Meeting here in our midst.

The State Society, desiring to give all reputable medical men the privilege of attending and enjoying this meeting, is preparing to conduct one of the most active campaigns for new members amongst ex-members and others who are eligible for membership. The American Medical Association is going to help us in this demand by sending down a real worker. We expect this work to begin about the 15th of February lasting up to the time of our Annual Meeting. He will pass through the country parishes,

soliciting new members for the State Medical Society, working at all times in co-operation with organized medicine in the district for the respective locality.

Any prospective candidate for membership in the State Society will file his application through the local organization (where one exists) or direct to the State Medical Society. We therefore cannot too forcibly impress upon every member of our present organization, especially our Councilors and Local Officers, the necessity of lending their co-operation and assistance to this representative at the proper time. This will aid materially the fight of organized medicine for additional members!

We expect great good in this direction and anticipate the support of each and every interested member of the society, in any way possible or consistent. Let us all work together and secure two-thousand memberships for 1920!

NEWS AND COMMENT

A MEETING OF THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS was held in this city, December 1, 2, 3, 1919, for the purpose of conducting an examination of physicians and midwives and chiropodists desiring to practice in this state. The following members were present: Drs. L. J. Menville, president, T. E. Wright, vice-president, E. L. Henry, and E. W. Mahler, secretary. Mr. T. S. Walmsley, assistant to the attorney general, was present. The board adopted rules regulating the practice of midwifery, which sets forth that midwives are licensed to attend normal labor cases only. Any midwife reported to the board as having attempted delivery in other than normal cases may have license suspended. After 1923 applicants for examination in midwifery are compelled to show evidence of attending a regular course in a recognized school of midwifery. The board is gratified with the large number who renewed their licenses for the year 1919, as required by Act of the Legislature of 1918. It will soon be in position to furnish each member of the profession an accurate list of all those practicing medicine and surgery, midwifery and chiropody in this state.

Fifteen physicians were present for examination in medicine, of which number, twelve passed and were granted certificates.

The names of the successful applicants follows: Claude Mosely Baker, Louis Blumberg, Joseph A. Broussard, Berney S. Clay, Charles M. Flagg, Tracey T. Gately, Emmett W. Irwin, Wm. W. Knipmeyer, Joseph M. Thuringer, Wm. L. Waller, John Perry White, Samuel S. Williams.

During the session eight physicians were granted certificates to practice medicine in Louisiana through reciprocity, namely: Wm. L. Atkins, Phares Wm. Galliham, Harry R. Carson, R. B. H. Gradwohl, T. Restin Heath, Barron Johns, T. C. Paulsen, Wirt A. Rodgers. Five midwives were examined for certificates to practice midwifery, two of which passed, namely: Mrs. Louise Federico, Lea Millot. Two chiropodists appeared for examination, both were successful, namely: Miss Matilda Bramer, Nellie B. Cooper.

The next meeting of the Board for the purpose of examination will take place in this City, June 10, 11, 12, 1920.

NURSES QUALIFY.—The semi-annual examination of the Louisiana Nurses Board of Examiners was held in New Orleans and Shreveport, December 15-16. Fifty-nine applicants qualified as registered nurses. The Louisiana Nurses Board of Examiners is composed of the following doctors: Dr. J. T. Crebbin, president; Dr. J. S. Hebert, acting secretary-treasurer; Dr. C. A. Bahn, Dr. G. S. Brown, New Orleans, and Dr. F. J. Frater, Shreveport.

THE PRACTICE OF MIDWIFERY AS DEFINED BY THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.—"The practice of midwifery means the undertaking or advising by any person to assist a woman in normal child-birth, but it does not include at any child-birth the use of any instrument except such instrument as is necessary in severing the umbilical cord; nor the assisting of child-birth by any artificial, forcible, or mechanical means; nor the performance of any version or the removal of adherent placenta; nor the administering, prescribing, advising or employing in child-birth of any drugs other than a disinfectant or cathartic. No midwife is authorized to practice medicine or surgery."

INSTITUTE WILL USE \$150,000 WORTH OF RADIUM.—A Los Angeles, Cal., institute plans to use \$150,000.00 worth of radium, and is the only institution of this character in the west. King C. Gillette is the president of the organization, as well as its financial backer. The purpose of the institution is to provide

facilities for radium therapy and the study and treatment of neoplastic disease. The benefit will be available to all requiring such treatment, and a fee consistent with the financial condition of the patient will be charged. The institute will have a large number of beds to provide for patients who find it necessary to remain for a time.

CLINICS FOR MIND CASES COMBINE.—Progress is being made in the establishment of joint clinics under the auspices of the New York State Commission for mental defectives. The purpose of these clinics is to provide in the various communities facilities for the examination of cases of nervous and mental disorders and of mental defects, and to supply expert advice and suggestion as to the treatment. Already, the co-operation of the State hospitals and the State Commission for mental defectives has been secured, and it is hoped eventually that the other state agencies will likewise co-operate actively. The first of these joint clinics was opened at Watertown, New York, through the co-operation of Dr. William C. Sandy, psychiatrist of the state commission, and Dr. Paul G. Taddiken, superintendent of St. Lawrence hospital at Ogdensburg. Parents, teachers, physicians and others may refer to the clinic children who are backward in their school work, or who are showing from their behavior or slowness that they are suffering from a nervous or mental trouble. Announcement is made that plans are under way for the establishment of two additional clinics, one in co-operation with the Binghamton State Hospital and the other with the Willard State Hospital at Ithaca.

JOURNALS CONSOLIDATE.—On January 1, the *Medical Fortnightly and Laboratory News* was consolidated with the *Medical Herald and Electro-Therapist* of Kansas City. Dr. Chas. Wood Fassett, is managing editor, and the offices will be at 536 Ridge Building, Kansas City, Mo.

ADDITIONAL GIFTS BY ROCKEFELLER.—John D. Rockefeller donated \$100,000,000 as a Christmas gift, and of the sum one-half was given to the Rockefeller Foundation, of which \$5,000,000 is to be expended in the development and improvement of the leading medical schools in Canada, the schools being required to raise additional sums from other sources.

INTERNAL MEDICINE CONGRESS.—The American Congress of Internal Medicine will meet in Chicago, February 23 to 28. The meetings will be held in conjunction with the American College of Physicians. Sessions will include daily clinics and laboratory demonstrations in hospitals and teaching institutions. One of the evening meetings will embrace the fourth annual convention of the American Congress of Internal Medicine.

MEETING OF TRISTATE MEDICAL SOCIETY.—The Tristate Medical Society composed of Louisiana, Arkansas and Texas held its fifteenth annual meeting in Marshall, Texas, December 9-10, 1919. The following officers were elected to serve during the year 1920. President, Dr. Chas. R. Hargrove, Marshall; vice-presidents, Drs. Lucian H. Lanier, Texarkana, Texas, Henry W. Jarrell, Mansfield, La.; and Joe Berton, Greenville, Texas; secretary, Dr. Frank H. Walke, Shreveport, La. Dr. Elizabeth Bass of New Orleans read a paper by special invitation.

BEQUESTS AND DONATIONS.—By the will of Mrs. Laura A. Kindig, of Goshen, Ind., \$65,000 to the Goshen, Ind., Hospital to establish and maintain a nurses' home and training school in connection with the hospital.

Washington University Medical School, St. Louis, \$300,000 to endow a department of pharmacology. The General Education Board contributed one-half the amount, and the other half was raised by the medical school.

By the will of Frederick Meade, \$25,000, to the New York Post Graduate School and Hospital, New York City.

The residuary estate valued at \$500,000, at the death of his two sisters, by will of Charles G. Thompson, to Presbyterian Hospital, New York City.

Grant Hospital, Chicago, a donation of \$50,000 toward the endowment fund; \$25,000 remitted from the Christmas sale at the Parkway Hotel, and an addition to the present nursery to accommodate twenty more beds, by Mrs. William C. Seipp.

As a Christmas gift from Mayor James Couzens, of Detroit, the following: Michigan Hospital and School for Crippled Children, \$1,000,000; for a new nurses' home, \$650,000; Children's Free Hospital, Detroit, \$125,000, and St. Vincent's Orphan Asylum, Detroit, \$75,000.

By Sir Joseph Flavelle, chairman of the hospital board of

trustees, \$250,000 as a donation to the Toronto General Hospital.

By the will of Jacob D. Schmidlapp, \$1,000,000, to the Rockefeller Institute for Medical Research, New York City.

American Section of the German Red Cross, a check for \$2,500,000 marks donated by relief committees in the United States for the benefit of tuberculosis and undernourished German Children.

THE TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION have made an appropriation of money to further meritorious research in subjects relating to scientific medicine and of practical interest to the medical profession, which otherwise could not be carried on to completion.

THE AMERICAN JOURNAL OF SURGERY for February will be composed exclusively of articles devoted to the surgery of the rectum and colon. Many well known proctologists will contribute.

RED CROSS ANNOUNCES APPOINTMENTS.—The medical department of the League of Red Cross Societies announces the following appointments: Prof. George Chandler Whipple of Harvard University, chief of the division of sanitation; Col. Francis L. Langley, assistant chief; Dr. Thomas R. Brown, Johns Hopkins University, Baltimore, chief of the division of medical information and publication; Miss Alice Fitzgerald, chief of the division of nursing; Dr. George C. Shattuck of Harvard University Medical School, Boston, chief medical secretary; and Col. Henry A. Shaw, M. C., U. S. Army, in charge of the field work of the league in the prevention of communicable diseases in eastern Europe. Col. Shaw will have as his assistants, Lieut.-Col. George Fordham, M. C., U. S. Army, and Major S. H. Dunn, S. C., U. S. Army.

THE RED CROSS SOCIETY AND ORDER OF ST. JOHN have signed an agreement by which the joint working of the corporations which led to such good results during the world war will continue during peace. A joint council has been appointed comprising of an equal number of members of each body, which body is given the general control of the work of the two corporations. The following are matters which it is expected to bring under immediate attention of the joint council: Care of the sick and wounded; care still necessary for prisoners of war; care of those suffering from tuberculosis; child welfare; work parties to provide garments

etc., for hospitals and health institutions; assistance necessary in all branches of nursing, health and welfare work, and home service ambulance work.

SWEDISH ASSOCIATION FOR MEDICAL RESEARCH.—Professors Forssner, Forssell, Holmgren and Dr. Key of Stockholm, and Professors Quensel and Petré of Upsal and Lund, recently held a meeting to organize the Svenska Sällskapet for medicinsk forskning to promote scientific research in Sweden. Already 169 members are enrolled and officers have been elected. Included are a number of prominent laymen, directors of banks, consuls and others besides leading professors in medicine. In the opening address Prof. Quensel emphasized that the rapidly changing world has created the necessity for new orientations and the blocking out of new routes. The aim of the new society is to provide funds for medical research. The treasury has been started with a donation of \$5,000 crowns from a legacy.

FOUR MILLION DOLLARS FOR VANDERBILT.—Announcement has just been made that the General Education Board of New York, has appropriated \$4,000,000 to enable Vanderbilt University, to reorganize completely its medical school. The amount is said to come from the general funds of the board and not out of the \$20,000,000 donation recently made by J. D. Rockefeller, for the promotion of medical education in the United States.

PERSONALS.—Since our last list, Dr. B. L. Browning of Spring Hill, La., has returned from service.

REMOVALS.—Dr. Paul Foster, from Opelousas to Grand Cane, La.

Dr. L. C. Cook, from Columbia to Parchman, Miss.

DIED.—On January 13, Dr. T. A. Gibson of New Orleans, aged 65 years.

On December 31, 1919, Dr. L. F. Salomon of New Orleans, aged 70 years.

On January 14, Dr. C. L. Edwards of Abbeville, La.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1919.
The Surgical Clinics of Chicago, December, 1919.

P. BLAKISTON'S SON & CO., Philadelphia, 1919.
Text-Book of Physiology, by Albert P. Brubaker, A. M., M. D.,
LL. D.
Mind and its Disorders, by W. H. B. Stoddart, M. D., F. R. C. P.
An Atlas of Dental Extractions with Notes on the Causes and
Relief of Dental Pain, by C. Edward Wallis, M. R. C. S., L. R. C. P.,
L. D. S.

THE MACMILLAN COMPANY, New York, 1920.
The Narcotic Problem, by Ernest S. Bishop, M. D., F. A. C. P.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington,
D. C.

Index Catalog of the Library of the Surgeon-General's Office U. S.
Army. Third Series, Vol. 1, A—Army.

Birth Statistics. Third Annual Report, 1917.

Cancer, Facts which every adult should know. Keep Well Series
No. 6.

Public Health Reports. Volume 34, Numbers 49, 50, 51, 52.

Index Public Health Reports. Volume 33, Part 1, Numbers 1-26,
January-June, 1918 .

MISCELLANEOUS:

Proceedings of the Thirteenth Annual Meeting of the Association
of Life Insurance Presidents. December 4-5, 1919.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for December, 1919.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	3		3
Intermittent Fever (Malarial Cachexia)	1		1
Smallpox	1	1	2
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	7		7
Influenza	6	5	11
Cholera Nostras			
Pyemia and Septicemia	1		1
Tuberculosis	34	36	70
Cancer	21	6	27
Rheumatism and Gout		2	2
Diabetes	3	1	4
Alcoholism	1		1
Encephalitis and Meningitis	5		5
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	18	6	24
Paralysis	1	1	2
Convulsions of Infancy			
Other Diseases of Infancy	15	10	25
Tetanus	1		1
Other Nervous Diseases	3	1	4
Heart Diseases	61	25	86
Bronchitis	3	4	7
Pneumonia and Broncho-Pneumonia	33	25	58
Other Respiratory Diseases	3	2	5
Ulcer of Stomach	2		2
Other Diseases of the Stomach	2	2	4
Diarrhea, Dysentery and Enteritis	6	3	9
Hernia, Intestinal Obstruction	2	2	4
Cirrhosis of Liver	4	2	6
Other Diseases of the Liver	7	3	10
Simple Peritonitis			
Appendicitis	6	1	7
Bright's Disease	28	26	54
Other Genito-Urinary Diseases	14	12	26
Puerperal Diseases	7	3	10
Senile Debility	7	3	10
Suicide		1	1
Injuries	29	12	41
All Other Causes	29	13	42
TOTAL	364	208	572

Still-born Children—White, 22; colored, 21; total, 43.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000

Death Rate per 1000 per annum for Month—White, 15.43; colored, 23.55; total, 17.65. Non-residents excluded, 15.33.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 30.18
 Mean temperature. 57
 Total precipitation. 0.83 inches
 Prevailing direction of wind, northeast.



NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS:

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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No. 9

EDITORIAL

INFLUENZA UP TO DATE.

A large degree of thankful appreciation should be awarded Dr. L. C. Scott of the Louisiana State Board of Health for his able and exhaustive digest of the available literature on influenza. This is published in a reprint by the Louisiana State Board of Health, in which more than three hundred references are studied and annotated.

This work of Dr. Scott will readily serve the practitioner who

has no access to so large a field of literature and it will serve to show what may have been attained in the study of the disease from the standpoints of its cause and of its treatment.

The reader will concur in the general conclusion of the vulgarizer, that "few fixed conclusions can be arrived at." It is illuminating to discover the diversity of opinion upon all phases of the disease and especially among those who sit in high places.

The fact remains that we do not know the cause of influenza and moreover there is as yet no standard treatment for the disease, which, in the pandemics in the last half century, has shown itself in protean forms. The concurrent spread of ordinary colds, breaking into various pneumonic types will continue to confuse and, as a corollary evil, will provoke a carelessness in prophylaxis and sanitation which will continue to make wholesale prevention impossible. The average individual is not timorous and until he is struck by calamity he does not anticipate it. To most laymen the early influenza symptoms, if mild, mean no more than an ordinary cold and many ambulant cases spread the disease, while the few succumb enough to be put to bed.

In the absence of a proven etiology, all attempts at vaccination have been questioned and the camps are still divided as to the use of such experimental procedures. The protagonists of vaccins and sera deal in formidable statistics, which are promptly combatted by others who have no faith in such measures. To the man in the street it seems wise to be conservative, so long as those who ought to know differ all the way from the Pfeiffer bacillus to the plague organism as the *causa morbi* in influenza.

In influenza more evil bearing microorganisms have come to light than with any other known disease and each of these has some champion.

Suffice it that the disease is still a menace uncontrolled and awaiting a true David.

From the mass of material which Dr. Scott has assembled and digested the general deductions may be drawn that rest in bed, warmth and clear emunctories are paramount. Plenty of liquids, alkalies (as the citrates) are important. Otherwise, the treatment is symptomatic. Before the pneumonia complications, the salicylates, iodides, and simple antipyretics may be indicated. Digitalis, belladonna (atropin) and strychnin are important when sup-

portive measures are demanded. Epinephrin is frequently advocated in influenzal asthenia and vasomotor disturbances.

The use of serum from influenzal convalescents and the use of transfusion and other blood injection methods are fully reviewed. In fact there is pabulum for many hours of reading and study in this admirable publication from the State Board. Aside from the degree of merit in the conception and presentation of such a work, Dr. Scott has rendered a valuable service to the medical profession, all of whom are now advised to get and read the work.

THE HOLMES CHAIR OF MEDICINE.

To the genius of Dr. Christian R. Holmes, Cincinnati owes the institution of a great hospital system and an excellent medical school, part of the University of Cincinnati. The untimely death of Dr. Holmes early in January prevented his participation in the completion of his plans, which contemplated the coordinating of all hospital provisions for the sick under the direction of the medical school. Only some of the hospital units are erected, but the plan will go on because the spirit of the initiative begun by Dr. Holmes has been instilled in those in authority and there is already enough expression of appreciation of his effort to insure the final accomplishment of his aims.

Among the first to recognize the worthiness of Dr. Holmes' achievement, the Carnegie Corporation has allotted a quarter of a million dollars to endow a chair of medicine at the University of Cincinnati in Dr. Holmes' honor. In making the announcement of this endowment, the President of the Corporation, Dr. Henry S. Pritchett, is quoted as saying: "The work which Dr. Holmes did stands alone. It deserves to be recognized in a wholly unusual way." * * * "Had Dr. Holmes been an Englishman, he would have been knighted and showered with collegiate and academic honors." * * * "The plans which he conceived and established will develop through their own greatness and make Cincinnati the very heart and home of medical research and instruction."

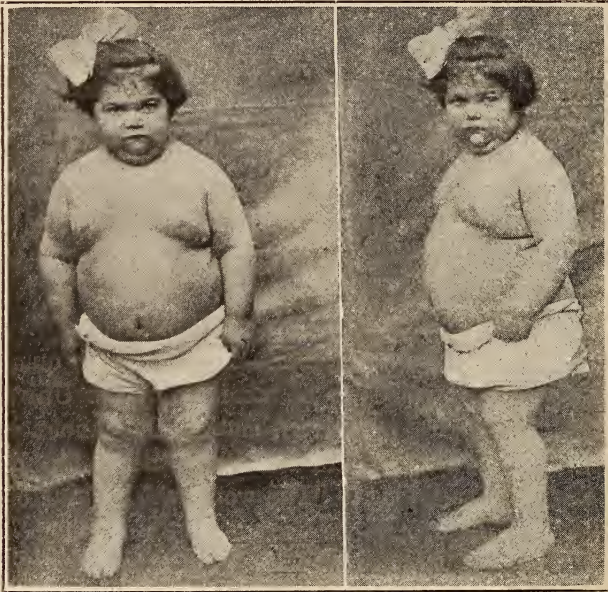
ORIGINAL ARTICLES

(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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

PRESENTATION OF A CASE OF MIXED HYPOTHYROIDISM AND HYPOPITUITARISM.*

By ALLAN EUSTIS, M. D., and L. R. DeBUYS, M. D., New Orleans.

DR. EUSTIS: The case which I am presenting to you tonight is of great interest from the fact that she was under observation for several years by Dr. DeBuys when she presented distinct symptoms of hypothyroidism while during the past two years she has developed well defined symptoms of hypopituitarism. She is a white female, fifteen years of age, and the mental and physical



development of a child of five. Her most marked symptoms at present are: weakness, unsteady gait, obesity, dryness of the skin, lack of physical and mental development and wetting of the bed. Her coordination of muscular movements is so poor that she is unable to feed herself. Constipation has been a prominent symptom for 6 years.

* Read at Meeting Orleans Parish Medical Society, October 13, 1919. (Received for publication January 5, 1920.—Eds.)

Family History: Father alive at 50 in good health, mother alive, 60 and in good health except for stomach trouble. She has two sisters and three brothers in good health, but one brother is a deaf mute.

Previous History: She was a normal delivery and was apparently a normal child for three years, walking around with the aid of a chair or other support. At three years of age she had a severe attack of "stomach trouble," and her family state that after this attack she seemed to lose interest in what was happening around her and would sit for hours at a time without moving. She became progressively weaker in her legs and finally was unable to walk from her fifth to her tenth year, until she entered Dr. DeBuys' clinic at Touro Infirmiry. She was under observation by Dr. DeBuys from 1915 to 1917, during which time she presented symptoms simulating deficient thyroid function and under thyroid therapy she grew six inches in height and was able to walk unassisted, while there was a marked improvement in her mental development. She discontinued taking any form of treatment in 1917 and has been gradually developing the present symptoms for the past two years while she has not grown at all in this time. She has had only measles and pertussis, but her constipation has been persistent since three years of age, requiring a daily enema. Her anterior fontanelle closed only two years ago, while she menstruated for the first time one month ago, associated with slight cramps but otherwise normal.

Physical Examination: The accompanying photographs best illustrate her general appearance, but I would especially call your attention to the abdominal girdle of fat, the fatty deposit of fat between the shoulders or rather at the base of the neck, and her chubby tapering fingers, while there is no hair on the pubis or in the axillæ, all definite symptoms of hypopituitarism, while the dry skin, pallor, cold integument and absence of any palpable thyroid gland point to deficiency in function of this latter gland. There is a marked depression at the site of the anterior fontanelle and, while she has a double row of teeth, dentition has been very much retarded. She has a decidedly unsteady gait and cannot walk unassisted, while she is unable to raise her feet sufficiently to step up even one step.

Lungs, spleen, liver, gall-bladder, and both kidneys are apparently normal. The heart is normal in size but the sounds are feeble, but no murmurs audible and systolic blood pressure 80 and diastolic pressure 50. Both patellar reflexes are absent, plantar reflexes sluggish and Babinski's sign negative. All voluntary movements are sluggish and it is very difficult to make her talk, although she seems to understand everything that is said to her. Her pupils are enormously dilated but react to a sudden change in light. Her weight is 81 lbs.

Urine: Acid, 1032, negative tests for sugar, albumin, urobilinogen, bile pigments, acetone and diacetic acid, great excess of indican, no casts but a few pus cells and a few erythrocytes.

Blood: Leucocytes—7,800; erythrocytes, 4,580,000, hemoglobin, 70%; color index 0.7; neutrophiles, 54; small mononuclears (lymphocytes), 45; large mononuclears, 0; eosinophiles, 0; basophiles, 0; transitional cells, 1.

This case has come under my observation only one month ago and is exhibited now, so that, in case there is any result from organotherapy, I will be able to show you the case again. I have

put her upon a capsule three times daily consisting of two grains of extract of the whole pituitary gland, one grain of extract of thyroid, and one grain of ovarian extract.

Dr. DeBuys will be able to tell you more of her early history and I hope at some future time to exhibit her to you again.

DISCUSSION.

Dr. DeBuys: This little patient was first seen by me in the outpatient department of Touro Infirmary in 1915 where she was brought for a cold from which acute condition she was relieved. She presented an unusual appearance which suggested cretinism. Her parents appreciated that she was an unusual child and were willing that something should be done for her. Until towards the end of her first year nothing unusual was noted by her parents. After this, however, they believed that instead of progressing in her development, she seemed to go backwards. Physical examination showed a child short of stature, much undersized for her age, which was eleven years; her complexion was sallow, her skin dry, her hair thin and straight; she was quite fat and had a prominent abdomen. There was no umbilical hernia and her hands were short, but her fingers tapering. As she showed so many symptoms suggestive of hypothyroidism she was at once placed on thyroid extract.

X-ray examinations were made of her bones which were found not to be characteristic of cretinism and an X-ray examination of her head also was made. There was apparently no evidence of any disturbance in the region of the pituitary gland. Her blood picture showed nothing unusual. Her Wassermann, luetin and von Pirquet were all negative.

An interesting feature which was noted in connection with the thyroid administration was that it seemed to have a direct influence upon her fat deposit, namely, the administration of thyroid resulted in the diminution in the fat deposit and a decrease in her weight; whereas, with the withholding of the thyroid extract, her fat and weight would increase.

Because of the absence of an umbilical hernia, absence of the characteristic hands of a cretin, and the negative X-ray findings, I believed the condition to be not one a cretin, but a condition in which the growth and deposit of fat might be influenced by the disturbance of another one of the endocrine glands, which had influence upon the deposit of fat.

Knowing that the anterior lobe of the pituitary gland has some similar influence as the thyroid and that a disturbance of this anterior lobe might produce some symptoms found in hypothyroidism, I determined to administer the anterior portion of the pituitary gland. As Dr. Eustis has told you, she gained both in height and development while under my treatment at Touro Infirmary. In going over her history and analysing her case, I find that the improvement and development took place after the beginning of the administration of the anterior lobe of the pituitary gland.

I believe that her condition is one primarily of the disturbance of the anterior lobe of the pituitary gland in which there is a diminished secretion, with secondarily a diminished secretion of the thyroid. I have been very much interested in this case, but lost sight of her when I went off to some of the medical meetings in the Spring of 1917 and

have not seen her since that time until to-night. I would like very much to know what the X-ray of her head will show at this time.

Dr. I. I. Lemann: I came in late and am sorry I did not have an opportunity to hear more of the paper and to see more of the child. The disturbance of the pituitary gland sometimes has some of the characteristics of those of disturbed thyroid function and it is very difficult in some cases to know whether we are dealing solely with dyspituitarism or with the combination as suggested in this case. There are two types of infantilism, due to pituitary disturbance; one short and fat, known as the Brissaud type and the other, the tall slender type called the Lorain type. We ought not to fall into the mistake of confusing infantilism with dwarfism. The infantile may be of almost normal size. I would like to ask Dr. Eustis whether he has made any study of the rate of metabolism in this child. Also I would ask whether he has considered the use of thyroxin. At the Mayo clinics they claim they produce better results with this than with the ordinary thyroid preparation.

Dr. Eustis (closing): In reply to Dr. Lemann, I will state that I have considered the advisability of giving thyroxin, but she is a very intractable child and I have given her the pluriglandular extract with the hope of getting some improvement rapidly and later determining positively whether or not it is a single endocrine glandular deficiency or a mixed. I understood from the family that she had taken considerable thyroid extract while under observation by Dr. DeBuys and her rapid improvement then justifies its employment now, and the employment of the pituitary extract can be easily justified by her several cardinal symptoms of deficiency of this gland. I might mention that she had improved to such an extent under the treatment received in Dr. DeBuys' clinic that she was able to attend school up to last June. Röntgenograms of her head and extremities should be made and her metabolism should be determined but this is impossible in the present state of her mentality.*

* December 15, 1919. She has improved in physical vigor and mental capacity and is now able to mount an entire flight of stairs unassisted. Her constipation has improved to such an extent that an occasional dose of phenol phthallein (1 grain) is sufficient. Enuresis still present. No change in organotherapy.

PRESENTATION OF A CASE OF CIRRHOSIS OF THE LIVER; TALMA OPERATION; ENTIRE RELIEF OF SYMPTOMS.*

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

This lady is 48 years of age. She has had one full term child and two or more miscarriages. She has been subject to attacks of asthma since the age of 13 years. She has been a fairly steady drinker; accustomed to wine, beer, and frequent cocktails. She has always been frail but never seriously ill. About three years

* Read at the Meeting of the Orleans Parish Medical Society, October, 27, 1919. (Received for publication January 5, 1920.—Eds.)

ago she began to develop cirrhosis of the liver with ascites and cachexia. Her condition steadily grew worse, gradually developing to the point where she had to be tapped. She had a certain amount of anemia and increasing weakness. She was treated by two of the physicians here in town, and later I happened to get in touch with the case. She was tapped altogether nineteen times before operation; at first at rare intervals; later it was necessary to tap every four or five days. Two or three gallons of fluid were removed each time. Along in December, 1916, she was bed-ridden and her condition was very grave. She was delirious most of the time, developed bed sores and was evidently about to die. On Christmas day, 1916, I did not think she would live through the week. As a last resort I suggested a Talma operation be performed. We took her to Touro and Dr. Miller and I operated on her on April 21, 1917. The Talma operation, as you know, is a procedure for "short-circuiting" the abdominal circulation around the liver. The omentum is brought up and sutured to the anterior abdominal wall, or as in this case, into the abdominal wall. The operation was done with novocaine. A supra-umbilical median incision was made, and the great omentum was brought into the wound and sutured there. The anterior surface of the liver was scarified so as to cause adhesions. She stood the operation fairly well, but was very toxic. Her condition was almost hopeless after the operation, but finally she recovered and was taken home.

The first thing we knew she was feeling badly again. We had to tap again, and she was tapped 15 times after the operation, the last time in August, 1917. During her illness she had developed a bad case of hemorrhoids, as well as a complete procidentia. On the 4th of July, 1918, we took her to Touro again and Dr. Miller operated, doing a vaginal hysterectomy and a hemorrhoidectomy. He first tried local and then used general anesthesia, as local failed on account of fibroids of the body of the uterus. She stood that operation nicely and has been doing well since. After the operation she also developed what was apparently a neuritis of the left leg. That did not worry her very much as far as pain was concerned, but she developed foot drop. She has gained a good deal of weight, does her own housework, and is generally in good condition.

I looked up the statistics of this operation in Moynihan's Abdominal Surgery and reports are as follows:

Sinclair White collected reports of 227 cases, with results as follows:

Deaths	75, or 33 %
Failures	34, or 15 %
Improved	29, or 13 %
Cured	84, or 37.3%

Thus 50% of the patients are cured or improved, which is better than can be done with any other method of treatment at our command.

DISCUSSION.

Dr. L. H. Landry: We are pleased to hear of Dr. King's case, as well as the success with the case. I think the procedure of scarifying the liver alone does not produce nearly as good results as omentopexy,—that is, fixing the omentum in the abdominal wall. That is a simple procedure. You can do this with local anesthesia and produce no shock. We have had several cases in which we did the omentopexy on one side and obtained so much benefit from it that it encouraged us and four or five weeks later we did another omentopexy on the other side. It does not give near as much shock as the procedure of scarifying the liver. It is a simple procedure and in many instances you will be warranted by this method to relieve your patients of the necessity of frequent tapping.

Dr. E. L. King (closing): In answer to Dr. Landry, I simply want to say that we scarified the liver so as to leave nothing undone. It may not have done any good but it did no harm.

**THE SEWING MACHINE MOTOR IN USE AS
A MOTOR SAW.***

By J. T. NIX, Jr., M. D.

Professor of Orthopedics, Loyola P. G. School of Medicine, Chief of Orthopedics, Charity Hospital, Visiting Surgeon, Hotel Dieu, New Orleans.

At times like the present all stock has reached its high water mark, labor is being paid more than ever in previous history, demand is greater than supply, consequently, the prices of everything have advanced enormously. This is especially true of all equipment, medical or surgical.

The very name surgical often adds from one hundred to five hundred percent to the proper valuation. The surgeons' chisel or gouge which sells for two to four dollars is duplicated in the carpenters' shop at a maximum price of fifty cents, and this same disproportion in cost exists between porcelain ware, chairs, scales

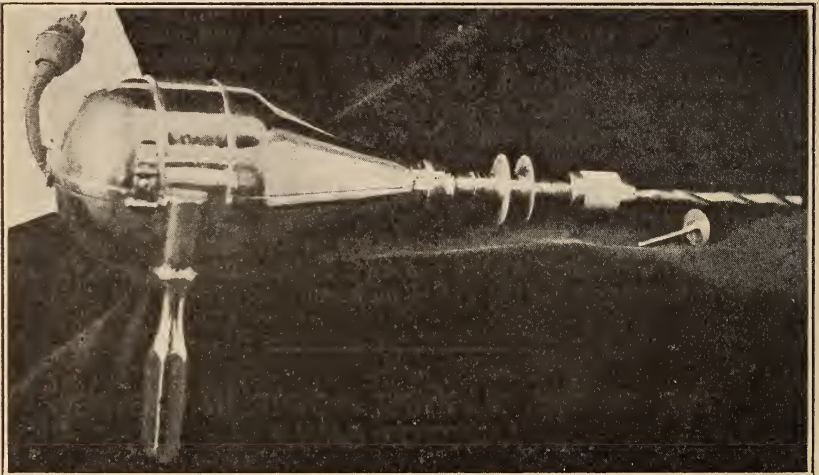
* Read at the Meeting of the Orleans Parish Medical Society, November 24, 1919. (Received for publication January 5, 1920.—Eds.)

and all other surgical appliances when compared to their facsimiles in domestic or other use. WHY?

Not because of unlawful profiteering, not because one man or set of men are rapidly growing rich for their huge, unjust profits, but simply because the output of the surgeon's instrument is infinitesimally small as compared to the enormous production of the mechanic's tool.

The same comparison is true of the electric motors.

For a long time past the motor has been used by the housewife to run the sewing machine or sharpen the kitchen knives, by the barber, professional masseur, and the mixer of soft drinks. Consequently the demand has been great, the supply more than adequate



Motor saw, Albee twin saw attached. Star Chuck No. 4, mechanic's drill, held by chuck and dental cross-cut saw detached.

and the resulting cost very low. They are made by the hundreds of thousands whereas the motors for surgical use are very limited in their production.

This motor that I have used for the past three years is a standard sewing machine motor purchased from the Railway and Light Company for fifteen dollars. The entire equipment cost less than seventy-five dollars, while the Albee outfit at that time sold for two hundred and fifty dollars.

Under no circumstances, however, should efficiency be sacrificed or lessened for the sake of economy. The motor has been used to cut twenty bone transplants from the human and in repeated experiments on wood. It has never failed to do the work and is

still practically new. Either direct or alternating current may be used. The rheostat control operates by a foot pedal, regulating the number of revolutions per minute and permitting five speeds.

Another very valuable feature is the use of Star Chuck No. 4 which screws on the end of the shaft and by means of which any part of any other electro-motor saw and many of the dental appliances and mechanic's drills are adaptable. Star Chuck No. 4 is standard, found in all work-shops, and on sale in every hardware store for fifty cents. The small dental circular saw is directly attachable thereto and is used to cross-cut the graft. It can be had at any dental supply house for less than a quarter of a dollar.

By attaching a long flexible revolving shaft with holder all of the dental burrs and drills may be used as in dentistry and the largest of these should replace the hammer and chisel of the otologist in operations for mastoiditis.

The machinist's drill, when attached, perfects the apparatus for placing intra-medullary grafts.

The sterilizable shell was hand-made at Hausmann Brothers for fifty dollars. If these were produced in quantity, and factory-made the price could be materially lowered.

To summarize: The Universal motor is not an experiment but has stood the test. It is simple, cheap, and efficient. By means of the special chuck any appliance of any other outfit is adaptable. If it is out of order, the motor is replaceable, immediately, anywhere on the face of the globe.

ADDRESS OF DR. ALEXANDER CRAIG, SECRETARY AMERICAN MEDICAL ASSOCIATION.*

When in the presence of any organization of physicians, I always feel very much at home, and the kindnesses which have been shown to us while in New Orleans by members of the Orleans Parish Medical Society make this meeting no exception.

The American Medical Association has been able to accomplish the well worth while things which it has done, because you and other organizations like yours are back of the great movements having for their object the bringing together of physicians in order that they may discuss questions and take such actions as will make them competent to serve the general public. This is the object of

* Delivered at Meeting of Orleans Parish Medical Society, Monday, Nov. 24, 1919.
(Received for publication Jan. 5, 1920.—Eds.)

the American Medical Association. It is also the purpose of the Orleans Parish Medical Society. In all its branches,—country, state and national,—the dominating purpose is to maintain and advance the education of physicians. For this reason, physicians meet to discuss scientific subjects in these several branches of the organization. It is also the reason that the Association publishes its Journal. That members of the medical profession may be in position the better to serve the public, in like manner is the central reason for the association holding its annual sessions. Because of your interest in this work, and your loyal cooperation, the next annual session of the association held in New Orleans, will undoubtedly be a successful one. If any assurance were needed, your hearty welcome tonight is sufficient evidence that the members of the Orleans Parish Medical Society are back of the movement for making the coming annual session of the association well worth while.

LETHARGIC ENCEPHALITIS.*

By J. M. PERRET, M. D., New Orleans, La.

Lethargic encephalitis is also known as epidemic encephalitis, infectious ophthalmoplegia, nona, sleeping sickness. It has nothing to do with trypanosomiasis, sleeping sickness, which is caused by *Trypanosoma gambiense*, and which occurs in Africa, the West Indies and South America.

The name lethargic encephalitis was given to the disease by von Economo in describing an epidemic which occurred in Vienna in the winter of 1916-17. He considered it the same disease as nona, which was seen in Italy and Hungary in the spring of 1890.

As far back as 1718 cases of sleeping sickness in connection with a grippe epidemic were reported by Camerarius. Our knowledge of the disease is still in a state of chaos and much remains to be learned.

Paul Sainton defines the disease as a toxic, infectious, epidemic syndrome, characterized clinically by a triad of symptoms, consisting of somnolence, palsies of the motor nerves of the eye ball, and a febrile state, and anatomically by more or less diffuse encephalitis, situated chiefly in the gray matter of the mid-brain.

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The cause of the disease has not yet been found. Some have thought that it was due to botulism, others to poliomyelitis, others to influenza, and others to some infection of unknown origin. Von Wiessner claims to have found a gram positive diplo-streptococcus in all his human cases and to have transferred the disease to the ape.

The pathological changes in the brain belong histologically to the class of polioencephalic diseases which are inflammatory. The brain microscopically shows meningeal congestion, and a minor amount of patchy localized meningitis. On section both the gray and white matter are found to be the sites of minute hemorrhagic areas scattered irregularly. The motor cranial nerve nuclei are involved.

Microscopically there is a thickening of the lepto-meninges with exudation of vascular congestion, and the gray matter is the site of peri-vascular cellular infiltration. There is parenchymatous degeneration of the neurones. Blood cultures are sterile. The white count is normal or slightly increased. The white count has gone up as high as 29,000. The Wassermann reaction is negative. The spinal fluid may be normal. It is clear and sometimes comes out under pressure. It is sterile. In some cases the cell count may reach 200 per c. mm., this being due to lymphocytes. Albumin and globulin content may be increased. There is nothing remarkable about the urine.

The most striking symptoms are the somnolence, asthenia, drooping of the lids and the mild fever. Prodromal symptoms are vertigo, headache, lethargy, asthenia, sore throat, conjunctivitis, diplopia and some alteration in the mental state. Later on there is fever, the patient is unable to make voluntary movements, the face is mask-like, drooping of the upper lids, the patient articulates with difficulty, the words are slurred, there may be double facial paralysis, paralysis of limbs, nystagmus, delirium, tremors, retention or incontinence of urine, incontinence of feces, constipation; may have pains in limbs. Lethargy occurs in 80% and ophthalmoplegia in 75% of the cases. The reflexes are usually normal, sometimes increased, occasionally decreased.

Babinski's sign, Kernig's sign and ankle clonus are sometimes found. The disease has been seen in infants of 12 weeks and in adults of over 60 years. Duration of the disease is from 6 to 60 days. The mortality is high. In 168 British cases it was 22% ;

it was 50% in the French cases. Fatal cases usually die in one to two weeks after onset of the disease.

The treatment is symptomatic. Occasional tappings of spine may give temporary relief. Heat should be applied to relieve pain. Opiates are to be avoided. We think that it is important that we should carefully look for foci of infection and should any be found, the appropriate treatment instituted.

Since 1919, cases have become reportable in Louisiana. The following data has been kindly furnished by the Louisiana State Board of Health: 37 cases have been reported to date from 19 parishes; Orleans leading with 8. 23 were among whites, 8 colored, 6 color not stated. March, 17 cases; April, 15; May, June, July, August and November, each 1 case.

Report of a case.

Mr. J. R. W., a white male of 27 years, a native of Kentucky, clerical occupation, was seen at the office on October 13, 1919, and complained of swimming in the head for preceding three days. Poor appetite. Sleeps well. Bowels regular. His family history was negative. When a boy he had a cold which lasted one month. Last year he had a mild attack of influenza.

Physical examination: the patient appears prostrated. Temperature 100 F., pulse 60, respiration 18. Blood pressure: systolic 120, diastolic 80. Heavy white fur on tongue; many gold caps on teeth; soft palate congested. The rest of the examination was negative.

The leucocyte count was.....	8250
Neutrophiles	72
Lymphocytes	22
Mononuclears	2
Transitionals	2
Eosinophiles	2

Wassermann reaction negative.

No positive diagnosis could be made. It appeared to be the onset of some infectious disease, probably typhoid fever.

For the next few days he kept on complaining of dizziness and pain in the temporo-mandibular joints. The physical examination was the same as before except that this soft palate was much more congested and that he was more prostrated. Five days after his visit to the office he was sent to Hotel Dieu and remained there for a month.

The clinical course was characterized by somnolence, asthenia, drooping of upper lids, photophobia, open mouth, mild fever, up to 101° F. by rectum. The somnolence was so marked at times that patient appeared to be in coma. The speech was slow and slurring and for days he was not able to speak at all. During the night he would frequently get restless, moan and complain of pains in knees and legs. At one time he complained of pain in right lower chest which seemed of pleural origin. He often voided involuntarily. He never had any headache, nor did he vomit. Only one day was he slightly nauseated.

He developed a Kernig's sign and tremor of upper extremities.

X-ray of teeth having shown three abscessed teeth, these were extracted on Nov. 7, and although the patient had begun to show some improvement a couple of days before, the removal of these septic foci seemed to have been of value, as after this the improvement was more rapid.

Examination of eyes by Dr. Dimitry: Eyes are in parallelism. Media clear. Fundus normal.

Laboratory findings: Urine negative. 10-19-19. Blood culture negative.

Whites	7,400
Neutrophiles	76
Lymphocytes	21
Endothelial leuc.	2
Basophiles	1

10-23-19. Widal and malaria negative.

Whites	29,000
Neutrophiles	91
Lymphocytes	8
Eosinophiles	1

Wassermann, Tschernogubow, Widal and malaria negative.

19-25-19. A spinal puncture was made and a clear fluid under slight pressure obtained. Culture and Wassermann were negative. 15 cells per c. mm. Globulin increased.

10-28-19.

Whites	18,000
Neutrophiles	91
Lymphocytes	9

The treatment was symptomatic. Careful nursing. Lots of fluids to dilute the toxins. Murphy drip of 5% glucose was given when patient could not take enough fluid by mouth. Frequent mouth washes. Sponging. Castor oil to keep the bowels opened. Urotropin and hydrochloric acid t. i. d. Codeine and morphine had to be resorted to a few times when heat would not relieve the pains. And last but perhaps not the least the removal of the septic foci, which in this case were abscessed teeth.

Present condition Oct. 19, 1919: The patient is now apparently convalescent. He is mentally bright. He can move his upper and lower extremities. There is a coarse tremor of his upper extremities. He cannot separate his teeth more than one-half inch. Kernig's sign is present. With some help he can walk in his room. Blood pressure, systolic 118, diastolic 85.

In conclusion I wish to thank Dr. J. T. Nix for the privilege of reporting this case, which is one of his patients.

The following articles have been consulted:

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 Hershfeld, A. S., *Illinois M. J.*, July, 1919.
 Neal, Josephine B., *Archives Neur. & Psyc.*, Sept., 1919.
 Pothier, C. L., *J. A. M. A.*, March 15, 1919.
 Vaidya, S. K., *Lancet*, Sept. 7, 1918.
 Vaughn, V. C., *J. Lab. and Clin. Med.*, April, 1919.
 Winner, S. S., *Illinois M. J.*, Sept., 1919.

DISCUSSION.

Dr. Johns: I have had the pleasure of seeing one or two such cases in the last six months and I am able to confirm all of the laboratory findings mentioned by Dr. Perret. As every symptom must be utilized in the making of this diagnosis, I would like to add that the reduction of a colloidal gold solution in the high dilutions (the meningeal type of curve) combined with an excessive globulin reaction and a rather low (30-50) all count in the spinal fluid analysis have been the most consistent laboratory findings of value in confirming the general picture of the case.

**REMARKS OF PASSED ASSISTANT SURGEON M. S.
 LOMBARD, U. S. PUBLIC HEALTH SERVICE,
 TO THE MEMBERS OF THE ORLEANS
 PARISH MEDICAL SOCIETY.***

I have asked the privilege to say a few words to you tonight because some doubt exists whether or not the whole medical profession of New Orleans knows that several cases of bubonic plague have occurred in this city since October last. It is not my intention to deliver a lecture on plague, as I feel that all of you are well versed on this subject. I would like to invite your attention to some facts, however, which will put you on your guard.

On October 29, 1919, a case of bubonic plague was discovered in the Charity Hospital. Two days later, three other cases were found, making four cases discovered by November 1, 1919.

On November 5, the fifth case was seen. All seemingly went well till November 22, when the sixth case was reported. Between November 25 and December 5, five other cases have been found, making a total of eleven cases to date with results as follows: Two cases were dead when first seen, two cases died in hospital, three cases have recovered and four cases are still in the Isolation Hospital.

Since the discovery of the first case, the Public Health Service activities have been greatly increased. Rat trapping areas were established at once and from November 1, 1919, to date, 22,899 rodents have been captured and sent to the laboratory for classifi-

* December 13, 1919; 8:30 P. M. (Received for publication Jan. 5, 1920.—Eds.)

cation and examination. Suspected rats were discovered from the very first, and out of the number captured, 174 have been proved plague infected and about 700 were plague suspected. Many of these suspicious rats are proving negative, but comparatively a large percentage are being confirmed. By citing these figures, I want to emphasize the fact that we are dealing with a severe epizootic. Why more people are not plague infected often makes us wonder. The epizootic is most marked along the river front and along the Old and New Basin Canals, but it is well spread over the entire City of New Orleans, and in each instance the trouble can be traced to defective structures. The way the service is meeting the present situation is as follows: In human plague, as soon as the case is discovered, the patient's residence and his place of employment is fumigated with cyanide gas, the object being the destruction of both rodents and fleas. In rodent plague, we fumigate the apparent rat harboring buildings. Intensive trapping is instituted, and at the same time defects of rat proofing are corrected. Our results by this method of treatment have been very satisfactory. We think we have prevented the spread of the disease to men in infected localities.

Fortunately, we have in back of us 5½ years of ratproofing, which makes the treatment comparatively easy. We do not have to destroy great rat harbors as we did in 1914, therefore, cyanide is believed to be effective.

My appeal to you is, 1st, to report suspicious cases early, 2nd, to refrain from prescribing for anyone unless you see the patient. If, for reasons best known to yourselves, you do prescribe without seeing the patient and by any chance the patient died, please do not sign the death certificate until you have seen the body and excluded plague. If, on account of enlarged glands, femoral, axillary, cervical, etc., doubt exists in your mind as to the cause of death, let us know and we will be glad to consult with you and assist with bacteriological procedures, if necessary.

The importance of reporting cases early is readily understood. By obtaining such information we believe that it is possible to prevent the spread of the disease to others. Be on the lookout for plague when treating employees of large food warehouses, especially from those located along the water front.

As you may have noted, through the press, responsibility has been placed where it rightly belongs. The Dock Board, certain

railroads and a few delinquent citizens have been advised that their share of the work must be completed. City officials are going to see to it that all non-ratproofed premises, within the Parish of Orleans, will be repaired as quickly as possible.

Some foreign governments have either quarantined against New Orleans or are threatening quarantine. Severe restrictions have been imposed on vessels from New Orleans by others. Under present conditions, as we are meeting this emergency satisfactorily, I do not believe that a quarantine against New Orleans is justifiable at this time. However, the Public Health Service has nothing to do with foreign governments, and it is the duty of the State Department to adjust matters of that kind.

Your help is needed in the way I just explained. As we are positive that we have discovered all cases of the quarantinable disease in this city, let us hope that we have seen the last case of plague.

THE SPONGE-FORCEP METHOD OF TREATING INCOMPLETE ABORTION.*

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

From the Department of Obstetrics and Clinical Gynecology, School of Medicine,
Tulane University of Louisiana.

As is well known, spontaneous abortion is very common; Williams¹ estimates that one out of every five or six pregnancies terminates thus, while Taussig (quoted by Williams) places the figure for all abortions at one in every 2.3 pregnancies. Furthermore, it is a familiar fact that incomplete abortions are more frequent than complete ones, Williams placing the ratio at 5 to 1 in hospital and 3 to 1 in general practice. Complete abortion is most frequent during the first two or three months of pregnancy; during the next three or four months the incomplete variety is the rule. After six and a half months, the case is one of premature labor and is handled as is a case of labor at term.

The treatment of this frequent condition is of course important, and in our eagerness to meet the emergency we are prone to forget the probable end—results of careless, unclean, or unnecessarily vigorous manipulations. Polak² stresses the point that the majority of incomplete abortions in his practice have been examined or treated

* Read at the Meeting of the Orleans Parish Medical Society, December 13, 1919. (Received for publication Jan. 5, 1920.—Eds.)

through an unprepared vulvo-vaginal orifice, and hence can no longer be considered clean. Practically all obstetricians agree with this statement, and hence caution against too vigorous a course of treatment. It might be well here to remind you that postabortal infections are very common, much more so than puerperal ones. One investigator found that over 5% of the gynecological cases in a large general hospital were traceable to these infections, and most of these infections in turn can be traced to intra-uterine manipulations.

Polak states that complete evacuation of the uterus by means of the curet, forceps, and fingers, under a strict aseptic surgical technic, is the best treatment for the clean case. In a case where infection is suspected he takes a uterine culture under aseptic precautions. If the culture is negative, the uterus is carefully evacuated, using the curet if the pregnancy has not advanced past the eighth week; the placental forceps and finger, if past this period. If the culture is positive, he waits until it becomes negative, tamponning only if there is free bleeding, and then cleans out the uterine cavity. He advocates final evacuation in all cases for three reasons: (1) the percentage of subsequent menorrhagia is greatly reduced; (2) the retention of placental fragments favors the later development of chorio-epithelioma; (3) routine curettage and microscopic examination of the scrapings will at times lead to discovery of early malignancy.

The diversity of opinion as regards the treatment of infected cases is well shown by the report of a committee on the treatment of puerperal fever to the section on obstetrics and gynecology of the American Medical Association in 1913, the committee having been appointed the year before by Dr. C. Jeff Miller, chairman of the section. Questionnaires were sent out to teachers of obstetrics and gynecology, to general surgeons, and to some foreign authorities; the questions were also published in the journal, and fourteen general practitioners sent in replies. The majority advocated cleaning out the uterus in infected abortion, if there were retention of secundines, but after once cleaning it out, no further intra-uterine treatment was favored. About 50% of those answering stated that they tried to distinguish by various means between infected and non-infected abortions, but there seems to be no reliable method for distinguishing between benign and virulent intra-uterine infections. The committee concluded that it is well to wait in the infected cases for nature to erect her barriers against the in-

fection. In the discussion, Montgomery advocated cleaning out decomposing material with the gauze-wrapped finger. Litzenberg favored completing incomplete abortions, but preferred to pack and wait in septic cases; if the cervix is dilated and the secundines presenting he would remove them with the placental forceps. Frank preferred the expectant treatment, and thought that many infections are due to haste in examination and treatment. Yarros would curet practically all cases. De Lee leans towards conservatism in septic cases, cleaning out with finger and forceps in two or three days. He uses the curet only exceptionally.

The consensus of opinion, then, seems to be that in infected cases we should either do nothing at all locally or that at most we should empty the uterus very gently and afterward keep away from it. All are agreed that the curet should never be used in the presence of infection. In clean cases more radical treatment is advised, and curettage is the method usually employed. In our work in Ward 65, Charity Hospital, we have for several years handled all the white abortion cases, and have reached the conclusion that the use of the curet is inadvisable, and is often productive of harmful after-results, even in clean cases. Our reasons for this opinion are as follows: (1) It is the rule to find microorganisms in the vagina, and streptococci are frequent in this location. (2) We know that it is impossible to absolutely sterilize the vagina and cervix. (3) The ideal way to implant these organisms into the uterus (which of course is just what we do not wish to do) is to remove the mucous membrane with the curet which has passed through the vagina and cervix and has picked up any bacteria which may be present. Infection of greater or less degree will often follow, depending upon the virulence of the particular organisms present. (4) The retained portions of the ovum are almost always partially or completely detached, and can be moved more effectually by the forceps than by the curet. (5) Perforation is not uncommon when the curet is used on account of the softness of the uterine wall.

Hence we have adopted the following method, for which no originality is claimed. The patient is always anesthetized, is carefully prepared with green soap and water, followed by alcohol, a self-retaining speculum is introduced, the cervix is grasped by a volsellum and dilated gently (if necessary). In the majority of cases the cervix is open enough to admit the sponge-forceps or the

finger, and no dilatation is necessary. An ordinary sponge-forceps is introduced, and with it the retained secundines are seized and withdrawn. Often the ovular remains are protruding through the cervix, and are easily removed. The forceps is introduced and withdrawn two or three times, until no more remnants are found, and then is introduced with a sponge in its grasp, which is twisted around inside the uterus in order to remove any small particles that may be left. Finally, if the cervix is sufficiently dilated, the finger is introduced and the cavity carefully palpated in order to make sure that all particles have been removed. This step is not essential, and is often omitted, as the cessation of bleeding is a very reliable indication that the cavity is empty. The uterus is not irrigated, no chemicals are used in its interior, and no pack is used except in the rare case in which rather free bleeding persists in spite of complete evacuation. The after-treatment is simply *rest*, local and general, for three to six days. The patient is allowed up as soon as the uterus has involuted well, and she is discharged two or three days later.

We have found that this method is as effective as the use of the curet in the removal of the retained material, is not followed by fever, and is not attended by any of the risks enumerated above. We have also found that the majority of incomplete abortions will not complete themselves, that ergot and pituitrin will not as a rule do this for us, and that the vaginal pack is uncertain and liable to produce infection. We have seen many cases of menorrhagia after abortions in which small pieces of the ovum were retained and the case left to nature. Polak also calls attention to this feature. So we feel that this "intermediate" method is the best one to employ in clean cases of incomplete abortion. We also use it in sapremic cases with known retention, as shown by hemorrhage and foul discharge, and the temperature generally falls rapidly to normal. In septic cases with no evidence of retention the uterine cavity is not invaded.

As stated above, no originality is claimed for this method, but we wish to emphasize its usefulness and safety. We have used it in several hundred hospital and many private cases with uniformly good results, and hence recommend it for your consideration.

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Am. Jour. Obst. Vol. 95, No. 3, Page 409.

REPORT OF CASE OF DERMOID CYST, LEFT OVARY, IN A PATIENT 14 YEARS OF AGE.*

By W. D. PHILLIPS, M. D., New Orleans, La.

Family history—negative. Present illness—Started about four years ago at which time she complained of slight pain in abdomen. She was treated by a physician for some intestinal disorder and seemed better until November, 1918, at which time she suffered severe pain in left side of abdomen. This pain continued during December, 1918, and January, 1919. She was not confined to her bed except one day and on that day suffered retention of urine, which was relieved by use of catheter. She was apparently well again until June, 1919, at which time she suffered severe pain in right side, she remained in bed three days.

She was apparently well again until Friday, December 5, 1919, at which time she suffered severe pain in left side and marked nausea and vomiting. She continued to suffer Saturday, December 6th, and Sunday, December 7, and Monday, December 8, 1919. She did not notice any enlargement of abdomen until Sunday, December 7, 1919. She was advised on Monday, December 8, 1919, to undergo an abdominal operation.

Patient admitted to Presbyterian Hospital Monday, December 8, 1919, at 5:30 p. m., at which time examination showed abdominal distention, marked rigidity and pain over entire abdomen most marked over McBurney's point. She informed me that menstruation appeared for the first time Wednesday, December 3, 1919, and was still menstruating at time she was admitted to hospital. Temperature was 101.4°; there was an area of dullness upon percussion over the whole lower abdomen which seemed to indicate loose fluid instead of encapsulated. Total leukocyte count—20,000. Differential leukocyte count showed—neutrophils 92%. Urine examination showed 1¼% albumin with four plus indican, otherwise negative.

A probable diagnosis of ruptured appendix was made although the general condition of the patient did not suggest same.

Operation.—At 8:00 p. m. under ether anesthesia, right rectus incision being used showed a large cyst of left ovary about the size of a foetal head lying on right side of abdomen. There was a marked twisting of the pedicle and a large hemorrhagic area at base of cyst. Some of the fluid was aspirated and cyst delivered through the incision. The appendix was examined and found to be large, congested and diseased so was removed.

Laboratory report of specimen showed: A dermoid cyst of ovary with hemorrhagic extravasation. Appendix slight, acute and chronic inflammation.

DISCUSSION.

Dr. E. L. King: I would like to mention a case which my brother, Dr. A. C. King, had several years ago similar to the one reported by Dr. Phillips. A little girl of sixteen years of age showed symptoms of acute appendicitis. My brother and Dr. Martin operated on her under this diagnosis. The appendix was taken out and it was decided

* Read at Meeting of Orleans Parish Medical Society, December 13, 1919. (Received for publication Jan. 5, 1920.—Eds.)

that it was not sufficiently diseased to account for the severe symptoms exhibited by the patient. So they investigated further and found a cyst of the right ovary, which had become hoisted upon its pedicle. This was removed. I do not think that it was a dermoid cyst, however, but, to the best of my recollection, it was a simple unilocular cyst.

A FEW GENERAL SUGGESTIONS REGARDING THE COLLECTION AND PREPARATION OF SPECIMENS FOR LABORATORY EXAMINATIONS.

By ELIZABETH BASS, M. D., New Orleans.

The object of this paper is to endeavor to make certain useful and practical suggestions relative to the collection of specimens for clinical laboratory examinations.

It is not intended to bring out any new ideas but rather to emphasize some of the things that are already well known. There is no branch of medicine, as you know, but that at some time, and usually very often depends on the laboratory for much valuable information in diagnosis. Such information is frequently obtained by direct findings, yet there are many instances in which diagnoses are made by exclusion only.

Having done, within the past few years, both in my private laboratory and in teaching in Tulane Medical College, a fairly large amount of work for physicians in various fields of medicine, I have been impressed with the fact that it is very important that specimens to be examined properly must, first, represent suitable material for examination and, second, that such material must be properly prepared, otherwise, correct interpretation of the findings is not likely to be made.

If one were asked to mention the material upon which he could give the greatest amount of information from a laboratory examination, I believe every clinical diagnostician would unreservedly state, the blood smear. To obtain such information, however, a suitable and properly made smear is essential. These are frequently made by the attending physician, who, not being familiar with the proper technic of making such smears, may send to the laboratory preparations that are not suitable for examination and upon which no dependable report can be made. Having been called upon to examine and report on many improperly made blood smears, I feel justified in stressing this particular point.

A number of different examinations may be made of the blood

smear and the findings may be of considerable value in diagnosis. Perhaps the greater per cent of requests for reports on blood smears are differential leucocyte counts. Next in frequency, in our southern territory, at least, are for malaria. There are many requests also for agglutination tests for typhoid. Again, much valuable information may be obtained, and often a certain diagnosis be made in cases of the leukemias, pernicious anemia, mineral poisoning and other blood dyscrasias. All of these examinations may be made on a properly prepared blood smear.

To make a satisfactory differential leucocyte count, a thin smear and an evenly distributed field should be selected for counting. To make such a smear one should puncture the finger tip or the lobe of the ear with a suitable blood sticker and obtain about one-fourth drop of blood by gentle manipulation and without hard squeezing, the drop of blood is collected and then thinly spread on the middle third of a clean glass slide with the end of another slide. The spread is made by touching the drop of blood with the end of another slide and allowing it to spread across the first slide, then raising the "spreader" slide to an angle of about thirty-five degrees, and making a quick forward stroke. The cells should not roll up to the lower end of slide but should be thinly and evenly distributed. If this technic is followed physicians who have not had experience can soon learn to make good smears without much difficulty.

If the cells are rolled up on one end, the differential leucocyte count on such smear may show an increase in the per cent of small lymphocytes, or it may show an apparent reduction in leucocytes. This is not in reality the condition of the patient's blood and although the count is accurately made, in so far as the cells on the slide are concerned, it nevertheless does not represent the ratio of the different cells. The endothelial and polymorphonuclear leucocytes being larger are rolled to the edge of the smear, more or less, are not counted unless one counts cells at the edge of slide which is not usually done.

The value of examination of blood for malaria, also, depends a good deal on the kind of smear furnished. The parasites can be most easily and quickly recognized in thin smears of blood where the cells are not piled up on each other. If the plasmodia are numerous not so much difficulty is encountered, but when the parasites are few in number it is very necessary that thin smears

be examined. One can not stain a thick smear of blood satisfactorily and it is necessary to secure a good stain not only for finding plasmodia but to be able to differentiate the leucocytes in making counts.

Frequently a drop of dry blood, not spread out, is sent to the laboratory with request for differential leucocyte count and examination for plasmodia. No report can be given on such specimens. An agglutination test for typhoid can be made on the dry drop of blood, but for this, also, it is preferable to have a thin well spread smear as described above. For one to make a total leucocyte count or a total erythrocyte count it is necessary that one trained to make accurate dilutions collect specimens, but the blood smear for the various examinations mentioned can be made by the attending physician and considerable time often saved. Many times laboratories are not accessible and it is necessary to send specimen some distance for examination. This is another reason why the attending physician should be able to make blood smears. Often a smear of blood is sent to the laboratory with request that an examination for plasmodia be made, when at a glance one observes an apparent, or perhaps a marked, increase in polymorphonuclear neutrophilic leucocytes and one can state to the clinician that the febrile or other symptoms from which his patient is suffering are due to some pyogenic infection and not from a protozoan organism. There are instances in which one can make practically correct classification of the anemias by examining a blood smear. However, in doubtful cases it is necessary to make total red cell count and determine the color index.

While speaking of blood I should like to mention one of the very satisfactory methods of collecting blood for cultures and for serological tests, and that is the "Blood Culture Keidel Tube" containing nutrient bouillon or ox-bile bouillon for the cultures, and the Keidel vacuum bleeding tube for collecting blood for Wassermann and other serological tests. These tubes are sold by Hynson, Westcott and Dunning of Baltimore and are most convenient and satisfactory. There is no danger of a specimen's becoming contaminated and the outfit is complete and ready for use. Blood for Wassermann test may be collected in any dry clean vial. It is not essential, though preferable, that specimen for Wassermann test be sterile but it is essential that containers be free from moisture.

Another mistake that is not uncommon is the use of unclean corks in bottle containing blood or serum for examination. A used cork, although apparently clean, may be saturated with some chemical that will give much trouble in the reading of Wassermann. Specimens are sometimes sent to the laboratory in bottles plugged with cotton which should never be done.

It may not be amiss for me to mention a few other materials that are sent to the laboratory and methods of preparing same. Much time can be saved and more certain findings reported if throat cultures, for instance, are planted at the bedside of patients than if material is collected on swab and sent to the laboratory. The hermetically sealed culture tube of Loeffler's blood serum with swab (designed and described by Dr. C. C. Bass, *Jour. A. M. A.*, Jan. 3, 1914) furnishes the general practitioner and specialist, as well, a convenient and ever ready culture tube for diphtheria. In fact, many other organisms grow luxuriously on this medium. Physicians who are likely to see cases in which throat cultures are desirable should carry such tubes with them. These tubes keep indefinitely and there is no danger of contamination nor evaporation of the nutrient substance such as usually occurs with the open mouth culture tube. If cultures are sent some distance in the mail there is sufficient warmth to encourage growth and frequently report can be given without further incubation or at least within much shorter time than is ordinarily required.

Pus of any character should be spread on slide and dried either in air or over flames before sending to the laboratory if there is to be a delay of several hours before specimen will reach the laboratory. The reason for this is that pus cells and bacteria disintegrate in fluids some more rapidly than others, and valuable diagnostic features are destroyed, particularly where organisms are phagocyted by the pus cells.

It is preferable when possible to send both slide and fluid of such material to the laboratory.

Specimens to be examined for intestinal parasite ova or larvæ should be properly collected. All of the intestinal worms commonly found in this country inhabit the small intestine and cecum, except oxyuris, which inhabits the large intestine.

The ova and larvæ being deposited high up in the intestine are thoroughly distributed in the feces, therefore stools of normal consistency are most suitable for examination.

One or two drams of material is a sufficient quantity. A wide mouth two ounce bottle with a new cork stopper is an appropriate container.

The interpretation on the examination of urine is of a great deal more value if examination is made on a freshly collected specimen. In fact, all such specimens if possible should be collected in the office or laboratory just before examination.

CONCLUSIONS.

1. Clinical laboratory findings are of great value when properly interpreted.
2. Correct interpretations can only be made on suitable and properly prepared specimens.
3. Physicians who expect to get the most information from laboratory examinations should at least submit properly collected and prepared specimens.

EPITHELIOMA, ITS VARIOUS TYPES AND THE TREATMENT BY RADIOTHERAPEUSIS.

By HENRY F. WILKINS, B. S., M. D.

Radiologist to The Birmingham Infirmary, Birmingham, Ala.

1. All epitheliomas arise from surface epithelium, and may arise from squamous cells or epithelial cells, according to location.

Squamous Celled Epitheliomas take their origin from a mucous membrane that is covered with pavement epithelium, and are especially prone to appear at the junction of the skin and mucous membrane or at the juxtaposition of the different kinds of epithelium. There is ingrowth of surface epithelium onto the sub-epithelial connective tissue, and colonies of the cells grow inward to form epithelial nests. It may arise without discoverable cause, it may follow prolonged irritation, or it may be found in a wart or fissure. The diseased area becomes cancerous in a very short time, and on the other hand the growth may require years to develop. Squamous epithelioma generally begins in a warty protuberance which soon ulcerates. Such an ulcer has a hard, irregular base, uneven edges, a foul, fungus like bottom, and gives off a sanious, ichorous discharge. This ulcer is a seat of a sharp, pricking pain, sometimes bleeds, and extends over a considerable area, embracing and destroying everything it comes in contact

with. Dissemination is not so common as other forms of cancer, but it does sometimes occur.

Cylindrical Celled Epithelioma: This form of epithelioma arises from structures covered with cylindrical epithelium and it contains cylindrical or columnar cells. The tumor is composed of a stroma of fibers between which lie tumular glands that are lined with columnar epithelium containing masses of epithelial cells, and found more commonly in the uterus and gastrointestinal canal, usually beginning from surface epithelium or from the cells of tubular gland. There is an acinus-like structure in these tumors and the spaces are filled with proliferating epithelium. This form of tumor may be found in the liver, and kidneys. They grow rather slowly, usually, but not always, cause lymphatic involvement, and may metastasize widely.

2. *Rodent Ulcer, Epithelioma Exedens:* This form of epithelioma begins after age of forty as a little warty prominence which ulcerates in the center, the ulceration usually progresses at a rate equal to the size of the growths. This ulcer is generally considered to be a rodent ulcer. The ulcer grows slowly and may last for years, but it does not involve the lymphatic vessels, and does not produce a cachexia. The destruction caused by the ulcer may become very great and the deformity is sometimes horrible. A rodent ulcer is generally considered one of the malignant growths, that springs from the sweat glands. Rodent ulcers do not contain cell nests. It very rarely forms a cicatrix, although a small portion of the ulcer may slough out and a temporary scar may form at this point.

3. All cancers of whatever nature, whether internal or external, are due to some form of irritation, and they obey certain general laws of growth. If it can be shown that any cancer in any particular part of the body is marked by a definite and invariable sequence of events, one is justified in the conclusion that this same law will govern the growth of every other cancer. It is my opinion, backed up by the opinion of many of the best authorities, that every cancer of the skin does not grow upon a healthy normal surface. Cutaneous cancers are always located where there has been tumors, scars, moles, warts, keratoses, or some form of irritation. Cancer of the mouth rarely occurs in a sanitary mouth with normal teeth. There is always present an irritation from a ragged tooth, from leukoplakia, a fissure, or a wart. So from these conclusions

we know that a precancerous stage exists and that in most cases the precancerous condition is remediable. In spite of this fact, even in the precancerous conditions, one frequently observes that the physician and the patient supinely and irresistibly wait for the inevitable disaster that all untreated cancers incur. If every chronic irritation were removed, every chronic ulcer healed, if every wart and mole were removed and every keretosis cured, if the mouth were kept in a wholesome condition and the teeth kept smooth, if every scar's unhealthy tissue were removed and necessary skin grafted to cover the nuded surface, then the problem of cancer would be solved, in so far as the surface of the body is concerned, or almost so.

4. TREATMENT.

In this discussion it is not my purpose to claim that surgery can be displaced by any other method of treatment, but I do believe that radium and X-ray should be employed as an adjunct to surgery and can be used in every case either before or after operation in all operable cases and will do an immense amount of good in all inoperable cases of cancer, in whatever state the disease may be. In all forms of skin cancer the treatment of choice is radium alone or in conjunction with X-ray. This form of treatment offers the best chances of curing the disease and that is what we wish to do. In the hands of those that have had an opportunity to study the effects of radium in these cases one will conclude that radium and X-ray will cure a very large per cent of epithelioma, when properly applied with technique, and by those that have had experience and training in the use of radium and X-ray. As to the manner of the use of these agents and the proper technique, will say that it requires experience and a knowledge of the physics of radiotherapy and the thorough understanding of physical effects of these agents, in order to obtain the best results in their application to the treatment of these conditions. Whatever differences of opinion may exist at the present time with respect to the value of radium in systemic neoplasms, there seems to be a unanimity of opinion in regard to the efficacy of radium in the treatment of epithelial tumors of the skin, in every phase of their growth. Radium treatment for cancer of the skin has been recognized by the best authorities on these subjects for about ten years. While it should never be the belief of the physician to avoid surgery, except when other methods warrant it, yet in a given af-

fection and equally good results obtained, there are distinct advantages in favor of such a procedure.

5. Of the two agents, X-ray and radium, either separately or in conjunction, at the present time there is nothing that we know will equal their application in the treatment of malignancies of the skin, in practically all cases, and especially is it the best treatment for epitheliomas in accessible localities. It is not my purpose to eulogize these agents in too optimistic terms, and in general I am interested in the cure of these cases by any means whatever. Our experience in the use of these agents during the last six years, however, prompts a high appreciation of their ability to heal skin cancers, while their uniformity of potential, allowing accuracy of dosage together with a fairly broad margin of safety, renders them remedies that are especially adopted to lesions of this nature. In these cases healing is obtained with slight inconvenience to the patients; no discomfort of any moment and with cosmetic results that can be obtained in no other way that I am cognizant of.

6. The following case reports, taken from the private practice of the writer, are illustrative of the cases that are amenable to radium treatment. The results were obtained by the application of ten fifteen mgs. of radium element, with such screening as were necessary in each case, there being no special form of applicators employed, as these can be made easily at the time of the treatment of the case.

Case 1. Mr. J. C. W., age 56, epithelioma covering practically the entire face but not very deeply ulcerated only in places. The ears were included in the diseased process. He was a hard looking case, but nothing else could be suggested for him than the use of X-ray and radium. Radium was applied each day for sufficient time to get the rays to all the tumor or ulcer in this case, with no screening so as to get the beta rays effects and left on each place for thirty minutes. He was requested to return in four weeks when this was repeated, and when he returned he was greatly improved. Now, after six months he is practically well. He has also had three treatments by the X-ray. In this case only patience and perseverance with radium and X-ray could such a fine result have been obtained.

Case 2. J. H. Y., aged 68, fifty-cent sized epithelioma left ear. Ten months duration. Radium applied for three hours at 2 seances and patient requested to return in four weeks. This was repeated and patient requested to return in four weeks as before, and when he came back was apparently well, and no scar or sign of the diseased ear was observed.

Case 3. W. C. C., age 47, deep seated epithelioma on left corner of mouth. Duration one year. Radium applied to this neoplasm two hours for five treatments in dosages of 15 mgs, no screening, and the

patient is now on the road to recovery from all external evidence that the case presents.

7. Report of such cases as the above might be continued but I think that it is more interesting to mention some of the physical action of radium and X-ray. There is no doubt that radium and the Röntgen rays exert a powerful influence over cancer cells. There have been many cases of cancer in various forms treated by radiotherapy, but most of these have come to the radiologist in the very last stages of the disease. Even in this condition occasionally a patient would get well, while nearly all received palliation to a greater or less degree. Many of these cases could have been referred sooner and the patients would have had a better chance, had the physician been familiar with radium. Radium has been lauded to the highest by many, abandoned by some because of its failure in some cachetic patients, and denounced by some who failed to give the remedy a trial. At present, radium and the X-ray are recognized by a great majority of the profession as a valuable addition and armamentarium in our fight against cancer.

8. My experience during the last six years shows that we can not treat with radium at a greater distance than two or three centimeters. It has been shown that cancerous growths can be promptly and permanently cured at this distance from the radium tube. However, if the disease has advanced and there is infiltration of the growth into adjacent tissues, the cure is only apparent. In this condition X-ray should be used to reach the deeper seat of the disease. The local growth may disappear, but if metastasis takes place before treatment is given it will progress, without regard to quantity of radium applied or the length of the exposure. Larger quantities of radium have been tried and the time of the exposure increased so as to influence cancer cells at a greater depth, but not much success has been accomplished in this direction. The rays of the radium in contact with the growth were too intense where it entered, and too weak at a greater distance from the tubes than two or three centimeters. Placing the radium at a distance from the surface so the rays would be nearly uniform at the point of entrance and at the distance required, renders the radiation too weak even if larger amounts are employed. The same objection is not held to apply to the present Röntgen ray, which, when excited, gives off many thousand times more rays than any quantity of

radium any one has ever used. In these cases it is best to use the Röntgen ray in conjunction with radium.

BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

By P. T. TALBOT, M. D., Sect'y-Treas.

Preparations for the Entertainment of the Members, Families and Friends of the A. M. A. at the coming meeting.

While there will be a number of entertainments of all kinds provided for the easy passage of the time and the amusement of the members and their wives, daughters and friends, a most original and characteristic program has been perfected which will be known as the President's Ball. This will be in the form of a carnival ball with a number of tableaux representing some medical subject of deep interest, a great deal of humor, and perhaps a little satire. The indications are that this ball will be fully as beautiful as any heretofore given, even in the halcyon days of pre-war carnival revelry. It will be carried out in exact accordance with the historical procedure laid down for such affairs. The scenery and settings will be specially painted and prepared to suit the theme. There will be the King with his Royal Court who will preside over the cast, limited to 150 of the most worthy subjects, all of them most gorgeously costumed as will be befitting the characters they portray and the illustrious onlookers before whom they will have the honor of appearing.

The King will have his Queen and the Dukes of his Court their Maids, and after the completion of the tableaux they, with the maskers will dance in series until everyone of the fair guests has been called out. After this has been accomplished the maskers will gradually disappear, black coats will come on and dancing will continue forever after.

As the Louisiana State Medical Society is the joint host with the Orleans Parish Medical Society it is hoped that as many of the out of town members as possible participate actively in this ball. Naturally there is some expense attached to this ball which will be borne by the participants. No doubt this pleasure will be

eagerly sought for by many more than would constitute the size of the cast, therefore it is suggested that applications be filed as early as possible so as to avoid disappointment.

This form of entertainment is essentially novel so far as the American Medical Association is concerned. It is essentially characteristic of the happiest life in the Crescent City, and will unquestionably prove to have been a happy inspiration and an unqualified success.

The tremendous material prosperity of New Orleans has placed great demands upon hotel space, which in turn limits that available for transients. There is not the slightest question of being fully able to take care of the unusually large attendance expected, yet it is realized that people coming from a distance prefer, if possible to obtain, hotel accommodation, and it is requested that the role of host be carried to its ultimate end and that all visitors from Louisiana avail themselves of boarding houses and other places, relinquishing to visitors from other states the hotel accommodation.

Dr. J. K. Newman, Chairman of the Finance Committee, reports that, with the exception of Rapides Parish, practically no financial assistance is coming in from the country, and believes that this is due to the erroneous thought that all expenses are to be borne by the American Medical Association. This is not true and a great deal of money is needed to properly finance the preparations for the comfort of our guests. These expenses must be borne by the profession of Louisiana, and an urgent appeal is made to all members of the State and Parish Societies to come forward as liberally as they can afford, making all contributions through Dr. Newman, or the Louisiana State Medical Society.

The above information was furnished the Society by Dr. Hamilton P. Jones, Chairman of the Publicity Committee.

We wish to announce to the profession that the Entertainment Committee of the A. M. A., of this city, has contributed some funds to its Membership Committee for the purpose of securing additional members to the Louisiana State Medical Society. This Committee will work independently but in co-operation with the Louisi-

ana State Medical Society. They will, very shortly, become active in the solicitation of new members for the society and I trust that every reputable member of the organization will lend this endeavor all of their support and influence. This work will prove a valuable adjunct to our attempts to secure for membership those physicians throughout the state who have not yet shown a willingness to become one of our organization. Dr. W. M. Perkins, as Chairman of this Committee, is very much interested in the work and I am sure he will be able to accomplish a great deal in the undertaking.

We are just in receipt of a check from Secretary Geo. C. Antony, M. D., of the Rapides Parish Medical Society, for \$420.00, as part of their contribution to the entertainment of the American Medical Association.

We wish to call the attention to every Parish Society, especially the large centers, to this splendid evidence of co-operation in aiding towards the entertainment of our guests of the American Medical Association. We trust and anticipate that this will give some encouragement to the localities who have not, up-to-date, contributed their pro-rata for this fund.

If proper attention is given to this subject and funds solicited from the various Parish Societies by their Officers, I am quite sure that a large contribution will be forth-coming in the near future.

We are sending out, through the mails, to every member of the Louisiana State Medical Society, a notice regarding an amendment to the Charter of our organization, which amendment will be voted upon at the Annual Meeting of the Louisiana State Medical Society. Enclosed with this notice will be found some membership blanks and we are especially desirous that every member of our organization will attempt to secure additional members for the Louisiana State Medical Society. Kindly have applicants fill out these blanks, in accordance with indications on the form, sending same direct to the Louisiana State Medical Society or local Secretary of the Parish Society. We particularly solicit your kind attention and assistance in this work.

COMMUNICATION

UNITED STATES PUBLIC HEALTH SERVICE.

Baltimore, Md., Dec. 31, 1919.

Editors New Orleans Medical and Surgical Journal,
New Orleans, La.

Dear Sirs:

I would invite your attention to a typographical error of some importance on pages 352 and 353 of the December number of the Journal:

The text is "Since the parasites in the mosquito live only the life of the host—say ten days—no interval greater than 10 days may elapse," etc. It should be *X* in place of "ten" and "10"—*X* representing any definite quantity. The mistake of your printer is excusable although I hate to be put in the position of saying that the life of an infected *Stegomyia* is only 10 days. Maybe *Z* had been a better letter to have used.

Very truly yours,

H. R. CARTER,

Assistant Surgeon General.

NEWS AND COMMENT

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for physicians on March 17, 1920, to fill vacancies in the Panama Canal Service. Both men and women, if qualified may enter this examination. Applicants must be unmarried; must have graduated from a recognized medical school whose graduates are eligible for commission in the United States Army; and must have had at least one year's postgraduate hospital experience. This examination is open to all citizens of the United States who meet the requirements. Applicants should at once apply for form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board at New Orleans. Applications should be properly executed, including medical certificates, but excluding the county officer's certificate, and filed with the Commission at Washington, D. C., in time to arrange for the examination at the place selected by the applicant.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for dental mechanics on March 9, 1920. Both men and women, if qualified, may enter this examination. Applicants must have passed through the common-school grades, and have had at least one year's practical experience in dental mechanics in a commercial dental laboratory, or have received a certificate of completion of a satisfactory course of laboratory instruction from a standard dental mechanical laboratory organized for instruction purposes. Applicants should at once apply for Form 1800, and application should be properly executed, including the medical certificate, and must be filed with the Civil Service Commission, Washington, D. C., prior to the hour of closing business on March 9, 1920.

THE DENVER POST on February 3, announced that it would pay \$25,000 to the physician finding a cure for influenza. The money is to be paid after the cure has been approved by the Rockefeller Foundation and Johns Hopkins University, Baltimore.

RUSSIA'S NEED OF SOAP.—The arch enemy of all Russia is the louse who is scourging the land with spotted fever and typhus. It is said that the only weapon that can be used against the louse is soap, and that must come from abroad. In all Russia the only soap available is a worthless imitation which does not clean the skin or garments. When the blockade is lifted the first cry to the outside world will be the demand for soap. The Bolsheviki will, it is stated, pay any price they have for soap and will trade off grain crops for credit to buy it. The peasants will extend credit to the soviet, supplying food on the promise that peace may soon be made with the entente and the blockade be-lifted.

NATIONAL ACADEMY OF SCIENCES TO RECEIVE \$5,000,000.—The Carnegie corporation of New York announces its intention to give \$5,000,000 for the use of the National Academy of Sciences and the National Research Council. A portion of the money will be used to erect in Washington a home suitable to the dignity of the two beneficiary organizations. The remainder will be placed with the Academy, which enjoys a federal charter, to be used as a permanent endowment for the National Research Council. The council was organized in 1916 as a measure of national preparedness, and during the war confined its efforts to assisting the government in the solution of pressing war-time problems involving

scientific investigation. It has been reorganized since the war, and is now attempting to stimulate and promote scientific research in agriculture, medicine, and industry, and in every field of pure science.

NATIONAL ANESTHESIA RESEARCH SOCIETY.—Announcement is made of the launching of this society, the purpose of which will be the collecting of data and prosecuting original research in this field of medicine. The Research Committee, which will have supervision of original work and the editing of material designed for the profession and professional press, is headed by F. H. McMechan, A. M., M. D., of Avon Lake, Ohio. Invitations to join the society are being sent to representative anesthetists of the country, who have by research and progress in their field distinguished themselves.

MEETING OF THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER.—The annual meeting of the American Society for the Control of Cancer was held at the Executive Office, New York City, at 4 P. M., November 15, 1919. Dr. Charles A. Powers of Denver, Colorado, was elected president.

BREATHING ROCK DUST.—According to a survey made by the Public Health Service at Niagara Falls, N. Y., announcement is made that over 200,000,000 tiny particles of dust, as sharp as ground glass, are breathed into the lungs and air passages with every cubic foot of air in some of the factories in the United States. It is stated that such dust breathed into the lungs is never expelled. Work under such conditions invites respiratory diseases and is hazardous to health. The investigation was made at Niagara Falls because manufacturing plants were engaged in producing abrasives, chemicals, gases, electrodes, carbons, metals and alloys. The laborers in all factories were found exposed to dangers which would eventually incapacitate them for further work. As a result of the survey industrial hygiene engineers have devised means for removing the dust from the air and minimizing the dangers from fumes and poisonous gases. Factory managements immediately put the devices into use regardless of the fact that installation was quite expensive.

SUPPLIES FOR ARMENIA.—The American Red Cross in response to a request from the Committee on Relief in the Near East has

donated emergency supplies for distribution in Armenia amounting to \$1,600,000, which are now being shipped. 3,800 metric tons of supplies are in the cargo, which includes beds, bedding, hospital clothing and supplies, drugs, medicines, kitchen utensils, and many other articles, such as surgical dressings, yarn, wheel-chairs, soap and refugee clothing.

DR. HUGH S. CUMMING APPOINTED SURGEON GENERAL, U. S. PUBLIC HEALTH SERVICE.—Announcement has been received of the appointment of Dr. Hugh S. Cumming as Surgeon General, U. S. Public Health Service, to succeed Dr. Rupert Blue, whose term expired January 13. The new appointee was born at Hampton, Va., August 17, 1869 and was graduated as M. D., from the University of Virginia in 1893 and from the University College of Medicine, Richmond, Va., in 1894. Dr. Cumming was commissioned assistant surgeon May 25, 1894, and passed assistant surgeon five years later. On March 15, 1911, he was promoted to the rank of surgeon, and senior surgeon Nov. 8, 1918. On March 6, 1919 he was appointed assistant surgeon-general. His principal interest has been in the field of preventive medicine and quarantine. Prior to the war he was for some years stationed at the Hygienic Laboratory, Washington, and during the war was detailed for special duty with the Navy Department. He is at present on duty at Constantinople in connection with the campaign for the control of typhus fever.

BUREAU OF DISASTER PREPAREDNESS.—The American Red Cross has inaugurated a bureau of preparedness for the purpose of combining the resources of community, state and nation for immediate relief in cases of disaster. Records for the past fourteen years showing one disaster per month for each year makes preparedness a necessity. The object is to combine all resources so that when a disaster occurs in any locality the Red Cross will be instantly prepared to meet it.

NEW TOWER FOR MISSOURI UNIVERSITY.—Students and alumni of Missouri University are contributing funds for the erection of a tower to cost \$500,000, which is intended as a memorial to the students and the alumni who served during the world war.

ACCORDING TO ST. LOUIS CITY OFFICIALS' REPORT the Marine Hospital in that city has outgrown its facilities to care for sick

soldiers, sailors and marines. An effort is being made to induce the United States Public Health Service to have a bill introduced in Congress to appropriate \$1,500,000 to construct and equip a new marine hospital.

MONUMENT TO THE INTERNS OF PARIS HOSPITAL.—To perpetuate the memory of the interns and former interns of Paris who sacrificed their lives for their country during the world war, a monument bearing their names will be erected near the entrance of the Hotel-Dieu. Subscriptions for the monument are to be sent to M. Arnette, 2, rue Casimir-Delavigne. The Societe des hopitaux started the subscription list with 1,000 francs. A memorial service was recently held in honor of the deceased in the Catholic, Protestant and Jewish places of worship.

THE AMERICAN PUBLIC HEALTH BATHS, the gift of the American Red Cross, were recently opened in the village of Blamond, a suburb of Verdun. At first the villagers looked upon the project with skepticism, but when the shining tubs and showers were finally installed, the bath house immediately jumped into popular favor. A neighboring village now is soliciting funds for a similar establishment.

PERSONAL.—Dr. Edmund McC. Connely has opened offices at 3439 Prytania St. Practice limited to neuro-psychiatry.

REMOVALS.—Dr. Mayer Newhauser, from Alexandria to Shreveport, La.

Dr. J. C. Denman, from Franklinton to Ramsey, La.

Dr. H. W. Pritchett, from Danville, Va., to Cleveland, Ohio. Mt. Sinai Hospital.

DIED.—On February 12, Dr. J. S. Thibaut, of New Orleans, aged 60 years, an ex-intern of the Charity Hospital, who had been successfully engaged in banking for the last few years in Donaldsonville, La.

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.

Symptoms of Visceral Disease. A study of the Vegetative Nervous System in its Relationship to Clinical Medicine, by Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P. 8 vo. pp. 317. C. V. Mosby Co., St. Louis, 1919.

Dr. Pottenger's book is devoted entirely to a study of visceral innervation and visceral reflexes. He shows a scholarly information of the whole range of the subject and an equally ripe clinical judgment in the manner in which he indicates the importance of these reflexes in physical diagnosis. He does not ride his hobby too hard nor attribute undue value to their presence. Because of Dr. Pottenger's special interest in tuberculosis, his description of reflexes due to lung disease is of especial interest.

It seems to the reviewer that it would have been better to adopt the natural order of arranging the book as indicated in the preface, namely, to describe the vegetative nervous system first before discussing its relation to symptoms due to visceral disease and the more common viscerogenic reflexes.

In conclusion, hearty sympathy is expressed for the author's plea for the study of the body as a whole and the patient as well as the disease. "Disease cannot be divided into those of this and that organ; for the human body is a unit. One part cannot be diseased without affecting other parts. No organ can be understood except in its relationship to other organs and to the body as a whole." While acknowledging the great obligation of the clinician to the laboratory he insists rightly that bedside observation need not be and should not be less scientific and accurate than laboratory observation. "The superior man in the medicine of the future will not be the great laboratory worker, or the man who is known for his studies in metabolism, or the expert gastro-enterologist, or neurologist or surgeon or he who stands pre-eminently above his conferees in his knowledge of diseases of the heart and arterial system or of the lungs, but the man who recognizes the fact that the truths derived from all the sources of study and investigation must be interpreted as belonging to the human patient as a whole—in other words, the internist who appreciates the unity of medicine." That is a splendid spirit in which to write a monograph on a single field of medicine.

I. I. LEMANN.

Experimental Pharmacology, by Hugh McGuigan, Ph. D., M. D. Lea and Febiger, Philadelphia and New York.

McGuigan has attempted to present experimental pharmacology in a concise form and at the same time give the student an adequate vision of this important subject; however, his effort to boil down the vital sub-

ject of anesthesia to less than three small pages is certainly a mistake.

The simple technic of intratracheal insufflation is explained and as McGuigan says, "The introduction of the tube into the larynx is then a very simple matter" But on the next page, the writer gives the disadvantages of intratracheal insufflation as follows:

(1) "The introduction of a tube into the trachea requires some dexterity and practice, and (2) the apparatus available on the market used for keeping up intratracheal insufflation is expensive." Following this is a plea for the use of the Meltzer method of intrapharyngeal insufflation.

As is well known this method consists in placing the pharyngeal tube well back in the mouth and in then anchoring the tongue well forward; also in strapping a board tightly over the abdomen to prevent stomach inflation.

With a reasonable amount of skill it is not difficult to pass a tube into the trachea and the advantages of intra tracheal insufflation are well worth while,—the element of guess work is recovered—the stomach is not inflated and it is not necessary to pass a stomach tube in case operative procedure is indicated in the abdomen. The question of expense should not be considered when trying to save human life, and in these days when fire-police and emergency departments of hospitals are becoming experienced in methods of resuscitation, the intratracheal method should certainly be encouraged.

This book of laboratory methods is valuable and no doubt will be welcomed by teachers of Experimental Pharmacology.

F. P. CHILLINGWORTH.

Beverages and Their Adulteration. Origin, Composition, Manufacture, Natural, Artificial, Fermented, Distilled, Alkaloidal and Fruit Juices, by Harvey W. Wiley, M. D. P. Blakiston's Sons & Co., Philadelphia.

This volume is a companion to Dr. Wiley's book on "Foods and Their Adulterations;" it is most timely in that the last 200 pages are devoted to an exact and critical description of almost all types of alcoholic drinks including the Sazerac Cocktail and the Gin Fizz of Ramos.

The author recognizes that water is our chief beverage and has given this drink the place of honor in his book in the hope that it is coming into more general use. A description of coffee, tea, cocoa and chocolate is also included.

Dr. Wiley closes his preface with the following paragraph:

"Every endeavor has been made to secure accuracy of statements and data. The latter are taken chiefly from official sources. It should be understood that this book was not written for the scientific investigator, but for the average, sober-minded, reasonably well-educated American citizen, who is daily taking a greater and deeper interest in what he eats and drinks."

CHILLINGWORTH.

Recherches Recentes sur les Icteres, by Dr. M. Brulé, ancien interne des hopitaux. Chef de Laboratoire a la Faculté de Médecine de Paris. Masson et Cie. Paris, 1919.

Brulé's thesis is that most if not all jaundices are due to disease of the hepatic cells. Even where there exists obstruction in the bile

passages the liver cells suffer secondarily from the retention of bile and the ascending cholangitis, so that the patients often die with all the signs of hepatic insufficiency. Apart from this, many cases of icterus thought to be due to obstruction of the bile passages may be shown to be due to damaged liver function as evidenced by the dissociation of biliary retention. In such cases there occurs sometimes retention of bile pigment and not of bile salts, or vice versa. It frequently happens that in the same case bile salt retention will be present at one stage, bile pigment retention at another and retention of both bile salts and bile pigment at still another period. Such changes can be accounted for only by changing function of the liver cells. Brule has studied the urine and feces as to the presence of bile salts and bile pigments (thus indicating the retention vel non) not only in cases of frank icterus but also in affections of the liver without icterus and in various infections. He notes that in typhoid, biliary affections are observed more frequently than albuminuria and he concludes that this seems to show that typhoid fever affects the liver more than the kidneys. In the urine of nearly all the pneumonias observed, biliary salts, urobilin and urobilinogen were found in abundance during the whole course of the disease, to disappear the day of the crisis or several days later. This was especially marked in alcoholic patients and in those who had a prolonged pneumococemia.

The book represents not only the original work of M. Brule and his collaborators but also a review of the French school of investigators along these lines. A few references are made to American, Japanese and German papers. The author's points are convincingly argued and his book makes profitable reading. It marks a worth while contribution to the study of disturbed function, which is the present and the future of internal medicine.

I. I. LEMANN.

Atlas of Operative Gynecology, by Barton Cooke Hirst. J. B. Lippincott Co., Philadelphia and London.

This superbly illustrated volume of 300 pages is a credit to the author, who has occupied a leading position as a teacher of obstetrics and gynecology for many years, and is a model from the publisher's standpoint.

The average atlas is unwieldy, and therefore not convenient for ready reference, a point evidently appreciated by the author. It is convenient in size, contains numerous full page colored plates, and presents a graphic description of every operation in gynecology. The text has been subordinated to the illustrations, saving the reader time and lightening the burden of obtaining a grasp of the subject.

The special feature of the volume consists of the magnificent illustrations drawn by Mrs. P. P. Chase. We cannot recommend too highly this volume to the student or practitioner who desires to study in detail the technic of gynecological operations.

MILLER.

Gynoplastic Technology, by Arnold Sturmdorf, M. D., New York. F. A. Davis, Philadelphia, 1919.

This book, consisting of 335 pages, embodies an elaborated compilation of the author's previous publications on the various phases of plastic restoration of the injuries of the birth canal.

It contains numerous well executed drawings, half-tone, and photo-engravings, many of which are in colors, and displays in detail the technic of the various plastic operations. The text is concise, and impresses the reader with the author's attempt to eliminate obsolete principles in pelvic pathology and anatomy. A special feature of the text is the description and the illustrations of the operation of tracheloplasty, devised by Dr. Sturmdorf, and which has become popular in many clinics.

The book is valuable as a ready reference for the pelvic surgeon.
MILLER.

Plastic Surgery; Its Principles and Practice, by John Staige Davis, Ph. B., M. D., F. A. C. S. P. Blakiston's Son and Co., Philadelpia.

The author in his preface claims that the time has come for the separation of plastic surgery from the general surgical tree. "There should be a well-trained plastic surgeon on the staff of every large general hospital, in order that these patients may be cared for intelligently." A glance over the large amount of material presented in this work will tend to convince the reader of the correctness of this view.

While claiming the rank of a separate specialty for plastic surgery, Davis treats the subject in such a way as to make his book valuable for those who cannot claim to be specialists in this line. The handling of wounds is given detailed attention. Those who care for the outdoor patient can learn from him, how to cure the sore legs that mean so much to the numerous sufferers from this disabling affection.

Methods are presented as they have been practiced and improved in detail by a painstaking and thorough worker. His personal views are made known without reservation, while the work of others is generously recognized especially in tracing the development of technique.

The interesting statement is made that "except for the progress made in the treatment of recent wounds of the face (especially those associated with fractures and loss of substance of the jaws—which are seldom if ever referred to the plastic surgeon in civil practice) little or no advance has been made in plastic methods during the war."

All phases of plastics are considered in detail. Descriptions are usually clear. Bibliography is exceptionally full. A minor defect that mars the perfection of the work is the construction of sentences, which at times is quite faulty, as when a dependent clause is made to constitute a separate sentence.

Taken as a whole the work is a very valuable up-to-date presentation of an important and somewhat slighted branch of surgery.

HERMAN B. GESSNER.

Bacteria and Protozoa:—By Herbert Fox, M. D. Lea & Febiger, Philadelphia and New York, 1919.

Within the past few years, there has been an increasing demand for a text-book on Bacteriology and Protozoology suitable for the use of college students, public health and other nurses, laboratory technicians, and laymen in general.

Dr. Fox has met this demand in his little book "Bacteria and Protozoa." The author has very simply and clearly described the relationship existing between microorganisms and disease. Emphasis

has been laid upon how bacteria pass from individual to individual, how they enter the body, and how they act once within, and their manner of exit.

Several pages of the book are devoted to the history, morphology, and general food requirements of bacteria, others describe the methods of sterilization by heat and the destruction of bacteria by chemicals. One chapter is devoted to the methods of producing specimens for examination. Mention is made of the various diseases of unknown etiology and reference to the recent work of Noguchi on yellow fever is included.

The book is certain to prove a very useful one for the student who is looking for facts regarding the relationship of bacteria to disease.

ELIZABETH BASS.

Pulmonary Tuberculosis, by Maurice Fishberg, M. D. Lea & Febinger, New York, 1919.

This book presents to the general practitioner, interesting and instructive discussions relative to the infection, prevention, diagnosis, prognosis and treatment of tuberculosis.

The author gives his experience and expresses his views upon the various topics discussed. Although we cannot agree with all he says, some points are well taken and will prove to be very entertaining to the unprejudiced reader.

In this new edition many chapters have been revised, and new chapters on tuberculosis of the pleura, and on artificial pneumothorax have been added.

The differential diagnosis of tuberculosis is elaborately discussed in a separate chapter, and several plates illustrating the pathology of pulmonary tuberculosis, all drawn from specimens obtained at necropsies under the author's care, have been added together with many radiographic plates.

Relative to the utility of tuberculin treatment, the author states: "It cannot, however, be denied that some good results have been obtained with tuberculin treatment." "That there is no record in medical literature that any investigator has succeeded in curing or benefiting a tuberculous animal with tuberculin treatment."

The treatment recommended in this book is based on experience with patients in New York City.

DUREL.

Tuberculosis of the Lymphatic System, by Walter Bradford Metcalf, M. D. The Macmillian Company, New York, 1919.

In the past years, glandular tuberculosis was thought to be of very little clinical significance, and was but casually mentioned in our text-books.

Today, however, phthisiologists recognize this condition as a serious infection, and one requiring an early diagnosis and aggressive treatment.

In this very practical essay, the author discusses the clinical phases of glandular tuberculosis, especially as it occurs in children. He specifically asserts that "Hilus Tuberculosis is an established entity, and that tuberculosis of the bronchial glands is the result of childhood infection, and undoubtedly the most common source of adult pulmonary tuberculosis.

“The profession is just awakening to the fact that pulmonary tuberculosis of the adult can be prevented by proper prophylactic methods during childhood.”

This timely and most elaborate book should occupy a conspicuous place in every physician's library. The subject is introduced with clearly defined general anatomical considerations and anatomical resume of the most important glandular chains and areas of the lymphatic drainage of the head and neck.

The physiological considerations of the lymphatic system are particularly well defined.

The chapters relative to the etiology, pathology, bacteriology, clinical diagnosis and specific diagnostic methods of tuberculosis of the bronchial, cervical, mesenteric and other lymph glands, convince the most astute critic that “glandular tuberculosis plays a most important ‘role’ in the prophylaxis and symptomatology of tuberculosis.”

The rest, diet, open-air, X-ray treatments,—heliotherapy, and especially the use of tuberculin are discussed in an unbiased and practical way.

DUREL:

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- W. B. SAUNDERS COMPANY**, Philadelphia and London, 1920.
The Family and the New Democracy, by Anna M. Galbraith, M. D.
Modern Surgery, by John Chalmers Da Costa, M. D., L. L. D., F. A. C. S., 8th Ed.
- C. V. MOSBY COMPANY**, St. Louis, 1919.
Syphilis, by Henry H. Hazen, A. B., M. D.
- THE MACMILLAN COMPANY**, New York, 1920.
Disease of Nutrition and Infant Feeding, by John Lovett Morse, A. M., M. D., and Fritz B. Talbot, A. B., M. D., 2nd edition revised.
- P. BLAKISTON'S SON & COMPANY**, 1920.
The Nose and Olfactory Organ, by J. Parsons Schaeffer, A. M., M. D., Ph. D.
- FORBES & COMPANY**, Chicago, 1919.
The Woman of Forty, by E. B. Lowry, M. D.
- WORLD BOOK COMPANY**, New York, 1920.
Food for the Sick and the Well, by Margaret J. Thompson, R. N.
- WASHINGTON GOVERNMENT PRINTING OFFICE**, Washington D. C.
Public Health Reports, Volume 35, Numbers 1, 2, 3, 4, 5.
Index Public Health Reports, Volume 33, Part 2, Numbers 27-52, July-December, 1918.
- MISCELLANEOUS:**
Dr. Crawford W. Long, the Distinguished Physician-Pharmacist, by Jos. Jacobs, Phar. D., Atlanta, Ga., 1919.
The Effect of an Injection of Mallein on the Serum Diagnosis of Glanders, by J. Basil Buxton, F. R. C. V. S., D. V. H.
The Effect of Repeated Bleedings on the Blood Constituents of Immunised Horses, by R. A. O'Brien, 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, 1920.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1		1
Intermittent Fever (Malarial Cachexia)	1		1
Smallpox	5	6	11
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	2		2
Influenza	13	6	19
Cholera Nostras			
Pyemia and Septicemia	2		2
Tuberculosis	34	37	71
Cancer	27	9	36
Rheumatism and Gout			
Diabetes	5	1	6
Alcoholism			
Encephalitis and Meningitis	2	5	7
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	19	15	34
Paralysis	7	2	9
Convulsions of Infancy			
Other Diseases of Infancy	15	9	24
Tetanus	1		1
Other Nervous Diseases	6	1	7
Heart Diseases	67	35	102
Bronchitis	3	1	4
Pneumonia and Broncho-Pneumonia	69	42	102
Other Respiratory Diseases	5	1	6
Ulcer of Stomach	1	2	3
Other Diseases of the Stomach	4	1	5
Diarrhea, Dysentery and Enteritis	14	11	25
Hernia, Intestinal Obstruction	4	1	5
Cirrhosis of Liver	6	3	9
Other Diseases of the Liver	2	3	5
Simple Peritonitis		1	1
Appendicitis	3	2	5
Bright's Disease	22	16	38
Other Genito-Urinary Diseases	10	8	18
Puerperal Diseases	8	4	12
Senile Debility	3	5	8
Suicide	3	1	4
Injuries	17	13	30
All Other Causes	23	23	46
TOTAL	395	264	659

Still-born Children—White, 15; colored, 21; total, 36.

Population of City (estimated)—White, 290,000; colored, 110,000; total, 400,000.

Death Rate per 1000 per annum for Month—White, 16.36; colored, 28.73; total, 19.75. Non-Residents excluded, 16.93.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure	30.18
Mean temperature	56
Total precipitation	5.66 inches
Prevailing direction of wind, northeast.	

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS :

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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Vol. 72

APRIL, 1920

No. 10

EDITORIAL

TO THE AMERICAN MEDICAL ASSOCIATION, GREETING!

In extending a cordial greeting to the members of the national association, which is to meet in this city on the 26th to the 30th of this month, we cannot do much better than to repeat some of the words of salutation published by the JOURNAL at the time the association last met in this city:

“The latchstring is outside and the heart of the Crescent City

is warm to welcome a profession working for the common weal. This is the land of sunshine and flowers, of peace, of hope and of promise, of beauty and of good cheer—and to our guests all is to be had for the taking, for this is the welcome New Orleans gives to the American Medical Association.”

This is the fourth time that this city receives the national body. On each of the previous occasions the meeting here has proved a *pronounced success* and the local profession must make sure that the one of 1920 is fully up to the mark.

Concerning the meetings formerly held in New Orleans, it may be found consistent with the JOURNAL'S age for it to become reminiscent, as it was established in 1844, or three years before the association was founded. We can glean much information in retrospect from our own pages.

The 1869 meeting was notable as the first organized reunion between the physicians of the North and the South after the “unpleasantness” between the two sections of the country. An idea of the results may be conveyed by an excerpt from an editorial in our July issue of that year which shows also that the editor of that time was not devoid of a sense of humor. We quote:

“The American Medical Association has met in the metropolis of the semi-barbarous people of the late slave states—among those fire-eating outlaws whose consciences have never been educated to the standard of human progress and personal saintliness attained by other tribes of Celestial Americans. But it somehow happened that the natives were on their good behavior, and, so far as we are informed, committed no act in the least degree offensive to the sensibilities of their visitors. The presiding officer,* by his dignity, impartiality and business dispatch, shed lustre upon his position. The welcome of the committee of arrangements was in good taste. Not a syllable of a political bearing was uttered upon the floor; no class legislation was attempted; no tracts of doubtful scientific value, or of questionable morals, were authorized to be published and distributed under endorsement of the association. The future may reveal that some things were done which had better been left undone; but surely we have just reason to be proud of the above results and to hope that all future meetings will be equally successful and agreeable.”

*This was Dr. W. O. Baldwin, of Montgomery, Alabama.



MAJOR ALEXANDER LAMBERT, M. D., U. S. Army.
President A. M. A.



REAR-ADMIRAL WILLIAM C. BRAISTED, M. D., U. S. Navy.
President-Elect A. M. A.

It was at this meeting that the association inaugurated its work for the improvement of medical education by frowning down the underbidding apparently then prevalent among medical colleges and opposing the schools in lowering their fees to obtain patronage, on the just ground that they would lower their standard of requirements for the same purpose.

At this same session also was born the Association of American Editors with the still regretted N. S. Davis as its first president.

The association met next in New Orleans in 1885. While the attendance was not as large as at the meetings in the larger centers of the population, the session was considered both successful and satisfactory. One of its important features was the passage of resolutions earnestly advocating the establishment in every state of a State Board of Medical Examiners whose certificate shall be the only license permitting to practice medicine.

By an interesting coincidence, it was here in New Orleans, at this meeting, that Dr. N. S. Davis was first elected editor of the *Journal of the A. M. A.*

Coming down to the last meeting of the association in this city, in 1903, it may be permitted to say that it was termed "the red letter event of the association." The attendance proved to be far beyond expectations and probably the largest up to that time, there being over two thousand registered. The association's own *Journal* said of it that "perhaps there has been no session that will leave pleasanter memories with those who attended it."

The organization of the national body was perfected, especially in regard to its close relationship with the lesser societies.

We shall indulge in no pre-meeting boast regarding the 1920 session. We cannot prophecy as to the scientific program, since we have no control over it; nor yet as to the attendance, unless our desire to please and our reputation for hospitality are estimated sufficient attractions for the crowd—but we can say that the profession of New Orleans has been and is still working hard to make this meeting an eminently successful one.

The entertainment committee has had the happy idea to combine the usual reception to the president of the association with a typically local function, a carnival ball. Comparatively few of the members from elsewhere have had the occasion to attend one of these characteristic entertainments, hence the charm of novelty

will be added to the other amusing and enjoyable features. Everything will be done to make this ball a regular carnival affair, following the customs familiar to New Orleans society. The maskers will be members of the local medical society, while the queen and her maids will be selected from the daughters of our guests as well as our own members. On one point alone will traditions be slighted, the French Opera House, where the handsomest of these balls were always given, having been destroyed by fire will have



to be replaced by the Atheneum which, however, will make a good substitute and will be arranged to represent the scenes successfully.

The ball organization pin has not been overlooked and will be presented in orthodox fashion by the maskers to their dancers. We give a reproduction of it here.

Other features have been devised for the enjoyment of our guests and their ladies, as may be seen by the announcements elsewhere in this issue.

The various headquarters have been centralized as far as possible and there will be no long trips from one to the other, such a frequent source of annoyance and loss of time.

It is not too late for suggestions, and any one having a happy inspiration which may tend in the least to contribute to the comfort or enjoyment of our guests should unhesitatingly communicate it to the committee of arrangements. It is our duty and our pleasure to make our guests feel at home and every one of us should be willing, nay anxious to contribute in some way, be it ever so unostentatious, to the glorious success of the 1920 meeting.

I want to go to New Orleans and see those happy Southern scenes. I want some dorky to call me "boss" while he serves me steak with creole sauce. I want to watch the doctors meet while they enjoy a Southern treat. I'm glad that practice is so slow. Pack up my grip! I'm going to go—Jl. A. M. A.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

ADDRESS OF PRESIDENT.*

H. E. BERNADAS, M. D.

Fellow Members, Honored Guests:

I wish to thank you for the honor which you have conferred upon me in re-electing me to serve as your President during the coming year. You have humbled me by so much honor.

While thanking you for this added honor which you have conferred upon me, my mind wanders to a little spot sheltered by the drooping branches of a dying monarch in the forest of the Panama Canal Zone, where screened by the intermingled meshwork of foliage and vines, stands today the remnants of walls which once supported a belfry;—as the rays of the setting sun filters through this mesh of foliage and sheds its hazy light within this enclosure, my mind traces upon these moldy walls the marks of a spiral stairway, which in days gone by, wended its circular way to the belfry above.

I gaze in contemplative silence on these wall marks, and visualize the old Indian of the Mission as he day in and day out trod up and down these stairs to toll the Angelus, so that the world at large might know that here was the seat of devotion, the home of prayer.

This loyalty to his task has left the imprint of his path and the worn flags of this stairway are mute evidence of a spirit which never dies: **THE SPIRIT OF LOYALTY TO CAUSE!**

You wonder why the loyalty of the Indian in the old Mission Day should call forth eulogy today.

The thought of the old Indian is prompted by the only parallel with which I am in daily contact—the loyalty of every member here to the Orleans Parish Medical Society.

In your loyalty to the cause of organized medicine, by your constant attendance in, succor to, and support of the Orleans Parish Medical Society, you have trodden a path upon the flag-

*Read at Meeting Installation of Officers, Orleans Parish Medical Society, Jan. 12, 1920. (Received for publication Feb. 19, 1920.—Eds.)

stones of Time which may cry in perpetuity to the world: "This is the home of Medicine. HERE LIVE THE SHADES OF ESCULAPIUS; HERE DWELLS OUR CREED!"

There my friends is loyalty, the most precious gift of man,—the most perfect flower in the garden of self.

This flower of wondrous beauty is worthy for its depiction of the genius of an inspired artist whose brush is laden with the colors that find their home only in the land of dreams, there to borrow from Mother's love the hue of its warmth, blending it tenderly with the shimmering idealism of devotion and with a caressing stroke merge these on his canvas with the ephemeral radiance of friendship,—painting a flower perfect in coloring, nebulous in beauty, but possessing the staunchness of the hardy cactus.

This flower is emblazoned upon the escutcheon of the Orleans Parish Medical Society, to be symbolic of our membership. Loyalty forever.

In April, from the 26th to the 30th, the American Medical Association will hold a Convention in New Orleans as our guest. We will have an opportunity to demonstrate to the Medical men of America the advances made by New Orleans and Louisiana since the 1903 convention.

Your help and co-operation will make this a successful convention, not one which will be remembered on account of its lavish entertainments, but one which will show the evidence of progress and modernization in civic, sanitary and medical lines which we have made.

During this convention no effort will be made to duplicate the entertainments of 1903.

The Arrangement Committee is preparing to furnish one or two features for the purpose of leaving with its guests some memories of their stay amongst us but no desire to duplicate past efforts is entertained by them.

I state the matter here "*en passant*" as I am aware that your loyalty to medicine makes it unnecessary for me to ask for your co-operation in placing the Louisiana State Medical Society and the Orleans Parish Medical Society in their proper lights before their brothers from the North, East, South and West.

You know that the coming of the American Medical Association will be of inestimable value to this community and its medical

men, because it will bring that body to a host of men who are not always prepared to go to the convention, of this you are aware. But in addition to this it will afford the members of the A. M. A. an opportunity to see our manifold advances as a medical body and as a modern city.

It has been contended that it was inopportune to bring the convention here at this time, as we are behind in our clinical facilities; if we are behind it is because the convention comes to us in the middle of our catching up process (normal man is always in the process of catching up, which fact is always an evidence of desire toward perfection); the presence of the convention should be an impetus to our speeding up and should perfect this catching up process. Let us be up and doing.

That the Orleans Parish Medical Society is better fitted today to entertain the convention than ever before in its history should be manifest to the most casual observer. Our membership has grown past the 400 mark. The men who have returned from the front have brought to this society not only the thoughts and work of the world at large, but have added to its lustre and standing by bringing home to it honors and glories which vie with those of any community in America.—To my mind, the most important presentation this society can make to the A. M. A. is its enlisted personnel from the most inconspicuous Lieutenant to the highest Lieutenant-Colonel.

The Orleans Parish Medical Society has gloriously fulfilled its mission in the last war and our members at the front have distinguished themselves. Their work has aided in making the medical and surgical records of this war a criterion for future medical military work. We are proud of the enlisted men of our society, and of the glamor which their achievements have cast over it. Their humbleness in glory is our source of pride.

I have now to report upon the activities of the society during the past year. First, your membership has grown past the 400 mark.

Second, we have weathered our bark over the financial rocks without having to make a plea for assistance from the membership. No call has been sent in for a contribution or assessment, and we enter a new year with our obligations met, and a surplus in the bank.

Third, we have perfected the organization of the three medical

bodies now united under our roof into a harmonious working unit.

Fourth, we have installed for the first time a working system of book-keeping, whereby the finances are at all times open to a moment's call.

Fifth, during the year the standard of scientific papers has been very high and as a result of this the attendance at the meetings have been very large.

During this year we have had several papers read by men of note from other parts of the United States, and it is our hope to be able to repeat this during the coming year.

Sixth, we are at work cataloguing and indexing our library, and we hope to be able to complete this at an early date.

Seventh, we have had marked activity and achievement on the part of our committees, as instanced, by the work of the Committee on Automobile Parking, which obtained for physicians an added two hours of parking time,—and the work of the Committee on Elk's Purchase of our Domicile. This committee has entered into negotiations with the Elks, and, but for the question of price, would have completed its work by now. This committee is still at work and expects shortly to report the results of its efforts.

Having enumerated the work accomplished, it is meet indeed that I should pay tribute to the Board of Directors, which has helped accomplish this. Their support has been a source of pleasure and assistance, and the Chair assures them that it is with profound and sincere regret that it will in the future miss their wise counsel and steadying hands. Our associations were intimate and pleasant and so closely woven had become the fabric of our activities that I can scarcely realize that it no longer exists, and with Francois Villon, I sigh,—“Where is the Board of yesterday?”

By their absence from the Board, the society will be deprived of the advice of men, who in addition to being able, had at heart the interest of this organization, and whose knowledge of its needs was paternal. Their names should be enshrined in the memory of this society as men who have given of themselves in a spirit of loyalty and achievement.

The support given this Board by its staff of assistants, has been unflinching, and of immeasurable help in accomplishing the results put forth this year. It is a pleasure indeed to be able to thank the retiring Assistant Secretary-Treasurer and the Assistant Librarian for their assiduous care and unflinching diligence in their work

during the past year. Their absence will be felt, but we feel that the work they have accomplished will be ever a constant reminder of their stay in our midst.

In venturing upon the seas of a new year, the Chair feels confident that the Board which you in your wisdom have selected to aid him, will continue the good work done by its predecessors and carry it successfully on, because in peace as in war the Board must "carry on."

The selection of this Board is a tribute to your loyalty. You have selected them with judicious consideration because you feel that to them the interest of the Orleans Parish Medical Society is paramount, and that in their hands it will receive the attention prompted by loyalty, LOYALTY, the flower you have emblazoned on your escutcheon as its sole motif.

ANNUAL ORATION.*

By MR. W. W. WESTERFIELD.

Mr. President and Members of the Orleans Parish Medical Society:

If I were a member of your organization, I would initiate a movement to change the designation of your annual speaker from that of orator, as at present, to some less grandiloquent term, as speaker for instance, and I would be influenced by two considerations, first, the audience is certain to be disappointed and second, the speaker is certain to be embarrassed in an effort to live up to the label placed upon him. Speaking for myself, I can assure you that, if it is not true, as many of our elders assert, that orators and orations both died with the Civil War, nothing that you will hear from me this evening will have a tendency to disprove their assertion.

In inviting me to address you this evening, your President, who in selecting me has assumed a responsibility to you which he must justify upon the ground of friendship instead of judgment, informed me that I might select any subject I saw fit; that I was free to roam the fields of fact or fancy, art, literature, or imagination, subject to no restraint or restriction. In other words, I

*Read at Meeting Installation of Officers, Orleans Parish Medical Society, Jan. 12, 1920. (Received for publication Feb. 19, 1920.—Eds.)

must "Let my conscience be my guide" and I am frank to say to you that my first inclination was to decline so large an order for I felt that in such a case, there was added to the usual responsibility of proper treatment of a given subject that of selection for a discriminating audience given to the practice of dissection of subjects as well as their treatment. However, I have invested so much money and time with numerous individuals of your profession and have been talked to so much by you that the temptation to talk back to you was too much for me to resist.

But I must have a subject and if possible it must be pertinent to the occasion if not interesting to my audience. I thought I might impress you with my knowledge of your profession by some discussion of a medico-legal subject but when I sounded the depth of my medical lore, I concluded I should need a mental anesthetic if I would impress you in this regard, because what I knew of medicine was entirely empirical and while I felt that I knew from personal experience of certain conditions where calomel or castor oil was indicated, I did not wish to revive unpleasant memories. It occurred to me that I might discuss in a practical way, the legal methods of executing wills on behalf of patients in "articulo mortis" but perhaps a profession devoted to the postponement of our earthly exit might resent a discourse advising it and its members of legal procedure appropriate to conditions indicating a failure of its purposes and this idea was abandoned.

Finally I concluded to borrow a leaf from the book of the dramatist and let the popularity of the subject compensate for the manner of its presentation and I shall talk about prohibition. Not from the standpoint of either the Pro or the Anti for that question is now foreclosed by our Constitution, neither shall I refer to whether the introduction of drachm or an ounce into the human system hypodermically or through any of the natural openings of the body will be poisonous or wholesome, for that is a matter within your province as a profession and about which I am informed you are not all agreed, and, I hold no brief for Sir John Barleycorn for, in the words of a distinguished Roman Citizen, "I come not here to praise, but to bury Ceasar." But as we stand before the open grave, I trust you will forgive me if I strew a few flowers upon his casket. Much suffering and sin, much poverty and distress have been caused by too eager pilgrims

cannot be gainsaid, but there are some credits also. Sir John has been a welcome guest in the human family for some six thousand years and his presence has done much to cheer and comfort us, to fan the spark of friendship and sweeten the milk of human kindness. His presence at our table and banquet board has sharpened the wit and stimulated the eloquence of speakers and so affected the appreciation of the listeners as to make common place remarks seem inspired, for Sir John was "a fellow of infinite jest and most excellent fancy." He has added much to good fellowship and aided in the formation of many friendships which have endured the test of time. But he has been convicted and sentenced by us to banishment and destruction because of the enormity of his sins, yet those of us who acknowledge any obligation I trust may be pardoned these few flowers for sweet memory's sake.

There is, however, a question of importance in this connection, the discussion of which is not foreclosed by the adoption of the Constitutional Amendment and that is whether the present tendency toward sumptuary laws as exemplified the case of liquor legislation and Sunday Laws does not seriously threaten the most sacred principles of Constitutional Government and human liberties. Of course, we are all too familiar with the habit of the Anti to rush into all forums public and private, with the Constitution brandished on high when we knew that the brandisher knew little and cared much less about human liberty than for the privilege of pursuing a profitable vocation, nevertheless, there was much wholesome truth in his position. The restriction of your right to select your own meat and drink and prescribing what you may or may not do on a certain day of the week is an invasion of private right and involves to that extent as a sacrifice of your personal liberties, and it is only justified upon the ground of necessity for the general good and welfare of the whole people under what is known as the police power, an indefinite authority common to all sovereigns. But when we, swept off our feet and in a spirit of fanatical frenzy, deny the liquor seller rights accorded to the murderer or rapist as has been done by Congress in the enforcement act and when the legislature of some of our states decrees that golf can't be played on Sunday as was recently done in Massachusetts, we are reminded of the early days of our colonial history when Plymouth Colony not only punished the failure to attend church on Sunday, but imprisoned in the stocks,

one who went to sleep in church. Massachusetts Bay Colony decreed that "any sin committed with a high hand such as the gathering of sticks on Sabbath Day may be punished with death when a lesser punishment might serve for gathering sticks privily and in need." The New Haven Colony has a similar provision punishing unlawful sports and recreation by fine, whipping or imprisonment, but if "the sin was proudly presumptuously and with a high hand committed, the offender "shall be put to death."

The first prohibitionist was probably an Egyptian called Amen and who lived in 2000 B. C. The first Anti Treating law was of Chinese origin of 5th Century B. C. which forbade drinking in company of more than three. At one time China beheaded the wine seller and under an ancient law of Rome, a man could kill his wife for drinking it, but at another period in Roman history, a man called Tricongius was knighted for drinking three gallons of wine at one sitting and called the three gallon knight, though it was said that his exploit was subsequently overshadowed by a six gallon knight.

The British State Church at one time punished with three days penance, priests who got drunk when about to go on duty at the altar, 15 days for those who were drunk through ignorance and 40 days for drunkenness through negligence. Queen Elizabeth was a wholesale liquor dealer and the tavern keepers of her day advertised that customers could get "drunk for a penny," dead drunk for two pennies and have straw for nothing."

I have said that the prohibition enforcement act denied to the liquor seller rights accorded to the vilest criminals and I refer particularly to that feature of the act which permits the issuance of an injunction directed against individuals suspected of violation of the law and provides for their punishment by means of contempt proceedings. There are other features of this act that are most unusual; for instance, making liable in damages all persons who shall sell liquor to an individual, who afterwards becomes intoxicated, for the consequences of his act. No such penalty attaches to the vendor of the lethal weapon in the hands of a murderer, but the first provision relative to the trial by injunction, not only deprives the violators of this act of real and substantial human rights, but constitutes an assault upon the liberties of the whole people in that it denies to a class of law breakers, the right of trial by jury and even though we conceive that in the

present temper of our Government in respect to the liquor question, an offense against the present enforcement act is one, which in the eyes of our people, is more heinous than all other felonies. It is important to consider the effect which the denial of the right of trial by jury to any class of persons accused of crime may have upon our institutions and upon human liberties. The position of the prohibitionist seems to be that he would pull all the pillars from the temple of human justice and liberty if only he might destroy the philistines of the liquor traffic in the ruins. It is well to consider whether we have not gone too far in following his lead and whether we have not endangered principles of Government far more sacred than any that is involved in the suppression of the liquor traffic. Possibly, we may yet reach the position where we would follow the example of China in beheading the wine seller or that of Rome in permitting our citizens to murder their wives who have been discovered drinking a glass of wine; even this extremity provided that we accorded to the criminals the right of trial by jury, would be less destructive of sacred principles of constitutional government than our present attitude of a denial of such rights.

Our prohibition friends have taken us to the mountain top and shown us the lights of a beautiful city. They have surmised much and we have taken them at their word and followed them in a great experiment and now it is incumbent upon all of us, as good citizens, to aid our government in giving this experiment a full and fair trial. We must properly punish all violators of the law designated to maintain this great policy of our Government, not, however, to the extent of refusing to recognize the violators of this law as human beings, but a whole hearted and sincere effort to co-operate in the experiment and if it should transpire that the prophecies of our prohibition friends are to any substantial extent realized, we will all rise up as one man and call them blessed and none will be quicker to acclaim the achievement than those who had been accustomed to the temperate use and occasional indulgence in alcoholic stimulants, because they will gladly forego the pleasures which moderate indulgence in the flowing bowl means to them in order that a greater good might result to the whole people and the community be rid of the evils which alcoholic intemperance has so often occasioned, but if after wandering with parched throats and withered tongues over the hot sands of the desert, we

do not find that crime has decreased, or that our jails are emptying, if we are not less inclined to beat our wives and rob the baby's bank and if some new form of intemperance develops more dangerous to society and the individual than liquor, and if we cannot curb the growing appetite of numerous fellow citizens for hair oil, varnish, turpentine and wood alcohol, and if we are not better men and better women as a result of our habits, we will let out a roar that can be heard from the Atlantic to Pacific and demand the desert shall blossom again as the rose.

EXPERIENCE WITH SHOCK AND HEMORRHAGE.*

By S. C. JAMISON, M. D., New Orleans.

It was the policy of the Medical Department to arrange a system for treatment of shock and hemorrhage in the following manner:

Such cases were turned over to a service whose only duty was the treatment of these conditions. This service was composed of two or more teams; these teams consisted of a medical officer of the rank of a Captain or Lieutenant, usually a Captain, a nurse, and one specially trained enlisted man. The hospital at which these teams served usually supplied an assistant nurse and the enlisted men for the routine work of the ward.

There was a school at Dijon during the summer of 1918 for the instruction of officers in this line of work. I can tell you nothing of this school, however, as I never had the advantage of taking this course.

The "Shock Teams," as they were called, were usually drawn from the Base Hospitals. They worked at Evacuation Hospitals chiefly, though some few worked in Field Hospitals. At Evacuation Hospitals there was always a special ward for shock cases. The material for this work was furnished by a Medical Supply Officer of the Hospital. The teams were, therefore, not burdened with carrying any of their own supplies. This material, in my experience, was only moderately good, but was really remarkably efficient, under the circumstances. The greatest criticism I would make of materials supplied, was of the needles, which are such an important element in successful work of this kind.

*Read at the Meeting of the Orleans Parish Medical Society, December, 13, 1919. (Received for publication Feb. 24, 1919.—Eds.)

Patients were usually brought directly from the First Aid Dressing Stations to the Evacuation Hospitals, where in company with all other patients, they were admitted to the tirage tent. They were examined as promptly as possible by the tirage officer, and distributed to the correct wards. All cases which he considered "shock or hemorrhage" cases, were sent to the "shock ward."

You must bear in mind that at the time these soldiers were wounded, they were usually already semi-starved, exhausted and de-hydrated; that they frequently lay on the field of battle for many hours in intense pain and under great exposure; that after these hours of exposure on the field, they were taken to a First Aid Dressing Station or Field Hospital (which degenerated really into little more than a dressing station), where they were given only the crudest treatment which was, of course, all that was possible at the time. This usually consisted in a hasty dressing of the wound, the application of a tourniquet, if necessary, and the administration of morphine and anti-tetanic serum. After this followed the long and terribly uncomfortable drives in the ambulances.

Our ambulances were not comfortable; they were frequently over-crowded; they were necessarily driven as fast as possible, over unspeakably bad roads. It takes little imagination to picture the condition of the desperately wounded men after such an experience. If they were not shocked at the time of injury, they ran a splendid chance of being badly shocked before they reached a place where better treatment and more permanent rest were possible. This, of course, was practically unavoidable. It is a pity, however, that these men should receive not even a hypo of morphine during their ambulance trip, but the ambulances were not accompanied by a Medical Officer, a nurse, or even a thoroughly trained enlisted man. Such people are not available in sufficient quantities.

In a great rush, after the advances during the Argonne, where it was not uncommon for three or four hundred patients to arrive in a few hours, men lay in the tirage tent of the Evacuation Hospital for hours, frequently cold, suffering, hungry and thirsty. This was not the fault of the tirage officer, but the fault of the men themselves, who not uncommonly would state that they were perfectly all right when they were really dying.

As soon as these cases were received in the "shock ward," the first

effort was to get them warm. The "shock ward" was always kept warm no matter if every other tent in the hospital went cold, and even if fuel was short for cooking.

A general examination was made as promptly as possible. This examination consisted first in an inspection of the injury, an examination of the heart and lungs by auscultation, pulse and temperature, of course, and the blood pressure taken. The blood pressure was of great importance and was one of our principal guides as to the existence of shock and hemorrhage, and to the extent of these. We considered cases whose systolic blood pressure was less than 100 unfit for immediate operation. Cases whose pressure was below 60 were considered hopeless. An attempt was made to determine whether the patient was suffering from shock or hemorrhage, or both, and also to determine the extent of hemorrhage, which we realized could not be done by blood pressure readings alone. We tried to determine this vital point by an approximate estimation of the blood volume. It is accepted, I believe, as a fact, that any case who has had lost 50% of his blood volume is certain to die, no matter what treatment is followed. However, if the blood volume is above 50%, transfusion is very likely to save life, provided too much shock is not also present.

We hoped to determine the blood volume by estimating the hemoglobin; from this, the quantity of red blood corpuscles lost, and this, along with the blood pressure, would give us an approximate idea of how much blood volume the patient had lost. It is generally believed, I think, and we took it as a standard, that the ordinary adult man has about 6,000 c. c. of blood. Red cell counts were, of course, also made. I cannot say whether this design was ever worked out satisfactorily; certainly, in my experience, it was not. It seems, however, to hold out great possibilities as a guide to both treatment and prognosis. Of course, where so many patients are to be treated, the time is a great consideration. It is often difficult or impossible to obtain more than a very few donors, and our idea was not to waste time and blood on patients who were certain to die, at the expense of saving the lives of other men who, with treatment, would almost certainly recover. Under the circumstances, it was, of course, necessary to have as accurate a possible means of determining such cases.

It was the duty of the officer in charge of the "shock ward" to determine the time at which cases were ready for operation. We

arbitrarily gave pre-operative treatment to all cases whose blood pressure was under 100. As soon as the pressure reached 100, these cases were sent to the operating room. If a patient's blood pressure did not rise, or steadily fell in spite of treatment, he was not sent to operation, unless it was evident that by operation an improvement could be brought about. No improvement could be hoped for in such cases presenting chest and abdominal wounds. In wounds of the extremities, however, if the cases got steadily worse, rapid amputation saved life in many instances, and it is a remarkable fact that the blood pressure would begin to rise promptly after the amputation of the limb in many cases. This, I believe, was due to the fact that a smaller blood volume was required.

One great difficulty presented itself, and that was the determination of gas bacillus infection cases. During the early stages of gas bacillus infection, the patient presents almost the typical appearance of profound shock; the blood pressure steadily falls in spite of all treatment, and the first warning you have that you are dealing with a gas infection, and not with a shock case, is when the peculiar greenish pallor of that disease begins to appear.

Heat was applied by the application of hot water bags and by tents made from the blankets, the heat being brought under the blankets with a curved stove-pipe placed over a solid alcohol tin. This method was dangerous, and no more satisfactory than the use of hot water bags, and was discontinued by us.

The foot of the bed was, of course, elevated, and morphine given to all cases who had not recently had a hypo; nourishment in the form of hot drinks was given to all cases not wounded in the abdomen.

Atropine proved of considerable value and was given to all cases who developed profuse sweats. This, of course, was with the idea of drying up the secretion of sweat, and retaining body fluids as much as possible. In all cases whose blood pressure did not begin to rise under the foregoing, infusions were given.

Infusions were given at once to all cases whose blood pressure was less than 70 on admission. At first, we used gum saline as an infusion. It did not take us long, however, to find this solution unsatisfactory. Reaction was quite common following its use, it flowed very slowly, and only rarely did patients appear to be much benefited. Salt solution alone appeared to me to be very bene-

ficial, especially when given following a hypo of atropine. Some of the officers felt that the saline was of little value because it was so promptly excreted by the skin. My own opinion is that this could be largely controlled by the use of atropine, and that the salt solution replaced fluids lost. The use of adrenalin in the saline certainly appeared to me to be of great value, particularly in pure shock cases, where hemorrhage was not great. Pituitrin was given in the same solution with the hope that the initial rise of blood pressure brought about by adrenalin might be sustained by the pituitrin. I am not prepared to say that this did not occasionally happen.

Blood Transfusion: No method compares to this in value. This is true, however, only in cases whose shock is due to hemorrhage. I do not believe that it is of great value, or even of any value, in the treatment of pure shock not accompanied by hemorrhage. That it is absolutely life saving in hemorrhage cases, no one who has seen it can doubt for a moment. It is without danger if the proper precautions are used, and very large quantities of blood are frequently not essential for the most brilliant results.

The necessary precautions consist in two things: the proper selection of the donor who is preferably of the same group, though if he be of group 4 there is little danger. If your patient be of group 1, or of the so-called universal recipients, it is better to give him blood from his own group, if possible, and, if not, from the group of universal donors.

Grouping at the front was done by the macroscopic method; citrated serums of groups 2 and 3 were furnished for these determinations. In civilian practice, I would not recommend the macroscopic method as the method of choice, but would prefer the microscopic method, and even better than this, the actual testing of the serum and corpuscles of the recipient against the serum and corpuscles of the accepted donor.

We experienced great difficulty in obtaining donors; this was not due to the fact that the enlisted men of the Medical Corps, the officers and nurses, were not willing to volunteer their blood, but was due to the fact that a general order was published of a very stringent character, prohibiting the donation of blood by members of the Medical Corps. In spite of these difficulties, however, we managed to get some blood for those cases desperately in need of it, though, of course, this very essential line of treatment was

greatly hampered by this order, and it also necessitated the immediate grouping of donors, and a feverish search for the same, whenever a case requiring blood transfusion presented itself.

The citrated method was always used and proved entirely satisfactory. The citrate was supplied in ampoules containing enough to make a 2% solution in 5000 c. c. of blood. All fluids were given intravenously by air pressure. I frequently gave hypodermoclysis. I was not impressed with its value except where cases merely were de-hydrated from lack of food and water. Certainly in profound shock and hemorrhage, its absorption is so delayed that its value becomes practically nil.

I personally treated about four hundred cases of shock and hemorrhage between September 20th and November 14th, 1918. All of these cases were treated in Evacuation Hospital No. 4 attached to the Third Army Corps of the First American Field Army. Of these cases, the mortality was a little over 25%, but you must bear in mind that a great number of these cases were hopelessly injured at the time of admission; that many cases were treated post-operative; that a certain percentage of cases were of gas bacillus infection and neither shock nor hemorrhage. There is no doubt in my mind that "shock teams" and "shock wards" are an absolute necessity and of great value in any hospital handling a large number of these cases; that the methods and personnel can be greatly improved if such emergency ever arises again. I believe that they can accomplish a great deal more good if they are as close as possible to the lines.

I am presenting this account, not as a scientific essay on the subject of shock and hemorrhage, but merely with the idea of giving you an account of the methods in use, and because such an experience is never likely to present itself again. The opinions which I have expressed are purely the result of my personal impressions, and are not based on statistics or any accurate case histories, as under the circumstances, these were almost impossible to keep, especially as there was considerable paper work required by the army, and this hampered keeping any personal notes.

DISCUSSION.

Dr. Ficklen: I am in entire agreement with Dr. Jamison in all the views that he has expressed. My own experience led me to the same conclusions. Most of the work that I saw personally was done before the "Shock Teams" were organized, and the personnel of the various

field hospitals and the evacuation hospitals handled these cases according to their own judgment. The field hospital of which I was a member had few facilities for treating shock cases. We set aside a small tent with a Sibley stove for the desperately wounded and kept them until they showed signs of recuperation before operating. Heat and morphine were all that we were able to use at first. Later on we got a blood transfusion apparatus and used it extensively. The French "Auto-chairs" were lighted electrically and they used an ingenious frame on which the stretchers rested above a bed of electric lights, twelve or fifteen in number. In this way the shocked patients were kept warm without danger of burning or chilling.

In regard to the statement made by Dr. Jamison about amputation and its effect on these patients, I was told that the policy of the English surgeons was to amputate immediately, no matter how shocked the patient was, on the theory that the removal of dead tissue eliminated one of the sources of shock. My informant, however, stated that from his observation the waiting policy was best and that the English, as a result of immediate operation, had a high mortality. Several cases of shock that I observed did not follow the classical text book description of this condition. The men, though pale and almost pulseless, were violently tossing from side to side, struggling to sit up, calling for water and staring wildly at surrounding objects. This is a terminal condition and was only seen a few minutes before death.

We were not hampered by the general order which appeared later preventing the use of the personnel as donors in transfusion cases. We kept a list of twelve volunteers who could be called on in any emergency. As a consequence, we had no difficulty in transfusing either shock or hemorrhage cases at once.

While in Base Hospital 24 I transfused one patient as a prophylactic measure, hoping to minimize the shock of an amputation of the thigh which was to follow in a few hours. The patient belonged to the group of universal recipients and we chose two donors from the group of universal donors. The blood of the first donor clotted so rapidly that it was necessary to withdraw the remainder of the 600 c. c. given from the second donor. When this mixture was given to the patient he showed all the signs of extreme prostration. His pulse became rapid and thready, he broke into a cold sweat, and complained of violent pains in the gums and in the lumbar region. We were a good deal alarmed at his appearance and gave him pituitrin at once. Fortunately this condition disappeared in a few minutes and he survived the operation. It is interesting to note that in this particular case three bloods were mixed with alarming result.

The gum salt solution I personally believe is a failure and dangerous. This seems to be the consensus of opinion.

In conclusion I think it can be safely said that blood transfusion is a procedure of very great value in cases of hemorrhage, and possibly in many other conditions. It is not used at present as much as it should be, but I think that when its simplicity is appreciated by the profession at large it will be employed much more frequently.

Dr. Muir Bradburn: With regard to the question of gum-salt solution. The opinion of many is that gum solution is of little value and of some that it is dangerous. This discussion came up at the American Medical Association meeting in the paper read by Dr. Bernheim and he said it was absolutely dangerous.

The second point Dr. Jamison made was that after operation in which the traumatized tissues were removed, the shock improved. That was what Dr. Cannon laid stress on—getting rid of the absorption from traumatized tissues helped in the case of shock. That was discussed and Dr. Crile thought such absorption played a small part in the production of shock. Dr. Lewis also entered into that discussion and he said that those cases which came in with tourniquets on, which therefore prevented absorption from the injured tissue, were among those in the greatest state of shock. Dr. Jamison called attention to the fact that smaller quantities than those ordinarily given produced beneficial results. We were urged to give 500 cc to 1 m cc. In one instance of hemorrhage to which I was called, only 250cc were given. The recovery was prompt and he left the hospital in good condition.

Dr. Parham: I want to speak especially about blood pressure. Dr. Porter, head of the laboratory of Experimental Physiology at Harvard, made a number of visits to the front and tried the blood pressure under the most varied circumstances, drawing the conclusion that the diastolic pressure was much more important than the systolic. A diastolic under 50 indicated almost surely a fatal ending.

I would like to ask what is Dr. Jamison's experience. It does seem that some of these cases are so helpless that nothing can be done. It strikes me that the most valuable lesson we have learned is that heat, morphine and black coffee are our remedies par excellence. Intravenous injections are at times of value in tiding over a dangerous crisis until the effect of heat can be obtained.

I noticed that Dr. Jamison laid no stress upon stimulants. Stimulants accomplished little. I am pleased that the work of Dr. Jamison has given us the valuable experience of some 400 cases, the kind of experience that we surgeons most welcome.

The subject is too vast to consider at length. I wanted only to call attention to these few points as the audience is looking forward anxiously to the counting of the votes tonight.

SOME SUGGESTIONS IN PHYSICAL DIAGNOSIS.*

By O. W. BETHEA, M. D., New Orleans.

I

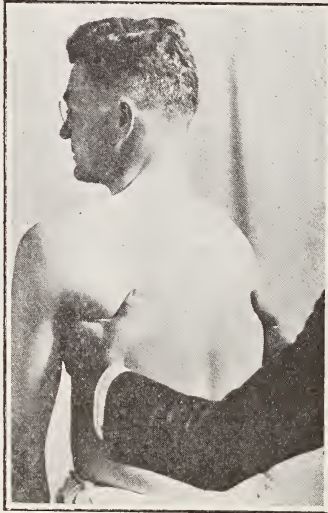
In making a physical examination of the chest we use every measure at our command in the hope that one or more of them may give us some information of value. We may inspect, or percuss time and again without results, but we continue to avail ourselves of these methods of investigation knowing that in a certain percentage of cases they prove of value. In submitting the following suggestions I realize their limited field of usefulness but have found them one of the many aids that at times have helped me to build up a diagnosis.

*Read before the Orleans Parish Medical Society, Jan. 26, 1920. (Received for publication March 11, 1920.—Eds.)

PALPATION FOR UNIVERSAL IMPAIRMENT OF APICAL EXPANSION.

This has been submitted to several diagnosticians and the reports have been very satisfactory. DaCosta has included it in the recent edition of his "Physical Diagnosis," but his description of the method is not as clear as it will probably appear in future editions.

In the past, palpation for unilateral impairment of apical expansion has been done by one of two methods.



- 1st. Standing back of the patient to grasp the shoulders with the thumbs back and the fingers in the supra—then the infra-clavicular fossæ as the patient takes deep breaths. The comparative degree of separation of the thumbs and fingers of the respective hands is noticed.
- 2nd. Standing in front of the patient and placing the palmar surfaces of the fingers in the infracavicular fossæ as the patient breathes. The comparative degree of movement of the hands is noted.

My suggestion is to stand or sit back of the patient with the thumbs pressed against the back to fix the hands and with the fingers placed well up in the axillæ so that the tips of the first and second fingers rest in the highest conveniently intercostal spaces, usually the first or second, and pressed down against the lower ribs. When the patient takes a deep inspiration there is a

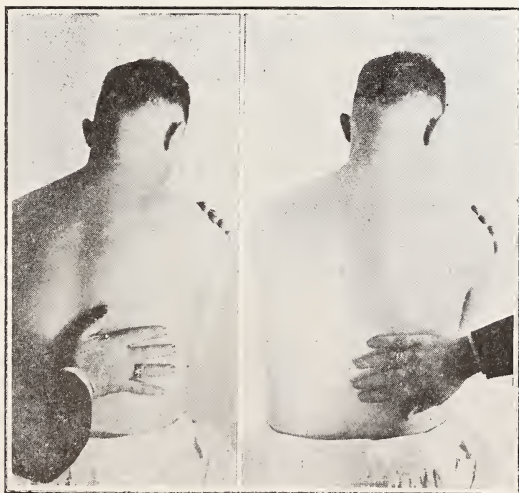
lifting up and rotation of the ribs under the finger tips and the comparative movement of the two sides can be judged with a fair degree of accuracy.

For Example: On one side the movement may be half the width of the rib, while on the other, the rib may pass entirely under the fingers, and the tips rest in the next lower intercostal space. When the patient exhales the ribs glide back under the finger tips until the original position is restored. I would suggest to those trying this measure that a certain amount of practice is necessary just as it was in percussion or auscultation.

II

A VARIATION OF THE USUAL PALPATION FOR DETECTING TACTILE FREMITUS.

The usual method is to place the palm of the hand, or the palmar surfaces of the extended fingers, or the dorsum of the



flexed fingers against different areas of the patient's chest while the patient speaks certain words. The fingers are held in apposition.

My suggestion is that in finding the margin between present and absent fremitus the palmar surfaces of the *separated* fingers should be applied and the hand moved a finger's breadth at a time as the patient speaks.

For Example: In location the margin of pleural effusion, begin

well up in the area of tactile fremitus and gradually move the hand downward. As the lower fingers pass out of the area of vibration the appreciation of the vibration is accentuated by the difference in the sensation in the respective fingers until finally only the upper finger is felt to vibrate. The pencil mark is then made between this and the next lower finger.

It has been recently demonstrated that the ulnar nerve is more sensitive to the impression of vibration and in some instances I have found that this palpation is best carried out with the little finger uppermost.

I hope that one result of this paper will be to stimulate further investigation along the lines suggested.

EXHIBITION OF A SPECIMEN OF TUBAL PREGNANCY.*

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

This is not a condition of great rarity, but I desire to present a rather early specimen that we obtained at the Charity Hospital, which might be interesting to you.

This is an early tubal pregnancy in which the fetal sac is beginning to be extended from the tube, and the little fetus can be seen inside. The specimen was preserved and happened to get a good deal harder than it should have done.

The special point of interest in this case is the diagnosis. This patient consulted me at one of my charity clinics in November and stated that she had had an abortion and was losing daily, and had been losing for 2 or 3 months. I told her that she should have the uterus cleaned out. She decided to go home and think about it. Finally, on one Sunday while she was still bleeding, she was suddenly siezed with abdominal pain and fainted several times. I at once became suspicious of extra-uterine pregnancy. The next day she had no pain and felt very comfortable, she had no fever, a very good pulse and no sign of bleeding. We considered curettage, but still that history lurked in my mind, though vaginal examination was negative. The next day I curetted her, and even under the anesthetic the examination was negative. But I decided to open the abdomen and found this little pregnancy

*Read before the Orleans Parish Medical Society, Jan. 26, 1920. (Received for publication March 11, 1920.—Eds.)

beginning to escape from the right tube. It is a tubal abortion, rather than a tubal rupture. One interesting point about the case is the fact that she had considerable pain and shock without the loss of much blood; we notice this in many cases of ectopic pregnancy. It is ascribed to peritoneal irritation.

DISCUSSION.

Dr. King, closing: In answer to Dr. Dimitry, it is often impossible to tell whether a tube is the seat simply of a salpingitis. The main point is that salpingitis is usually bilateral and tubal pregnancy is generally unilateral. If it is a case of salpingitis, it would at times be a very serious error to incise it. So we ligate at both ends and remove the tube. In case we are dealing with a tubal pregnancy, the operation is the same. Incision, removal of the fetus and subsequent repair of the tube would be futile, as we could hardly hope to restore its lumen.

SPINAL ANALGESIA.

By SIDNEY P. DELAUP, M. D., Professor of Genito-Urinary and Rectal Surgery,
New Orleans Polyclinic.

Well recognized contraindications to the administration of a general anesthetic have created a wide interest in local anesthesia. At the present and regional time there seems to be an ill-defined difference of opinion among able surgeons as to the choice of three general schemes for producing local anesthesia. Many follow the early infiltration plan. Others prefer nerve-blocking wherever possible. Still another group have adopted spinal anesthesia. While some surgeons have championed one of these three plans as being far superior to either of the other two, there are some who take a more liberal view of the proposition and recognize possible indications for any one of them, according to the character of the operation and physical and mental condition of the patient.

I first became interested in spinal anesthesia following a most favorable experience on November 3, 1899. From that date until November 15, 1919, I have operated over 5000 cases under spinal anesthesia in my services at the Charity Hospital of Louisiana. Of this number exactly 3,138 were my own private cases. These cases ordinarily would have demanded general anesthesia.

I consider spinal analgesia superior to general anesthesia for surgery below the umbilical line as the patient is in a much better general condition following the operation. Acute nephritis, which

might follow general anesthesia, can be avoided. The many post-operative conditions caused by the general anesthesia are absent, thus placing the patient in a much better condition for a prompt recovery from the effect of the operation.

Since September 26, 1918, I have used apothesine exclusively for spinal analgesia. Of all the synthetic local anesthetics employed it appears to be the most satisfactory. Preference is based upon its low toxicity, rapid action, especially in spinal analgesia, its lasting effect, and last, but not least, the fact that it is an American product sold at a reasonable price.

The following 297 operations performed under spinal anesthesia with apothesine will clearly show the wide range of conditions in which spinal analgesia may be successfully used:

Herniotomies	4
Fistulectomies	32
Hernopunctures	43
Proctotomies	18
Prostatectomies	19
Hydrocele	7
Adenectomies	24
Circumcision	41
External Urethrotomies.....	26
Internal Urethrotomies	22
Cystotomies	7
Papillectomies	11
Episioplastics	4
Cancer of Rectum.....	3
Colostomy	6
Orchidectomies	4
Cauterization Chancroid.....	19
Rectal Ulcer	4
Varicocele	2
Penis amputation.....	1

Much of the success in spinal anesthesia depends upon technic, the following being the method I employ:

1¼ grain apothesine dissolved in 1 c. c. distilled water; boil for two minutes.

Spinal needle inserted to right of median line from eleventh dorsal to fourth lumbar according to operation. This line to side chosen to avoid plexus of veins and interspinous ligament.

Solution transferred to syringe and when same is joined to needle, about 1 c. c. spinal fluid allowed to escape, then injection is made. Care should be exercised in introducing the needle, so as not to injure the spinal cord, and the injection made within the dura.

A certain class of cases presenting a very simple surgical procedure may be successfully operated under local infiltration anesthesia, using $\frac{1}{2}\%$ to 1% solution apothesine. Anesthesia is produced in one to three minutes following injection, lasting from thirty to forty-five minutes.

Care should be used in introducing the solution into loose cellular tissue to avoid unnecessary infiltration, which might result in pressure necrosis. This same condition might result from introducing an excessive amount of any fluid into certain structures.

The following ninety operations were done under local infiltration anesthesia with apothesine, followed by the most satisfactory results.

Circumcision	26
Hydrocele	12
Varicocele	13
Sigmoidopexies	10
Cystotomies	14
Adenectomies	12
Fistulectomies	3

It is needless to say, however, that this group of cases presented no complications and were simplest in character from a surgical viewpoint.

This report has been confined exclusively to local infiltration and spinal analgesia, I shall not attempt to discuss any phase of the nerve-blocking plan.

After some experience the surgeon will be able to decide which cases should be operated under spinal anesthesia and those best suited for local infiltration. In either instance the operation itself is frequently more successful than if done under general anesthesia, and eliminates many of the undesirable and, sometimes, alarming conditions caused by the administration of general anesthetics.

COMMUNICATIONS.

The Editors, New Orleans Medical and Surgical Journal:

Dear Sirs:

In the interest of this organization, can you publish the following letter:

"To all physicians who served the Federal Government during the War:

An association of Medical Veterans of the World War was organized at Atlantic City, in June, 1919, at the time of the meeting of the American Medical Association, and a constitution and by-laws chartered. 2500 physicians have already joined and all others who are eligible are invited to join the society.

The Dominant Purpose of this Association Shall be Patriotic Service. The objects of this association shall be: To prepare and preserve historical data concerning the medical history of the war; to cement the bonds of friendship formed in the service; to perpetuate the memory of our medical comrades who made the supreme sacrifice in this war; to provide opportunity for social intercourse and mutual improvement among its members; to do all in our power to make effective in civil life the medical lessons of the war, both for the betterment of the public health and in order that preparedness of the medical profession for possible war may be assured.

The organization of the society provided for state and local organizations wherever the members desire it, and in some states, such as Wisconsin, organization has already been effected.

Below is a list of all the physicians who have already joined the organization from your state, and it is desired by the National Association that these members at the first convenient opportunity meet together in larger and smaller groups and effect a local organization with a chairman and secretary, and also at the next meeting of the state medical society that a place be provided on the program for the Medical Veterans:

Eschback, H. C., 115 Benton Ave., West Albia.

Roberts, Wm. J., Colfax.

Hunter, Walter B., Coushatta.

Glew, Percival B., Dallas Center.

Pierson, C., Jackson.

Brown, Fred. Temple, 7 Rosa Park, New Orleans.

Dyer, Isadore, 2222 Prytania St., New Orleans.

Menville, Leon J., 1201 Maison Blanche, New Orleans.

Lopez, Louis V. J., 3711 Carondelet St., New Orleans.

White, Stuart Lyons, Ruston.

Rutledge, Clifford P., Highland San., Shreveport.

Hartman, Frank T., 623 Mulberry St., Waterloo.

The organization of the society is based on democratic principles and it is hoped that the members who have already joined will take the initiative and organize their own state and local societies.

The national organization will assist by furnishing application blanks and copies of the constitution and by-laws, and, if desired, stationery.

The first things to be done after the organization of a state society is effected is to elect a councillor to the general council of the organization, to represent the state society at the next annual meeting of the Veterans at New Orleans on the first day of the meeting of the American Medical Association, April, 26, 1920.

A badge or button for members of the society is being made and will soon be ready for distribution."

Yours very sincerely,

F. F. RUSSELL,

Secretary.

Editors New Orleans Medical and Surgical Journal:

Dear Sirs:

The undersigned would like to enter into communication with Physicians who may be located in malarial districts, in reference to securing postmortem material from fatal cases of malaria for purposes of investigation.

Any aid that may be afforded us in this connection we should deeply appreciate.

Yours truly,

C. E. SIMON,

R. W. HEGNER.

Johns Hopkins University, Baltimore, Md.

BULLETIN OR THE LOUISIANA STATE MEDICAL SOCIETY.

By P. T. TALBOT, M. D., Sect'y-Treas.

“PROGRAM”

Forty-first Annual Meeting of the Louisiana State Medical Society, which convenes in New Orleans, April 24th and 26th, 1920.

MEETING PLACE:

Hutchinson Memorial Building, Tulane University College of Medicine, Canal and Villere Streets.

HOUSE OF DELEGATES:

The House of Delegates will hold two sessions,—Saturday, April 24th, 1920, at 10 a. m. and Monday, April 26th, 1920, at 10 a. m.

PUBLIC MEETING:

The Public meeting of the Society will be held on Monday, April 26th, at 8 p. m., at the Hutchinson Memorial Building.

PROGRAM OF “PUBLIC MEETING:”

President's Address—Dr. C. P. Gray, Monroe, La., 1st Vice-President. (In the absence of Dr. E. L. Henry, President.)

Annual Orator—Gov. Elect, John M. Parker.

Adjournment.

Governor Parker will discuss the medical phases of the problems as they confront him in his administration and will outline his policy as to sanitary and institutional administration of a medical nature.

Further announcements will be made through the columns of the daily press of New Orleans.

The above information was furnished by Dr. J. Birney Guthrie, Charman of the Arrangement Committee.

A. M. A. NOTES.

All things needful seem to have been done for the convenience, pleasure and comfort of our expected guests, and it looks as though we, as well as they are to have a very delightful time.

The opening meeting of the American Medical Association will be held on the night of Tuesday, April 27th, 1920.

John M. Parker, Governor Elect, will deliver the Opening Address, while the Honorable Martin Behrman will deliver the Address of Welcome. The Opening Prayer will be offered by the

Archbishop John William Shaw, of the Diocese of New Orleans.

Wednesday night will be given the "President's Ball," at the Athenaeum. This is, of course, the Great Ball and promises to more than fulfill all expectations.

Thursday Evening and Night will be devoted to a Fete Champetre at the City Park, where there will be given an historical pageant and other interesting features. This will be peculiarly delightful, especially as there will be something going on all the time, with ample room for everybody.

Plans have been perfected for fishing trips, golf, tennis, boat trips and especially guided parties to the various points of interest about the city, especially through the French Quarter.

The Newcomb Art Alumni Association will give a tea on the Newcomb Campus where an opportunity will be had to see the celebrated Newcomb Pottery and Art School.—The Tulane University adjoins and an interesting afternoon will be had by the ladies.

Every thought and effort has been expended to insure the visiting ladies a continuous round of available amusement, both with and without the men.

Hotel and other accommodations seem ample, but it might be both pleasant and convenient to charter sleepers for the round trip, using them as dormitories while in New Orleans.

The Commercial Exhibits will be the most interesting, diverse and extensive ever given at any meeting of the American Medical Association and members are urged to visit them as often as possible.

There promises to be an unusually large attendance at this meeting but from word received, the attendance will come more generally from the South and it is hoped that this opportunity to come into their own will be availed of by them.

A Buffet Luncheon for the visiting Women Physicians is to be given by the Women Physicians of the Southern Medical Association, on April 27th, at the St. Charles Hotel, New Orleans, La.

The "Annual Banquet" for women physicians is to be given at the Louisiane, Wednesday, April 28th, at 6 p. m. Kindly make reservations through Dr. Margaret P. Bouden, 1217 Calhoun Street, New Orleans. Four dollars per plate.

Everything concerning this meeting looks good!

**CLINICS OFFERED FOR THE PERIOD PRECEDING AND
FOLLOWING THE MEETING OF THE A. M. A.**

New Orleans, April 27, 28, 29, 30.

It is purposed to make available for these clinics, all the hospitals affording sufficient facilities. The cooperation of the Charity Hospital of Louisiana, of the Eye, Ear, Nose, and Throat Hospital, of Touro Infirmiry, the Hotel Dieu, and the Presbyterian Hospital has been secured. These institutions are interested in placing their clinical material at the disposal of the visiting profession, and have entered into the spirit of the undertaking in the most cordial manner.

The clinics will be arranged for Thursday, Friday and Saturday of the week before the meeting, April 22, 23, 24;—for Monday and Tuesday of the meeting week, April 26 and 27;—and for the Saturday following, May 1.

In accordance with hospital customs in New Orleans, the operative clinics will be held in the forenoon, the non-operative in the afternoon. Daily a notice of the morrow's program will be multi-graphed and posted in the registration booth, the various sections, the hotels, and the hospitals themselves. The program will give the number of visitors who can be accommodated in each clinic. All the institutions will offer instructive work each day, the programs running concurrently, so as to offer opportunities to as large a number of visitors as possible.

CHARITY HOSPITAL.

Location: Tulane Avenue between Howard and Magnolia. Take Tulane Belt car on Canal St., going from river.

Operative clinics every forenoon, in Miles and Delgado buildings, accommodating respectively 525 and 75 spectators.

Dispensary clinics every forenoon.

Non-operative (medical, dermatologic, obstetric) clinics in the afternoon, chiefly in the Miles Amphitheater (capacity 500).

Surgery: Drs. J. M. Batchelor, J. A. Danna, H. B. Gessner, F. A. Larue, E. D. Martin, R. Matas, F. W. Parham, John Smyth, M. J. Gelpi, C. Grenes Cole, J. E. Landry, Henry Leidenheimer, C. W. Allen, U. Maes, W. M. Perkins, A. C. King, M. Bradburn, W. P. Bradburn, A. Duncan, J. F. Points, John Lindner, A. A. Keller, E. J. Richard.

Medicine: Drs. John B. Elliott, Jr., G. S. Bel, Benj. Ledbetter, J. T. Halsey, G. Farrar Patton, Edw. Moss, J. B. Guthrie, I. I. Lemann,

J. A. Storck, Otto Lerch, Hamilton P. Jones, L. L. Cazenavette, Wallace Durel, Harry Daspit, A. E. Fossier, O. W. Bethea, J. L. Lewis, R. Lyons, S. Chaillé Jamison, J. C. Cole.

Gynecology and Obstetrics: Drs. S. M. D. Clark, Wm. Kohlmann, Paul Michinard, C. Jeff Miller, H. S. Coeram, W. W. Leake, H. W. Kostmayer, J. W. Newman, E. H. Walet, P. B. Salatch, C. P. Holderith, E. D. Friedrichs, J. F. Dicks, E. L. King, C. A. M. Dorrestein, C. P. Brown.

Orthopedics: Drs. E. D. Fenner, John F. Oechsner, Paul A. McIlhenny, Solon G. Wilson, Jas. T. Nix, Jr., Jos. Levy.

Urology: Drs. S. P. Delaup, Jos. Hume, A. Nelken, Paul Gelpi, Henry Walther, P. J. Kahle, Hy. Lindner.

Ophthalmology: Drs. M. Feingold, T. J. Dimitry, A. L. Whitmire, V. C. Smith, Henry Blum, A. R. Crebbin.

Disease of the Ear, Nose and Throat: Drs. Homer Dupuy, S. M. Blackshear, W. T. Patton, J. A. Estopinal, L. de Porter, Wm. Scheppegrell (Hay-fever clinic).

Pediatrics: Drs. C. A. Borey, L. R. De Buys, C. J. Bloom, John Signorelli, R. A. Strong, R. Crawford, Geo. J. de Reyna.

Dermatology: Drs. Isadore Dyer, H. E. Ménage, J. N. Roussel.

Radiologist: Dr. J. B. Harney.

Pathologist: Dr. C. W. Duval.

EYE, EAR, NOSE AND THROAT HOSPITAL.

Location: Tulane Avenue, corner of Elk Place, five squares from Charity Hospital. Take Tulane Belt car on Canal St., going from the river.

Dispensary and operative clinics as follows: Ear, nose and throat in the morning, eye in the afternoon.

Amphitheater seats fifty.

STAFF:

Eye:—Drs. Henry Dickson Bruns, E. A. Robin, C. A. Bahn, W. R. Buffington, E. McCarthy.

Ear, Nose, Throat: Drs. R. C. Lynch, John T. Crebbin, Geo. Taquino, J. D. Martin.

TOURO INFIRMARY.

Location: Prytania between Aline and Foucher. Take Prytania car at Canal and Camp, or St. Charles Belt.

Dispensary in the forenoon.

Operative clinics every forenoon; six rooms accommodate sixty.

Medical clinics in the afternoon; accommodations for 200.

Surgical Staff: Drs. R. Matas, F. W. Parham, E. D. Martin, C. Jeff Miller, S. M. D. Clark, C. W. Allen, A. Nelken, H. B. Gessner, U. Maes, L. H. Landry, R. E. Stone, Isidore Cohn.

Obstetrical and Gynecological Staff: Drs. Wm. Kohlmann, J. W. Newman, J. Barnett, J. G. Hirsch, Jos. Conn, C. A. M. Dorrestein.

Orthopedic Staff: Drs. E. S. Hatch, J. T. O'Farrall, L. C. Spencer.
Eye: Drs. M. Feingold, Henry Blum, A. R. Crebbin.
Ear, Nose and Throat: Drs. C. J. Landfried, R. C. Lynch, J. P. Leake, A. I. Weil, S. M. Blackshear, H. L. Kearney.
Medical Staff: Drs. I. I. Lemann, L. R. De Buys, S. K. Simon, R. M. Van Wart, C. L. Eshleman, R. Lyons, J. M. Bamber, J. C. Cole, O. F. Ernst, A. L. Levin, C. J. Bloom, C. S. Holbrook, B. R. Heninger.
Radiology: Drs. E. C. Samuel, E. R. Bowie.
Dermatology: Drs. J. N. Roussel, R. A. Oriol.
Pathology: Dr. J. A. Lanford.

HOTEL DIEU.

Location: Tulane Avenue, corner of Johnson. Take Tulane Belt car on Canal St., going from the river.

Operative clinics every forenoon; five rooms accommodate a total of twenty-five.

STAFF:

Drs. M. Souchon, J. A. Danna J. T. Nix, Jr., Louis Levy, Homer Dupuy, J. J. Ryan, H. W. Kostmayer, Maurice Gelpi.

Radiologist: Dr. L. A. Fortier.

Pathologist: Dr. M. Couret.

PRESBYTERIAN HOSPITAL.

Location: Carondelet St. between Julia and Girod. Take Peters Avenue and Laurel St. cars at Carondelet and Canal.

Operative clinics in the forenoon; four rooms accommodate a total of forty.

Demonstration of pathological specimens and radiographs in the forenoon.

STAFF: Surgery—including Special Senses.

Drs. J. P. O'Kelley, W. D. Phillips, C. Grenes Cole, Roy Harrison, A. O. Hoefeld, Jos. Hume, J. R. Hume, John Smyth, D. L. Watson, M. P. Boebinger, F. A. Overbay, H. S. Cocram.

Internal Medicine: Drs. J. L. Lewis, Chaille Jamison, F. Lamothe.

Pathologist: Dr. Wm. H. Harris.

Radiologist: Dr. Adolph Henriques.

NEWS AND COMMENT

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The fifty-first annual meeting of the American Medical Editors' Association will be held at the Grunewald Hotel, New Orleans, on Monday and Tuesday, April 26 and 27, (during the week of the A. M. A. Convention) under the presidency of Dr. Seale Harris, Editor of the *Southern Medical Journal*. A most interesting program has been arranged and every doctor, even remotely interested in medical journalism, will find it to his advantage to attend.

MEETING SOUTHERN SECTION OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY.—The annual meeting of this society will be held in New Orleans, at the Eye, Ear, Nose and Throat Hospital, corner Elk Place and Tulane Avenue, on Tuesday, April 27, at 9 A. M., the day before the first scientific session of the A. M. A.

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS.—The next examination of this board will be held at New Orleans, Monday, April 26, at the time of the meeting of the American Medical Association. Candidates who wish to take the examination for the certificate of the Board must have their application and credentials in the hands of the Secretary, Dr. W. H. Wilder, 25 E. Washington St., Chicago.

THE UNITED STATES CIVIL SERVICE COMMISSION announces open competitive examinations for bacteriologist and junior bacteriologist. Both men and women may enter these examinations, but appointing officers have the legal right to specify the sex desired in requesting certification for eligibles. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board, Customhouse, in their district. Applications should be properly executed, including the medical certificate, and filed with the Civil Service Commission, Washington, D. C., without delay. Receipt of applications will cease on June 29, 1920.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for inspector and agent Antinarcotic Act, May 4, 1920. Both men and women may enter this examina-

tion, but appointing officers have the legal right to specify the sex desired in requesting certificate of eligibles. For these positions in the Internal Revenue Service male eligibles are desired. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board, Customhouse, in their district. Applications should be properly executed, including the medical certificate, and must be filed with the Civil Service Commission, Washington, D. C., without delay.

THE AMERICAN RED CROSS gave outright \$1,000,000 to purchase drugs and other medical supplies for French soldiers, during the dark days of the war, when the French Red Cross found itself unable to provide for the 780,000 wounded men lying ill in the hospitals. This is only part of the assistance rendered the French women war workers by the American organization, according to Countess d'Haussonville, a prominent French woman.

LOYOLA POST GRADUATE SCHOOL OPENS NEW HOME.—On Thursday, February 26, the new home of this school situated on Tulane Avenue and South Villere St., was opened. The occasion was auspiciously celebrated with a house warming. A number of the medical profession accepted invitations and an enjoyable evening was spent. Interesting talks by members of the faculty and others were delivered, the evening closing with light refreshments. The JOURNAL extends congratulations and best wishes for success.

NEW MEDICAL BUILDING.—A new medical building to cost \$750,000 is to be erected for the University of Alberta, Calgary, Alberta. The plans have been prepared and construction will begin as soon as weather conditions permit.

THE CITY COUNCIL OF PHILADELPHIA has passed a general appropriation bill placing \$50,000 for the combating of influenza or for use in any other health emergency. The money will be expended by the director of public health and charities, subject to approval by the mayor, president of council and chairman of the finance committee. Latest reports indicate that influenza is decreasing.

PUBLIC HEALTH SERVICE APPROPRIATIONS.—An emergency deficiency bill which has just passed the senate carries an appropria-

tion of \$3,000,000 for medical, surgical and hospital services for war risk insurance patients of the Public Health Service. Expenditure of the money is made immediately available to care for the work of the Public Health Service for the benefit of former service men of the Army and Navy. Included in the bill is also a provision for the final purchase of the Broadview Hospital-Speedway at Chicago. This hospital is to be used by the Public Health Service for the care and treatment of war risk insurance patients. Three million dollars has already been appropriated for the purchase of this hospital, and an additional \$500,000 is needed to complete the construction, to make it meet the requirements of the Public Health Service.

ENLARGEMENT OF HOSPITAL SOCIETY.—At its meeting in Chicago, February 12, the National Methodist Hospital Association voted to include in its organization, homes for aged and dependent children. Plans to cooperate with the church world movement, giving over an item of \$100,000,000 in the budget for Methodist hospitals were discussed. Mr. E. S. Gilmore, superintendent of the Wesley Memorial Hospital, Chicago, was reelected president, and M. C. England, Cleveland, vice-president.

PHARMACOPEIAL CONVENTION.—The United States Pharmacopeial Convention has issued a call for its tenth decennial meeting to be held in Washington, D. C., at 10 A. M., May 11, at the New Hotel Willard. One of the first and most important matters will be the election of fifty delegates to constitute a committee of revision, to whom will be assigned the task of determining the general principles to be followed by the tenth revision of the pharmacopeia. The United States Pharmacopeial Convention is a corporation composed of delegates elected by a number of organizations associated for the purpose of revising the United States Pharmacopeia every ten years. Interests of medical practitioners are conserved by delegates from the American Medical Association, the state medical associations, the medical colleges and medical departments of the U. S. Army, U. S. Navy and U. S. Public Health Service. Each of these organizations should at once choose three competent and qualified delegates to attend the convention and take active part in forming its policies. Forms for certifying the delegates may be obtained from Dr. Noble P. Barnes, Arlington Hotel, Washington, D. C. The forms should be properly exe-

cuted and the delegates reported to Dr. Barnes at least six weeks before date set for convention.

MEMORIAL INSTITUTE TO LISTER.—The movement which originated before the war for the establishment in Edinburg of a memorial to the late Lord Lister has been revived. It is planned to have the memorial in the form of a scientific and research institute under the direction of the University of Edinburg, the Royal College of Physicians and the Royal College of Surgeons of Edinburg.

MEETING AMERICAN PROCTOLOGIC SOCIETY.—The twenty-first annual meeting of this society will be held at the Hotel Gayoso, Memphis, Tenn., April 22-23. An interesting program has been arranged. Any one interested in Proctology whether he be a member of the society or not is invited to attend.

THE FIRST CHINESE MEDICAL COLLEGE.—During the war between Japan and Russia in 1904 the Chinese Red Cross was formed, to look after thousands of Chinese who were left homeless and destitute in the regions where fighting raged for many months. After the situation was relieved, a large amount of money remained over, and upon the decision of members of the General Council, ground was purchased near Shanghai and a large and handsome building erected as the Chinese Central Red Cross Hospital and Medical College, for Chinese students. The hospital is completely equipped with the most modern apparatus and furnishings. Instruction in the college is carried on in English only. The first year there were twenty registrants. The Chinese are proud of their medical school and view the results of its work with satisfaction. The Chinese Red Cross is today an organization with 25,000 members, whose interest in world relief work is evidenced by the entrance of the society into the League of Red Cross Societies. The Chinese have been impressed with the work of the American Red Cross during the war, and after, and now wish to take their place beside the other nations of the world in the work of relieving human suffering.

ELECTION OF OFFICERS, MEDICAL COLLEGE ASSOCIATION.—The annual meeting of this association was held in Chicago, March 2 and 3, the following officers being elected. President, Dr. Wm. Pepper, Philadelphia; vice-president, Dr. Thomas Hough, Char-

lottesville, Va.; secretary-treasurer, Dr. Fred C. Zapflee, Chicago, re-elected. The new council is composed of the following: Drs. Irving S. Cutter, Omaha; Isadore Dyer, New Orleans; James Ewing, New York City; Charles R. Bardeen, Madison, Wis.; and George Blumer, New Haven, Conn.

DONATIONS TO MEDICAL COLLEGES.—Announcement is made by the general education board of the following contributions for the advancement of medicine: Washington University, St. Louis, \$150,000; Johns Hopkins University, \$400,000, and Meharry Medical School of Nashville, Tenn., \$150,000. The donation to Johns Hopkins is intended to establish a full-time teaching system, with complete facilities for a department of obstetrics.

ACCORDING TO A LETTER sent out by Rupert Blue, Surgeon-General U. S. P. H. Bureau, the general death rate of the United States has decreased from 17.6 to 14.2 during the past twenty years. Had the conditions of twenty years ago prevailed during the past year some 350,000 more persons would have died than actually did die. This is truly an enormous saving of life.

A MARINE HOSPITAL under the direction of the government will be founded in Manila, P. I. This will be the first hospital in the Orient which shall be used exclusively for men of the U. S. merchant marine and will make Manila one of the chief ports of call for all vessels from the United States.

THE WAR'S EFFECT ON GERMAN CHILDREN.—Professor Abderhalden of Halle, is reported as having stated that had the war not occurred 2,000,000 children would have been born in Germany between 1914 and 1918. Half a million children were starving at the time of the armistice, over 100,000 of whom would have died but for steps taken. Tuberculosis and rickets were prevalent to a horrible degree among the youth of Germany. Contrary to all reports, the professor declared, food conditions in Vienna were better than in Germany.

IN HONOR OF PROF. WILLIAM H. WELCH.—As a tribute to Prof. Welch who reaches his seventieth birthday in April, it has been decided to bring together and to publish in three volumes his papers and addresses which strikingly reveal the great part he has played in the development of medical science and medical education. In order that the project may be assured it has been de-

cided to invite his friends and former pupils to unite in making possible the publication of the work. The volume will be issued by the Johns Hopkins Press.

TYPHUS IN ESTHONIA.—Steps to combat the serious outbreak of typhus in Esthonia have recently been taken by the American Red Cross representatives in Europe. Early this year a dangerous shortage of doctors and nurses and an almost complete demoralization of hospital service was reported in face of a rapid spread of the epidemic, Lieut-Col. Ryan, American Red Cross Commissioner for the Baltic States has, in addition to relief measures taken on the ground, arranged with the French Service de Santé for a detail of twenty French doctors for two months to assist in fighting the disease. In the vicinity of Narva the Red Cross is already caring for 15,000 typhus, dysentery and influenza patients.

THE REGULAR SEMI-ANNUAL MEETING OF THE FOURTH DISTRICT MEDICAL SOCIETY OF LOUISIANA, was held at City Hall, Shreveport, Thursday, March 18, 1920. It was the best meeting since before the war and there was the satisfactory attendance of 46. The following program was carried out:

Afternoon Session, at 2 O'Clock.

Call to Order, by Thos. P. Lloyd, President; Invocation, by Rev. M. E. Dodd, Shreveport; Addresses of Welcome were delivered by Hon. John McW. Ford, Mayor, and Arthur A. Herold, President Shreveport Medical Society. "The Fourth District," by J. E. Knighton, State Counselor.

Paper No. 1. "Tonsillitis; Its Frequent Occurrence and Sequelæ," by H. L. Crow, Elm Grove. Discussion opened by J. L. Scales, Shreveport; also discussed by Dr. White of Shreveport.

No. 2. "Post-operative Ileus," by J. A. Hendrick, Shreveport. Discussed by Dr. S. D. Kearny of Pelican and Dr. Lloyd of Shreveport.

No. 3. "A Case of Chronic Nephritis, Symptoms Intensified During Latter Months of Pregnancy," by H. W. Jarrell, Mansfield. Discussed by Drs. Scales, Hendrick, Bodenheimer, Johns, Herold, Edgerton, McAnn, Kearny, Hewitt and by Jarrell, in closing.

No. 4. "Keratoses Seborrhoeica," by C. B. Erickson, Shreveport. Discussed by Drs. Rutledge, Knighton and by Erickson, in closing.

Announcements by the Secretary. Adjournment 'till 7:45 p. m.

Evening Session, at 7:45.

No. 1. "Differential Diagnosis of Gastric and Duodenal Ulcer and Appendicitis," by J. E. Knighton, Shreveport.

No. 2. "X-ray Diagnosis of Duodenal Ulcer and Appendicitis" (with lantern slides), by S. C. Barrow, Shreveport.

No. 3. "The Surgical Aspect," by A. B. Nelson, Shreveport.

No. 4. "Report of a Case, Illustrating Difficulty in Diagnosis," by A. A. Herold, Shreveport. Discussion opened by C. E. Edgerton, Coushatta; also I. Abramson, Bodenheimer, Crain, Ferguson, Crow, Hendrick, Rutledge, Jarrell, and, in closing, by Knighton, Barrow and Nelson.

Unfinished business and announcements; adjournment. Luncheon.

PERSONALS.—Dr. Fayette C. Ewing formerly of St. Louis, has now located at Alexandria, La., and has been appointed consultant to the Eye, Ear, Nose and Throat section U. S. Public Health Hospital, Camp Beauregard.

REMOVALS.—Dr. A. W. West, from 1538 Thalia St., New Orleans, to 216 Cline Wood Building, Wichita Falls, Texas.

Dr. John J. McGuire, from Charity Hospital, New Orleans, to De Funiak Springs, Florida.

Dr. A. L. Peters, from Glenmora, La., to McNary, La.

DIED.—March 7, 1920, Col. Louis A. LaGarde, M. C., U. S. A. (retired), on the train, while on his way to his home in Washington, D. C. Col. LaGarde was born in Thibodaux, Louisiana in 1849 and his army career was quite eventful, covering the Indian wars, the Spanish-American war and the great war, in all of which he served. Chief Medical Officer at Santiago, later at Manila and finally at Panama; he was well known in and out of the service. As one of the founders of the National Board of Medical Examiners, he was always active in the interests and it was returning from a Chicago Meeting of the Board that he met his end.

On March 14, Dr. John Gazzo, at his home in Raceland, La., aged 63 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.

Manual of Exercises for the Correction of Speech Disorders, by May Kirk Scripture, B. A., and Eugene Jackson, B. A. F. A. Davis Co., Philadelphia, 1919.

A wonderfully clear text for teachers of speech defects in which are presented and considered all steps incident to the correction of such disorders. Articulation, breathing, habits and exercise in careful detail are explained. Altogether a book worth while. DYER.

Roentgenotherapy, by Albert Franklin Tyler, B. Sc., M. D. C. V. Mosby Co., Philadelphia.

The author offers this as a contribution to the beginners in this subject and the effort seems worthily accomplished. Numerous illustrations support a clear text, which is explicit while in no wise stinted. Dosage methods are explained as well as the other technics and in an understandable way. The application of the X-ray to particular diseases is outlined and the methods in each given in ample details. Cases are given in illustration. Half the book is filled with such cases, which may serve a useful purpose to the beginner with such practice before him. DYER.

The Medical Treatment of Cancer, L. Duncan Bulkley, A. M., M. D. F. A. Davis Company, Philadelphia.

The author premises that many cases of cancer have disappeared under complete change of diet and mode of life, with more or less proper medical treatment. He submits the frequent recurrence of cancer after surgery and after occurrence of cancer following surgery in simple growths, as a further reason for the consideration of the subject he submits.

Imperfect metabolism, culinary habits, modern urban life and the associated ills may be the basic cause of cancer, which in the exact statement of the author is not a surgical disease. To prove the latter contention the increase in cancer in a period of 15 years is instanced as compared to tuberculosis which medical care has reduced. The summum of the author's case would seem to be the plea for a return to the simple life, escape from the evils of modern civilization. Abuse of meat is condemned; likewise all but vegetable proteids and some cases are presented—which were treated without surgery and on diet alone (if we accept the author's text). All of these cases are interesting and some remarkable in the results stated. DYER.

Rules for the Recovery from Pulmonary Tuberculosis, by Lawrason Brown, M. D. New York, 1919.

This little book will prove to be most interesting and instructive reading to the physician as well as to the layman. It is written in a plain and concise manner, and is a very good "rule" book for all

sufferers and victims of the Great White Plague. It gives valuable and clearly defined information regarding prophylaxis, diet, rest, exercise, open-air life, the proper "mode of living," etc., which are of so great importance in the care and treatment of tuberculosis.

The introductory remarks are worthy of our attention; "the physician must not only be prepared to do what is right himself, but also to make the patient, the attendants and externals cooperate."

DUREL.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1920.

The American Illustrated Medical Dictionary, by W. A. Newman Dorland, A. M., M. D., F. A. C. S., 10th edition revised and enlarged.

The Medical Clinics of North America. November, 1919.

PAUL B. HOEBER, New York, 1920.

Education in War and Peace, by Stewart Paton, M. D.

Rambling Recollections, An Autobiography, by A. D. Rockwell, M. D.

Physical Reconstruction and Orthopedics, by Henry Eaton Stewart, M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1920.

A Manual on Foot Care and Shoe Fitting, by W. L. Mann, Ph. B., A. M., M. D., and S. A. Folsom, M. D.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D. C., 1920.

United States Naval Bulletin, Vol. XIV, No. 1.

U. S. Department of Agriculture, Bureau of Chemistry. Service and Regulatory Announcements. Supplement.

Public Health Reports, Volume 35, Numbers 6, 7, 8.

Final Report of the Provost Marshall General to the Secretary of War, to July 15, 1919.

Publications of the U. S. Public Health Service Misc. Pub. No. 12, April, 1919.

MISCELLANEOUS:

B. H. Tyrrel Press, New York, 1920.

Address on the Methods and Results of National Health Insurance in Great Britain. (Preliminary Report), by Frederick L. Hoffman, LL. D., 3rd V. P., and Statistician The Prudential Insurance Co., of America.

REPRINTS.

On Some Digitalis Preparations, by Thomas E. Satterthwaite, M. D.

Annual Report of the Library Committee of the College of Physicians of Philadelphia, for the year 1919.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for February, 1920.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1		1
Intermittent Fever (Malarial Cachexia)			
Smallpox	9	9	18
Measles	2		2
Scarlet Fever	1		1
Whooping Cough			
Diphtheria and Croup	2		2
Influenza	63	31	94
Cholera Nostras			
Pyemia and Septicemia	1	2	3
Tuberculosis	48	26	74
Cancer	29	8	37
Rheumatism and Gout		1	1
Diabetes	6	3	9
Alcoholism		1	1
Encephalitis and Meningitis	4	2	6
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	25	7	32
Paralysis	3	2	5
Convulsions of Infancy	1	1	2
Other Diseases of Infancy	10	8	18
Tetanus		1	1
Other Nervous Diseases	3		3
Heart Diseases	83	41	124
Bronchitis	5	3	8
Pneumonia and Broncho-Pneumonia	92	85	177
Other Respiratory Diseases	3	1	4
Ulcer of Stomach	3	1	4
Other Diseases of the Stomach	1		1
Diarrhea, Dysentery and Enteritis	9	7	16
Hernia, Intestinal Obstruction	3	2	5
Cirrhosis of Liver	3		3
Other Diseases of the Liver	1	2	3
Simple Peritonitis			
Appendicitis	6	3	9
Bright's Disease	25	14	39
Other Genito-Urinary Diseases	5	9	14
Puerperal Diseases	6	10	16
Senile Debility	4	3	7
Suicide	1		1
Injuries	13	6	19
All Other Causes	36	21	57
TOTAL	507	310	817

Still-born Children—White, 26; colored, 28; total, 54.

Population of City (estimated)—White, 290,000; colored, 110,000; total, 400,000.

Death Rate per 1000 pr annum for Month—White, 20.98; colored, 33.82; total, 24.51. Non-residents excluded, 21.66.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmosphere pressure.	30.10
Mean temperature.	56
Total precipitation.	3.60 inches
Prevailing direction of wind, north.	

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

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Vol. 72

MAY, 1920

No. 11

EDITORIAL

THE POT BOILS.

There is room for much reflection and more philosophy in the study of the economic state of the civilized world at this time. Conflict has held place for most of a decade and is still fermenting everywhere. The aftermath of the greater war has split the peoples into smaller and greater struggles—national, international, and civil. Anarchy rears its foul head in menace and organized society is not yet potent enough to strangle it. The outcome is in the balance.

Meanwhile there is a steady current of reform winding among the foul eddies of revolt and the pure minded are still creating

and fostering ideals of living for the salvation of the benighted and for the weak. Organized crusades against vice and its corollaries are in actual progress and the governments of this and other countries are operative in such movements. The improvement of the economic and social states of the whole people is being discussed along practical lines. Child welfare, social surveys, health insurance and domestic hygiene, including mental habits are among the harbinger of a better day.

Meantime the unrest among all kinds of people has created an excrescence of worldly and of world resentment against organized society, through which an unreasonable and intemperate attack upon society has been made by the former parasites of modern civilization, joined to the malcontents who hope to profit by their neighbors' efforts.

No judicial mind may prognosticate the outcome, but the experience of time has levelled the unrighteous and it is fair and right to assume that the adjustment of society to sane living will come when predatory wealth has been disciplined and when the froth of unrest has settled.

The pot must boil until the mass of unassimilable forces has been brought into homogeneity and then society may again rise to the problems of new ideals.

NEW PLANS FOR THE ARMY MEDICAL CORPS.

A recent circular proposes to accept graduates of recognized schools, who have attained a college grade of not less than 85% and to commission them as first lieutenants in the Army Medical Corps after a qualifying physical examination. They will then be admitted to the government hospitals, as internes, with pay at \$60.00 per month, with limited military discipline, and no military restrictions and without the privilege of pension while in such hospital service.

The training proposed is far and above any interne positions offered in any hospital in the United States, with a division of services and under such directions as will insure proper attention to all duties involved.

This move on the part of the Army, and of the Surgeon General in particular, should attract recruits to the Corps, in which there

are now many vacancies. The navy early in 1917 brought in a large number of high grade men by adopting a similar plan and it is gratifying to see that the Army has fallen in line. The standardizing of first class medical schools, under the regulation of the council of the A. M. A. and of the association of American Medical Colleges, should make it certain that the better graduates of such schools should be qualified without further examinations, and examinations of a sort which have hitherto deterred applicants for the Army. This plan should be rewarded by many applicants from the schools now standing for first class instruction.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

POLLENS IN THEIR RELATION TO HAYFEVER.*

By WILLIAM SCHEPPEGRELL, A. M., M. D., New Orleans.

President, American Hayfever Prevention Association; Ex-President, American Academy of Ophthalmology and Otolaryngology; Chief of Hayfever Clinic, Charity Hospital.

IMPORTANCE OF CORRECT KNOWLEDGE.

The relation of pollens to hayfever is important both from a prophylactic and therapeutic standpoint. In the former, it is necessary to know the plants that are responsible for hayfever, so that intelligent measures may be undertaken for their control, including the enactment of proper legislative measures. In the treatment, the lack of knowledge regarding the specific pollens responsible for cases of hayfever results in erratic efforts of immunization.

In its relation to preventive measures, the erroneous idea that the golden-rod, daisies, lilies of the valley, and other harmless plants,¹ are responsible for hayfever, as stated in many of our text books and encyclopedias, prevents effective measures from being instituted for its prevention. The correct knowledge that the majority of hayfever pollens are generated by worthless weeds, that have already been condemned by the farmers, tends to encourage public cooperation for its control.²

In the treatment, the use of the wrong pollen extract is responsible for many of the cases of failures in immunizing methods. Last June, a well-known rhino-laryngologist complained of lack of benefit in a case of hayfever which he was then treating, and was surprised when informed that the ragweed extract, which he was injecting, not only could not immunize the patient who had hayfever in June, which could not be due to the ragweed which

1. Our Harmless Flowers and Hayfever Weeds, W. Scheppegrell, M. D. Interstate Medical Journal, February, 1919.
2. A Year's Work in Hayfever Prevention in the United States. W. Scheppegrell, M. D. American Journal of Public Health, Volume 7, No. 2.

*Read before the Orleans Parish Medical Society, February 9, 1920. (Received for publication March 11, 1920.—Eds.)

blooms in August and September, but might even induce a sensitization to the fall hayfever.

POLLINATION.

Pollen is the male element of flowering plants. It is formed in the anther, but must be deposited on the stigma, where the pollen may germinate, and grow down the style until it reaches the ovule, in order to complete the process of germination.

In perfect flowers, in which the pistils and stamens are almost touching each other, pollination is easily effected. There are many plants, however, in which the pistils and stamens are on separate flowers, and even on separate plants, such as the persimmons, willows, ragweeds and grasses, and in these cases, pollination is much more difficult.

Pollens are conveyed from one plant to another principally by insects or the wind. In the former, the flowers are usually bright-colored or sweet-smelling to attract insects, and the pollens are comparatively few. In the latter, the pollen is without these attractions, and is formed in immense quantities and is very buoyant.

The only pollens which can cause hayfever are those which are carried by the wind, and are therefore in the air. The characteristics of hayfever plants may therefore be summarized as pollens. 1. They are wind-pollinated. 2. Very numerous. 3. The flowers are inconspicuous, without bright-color or scent, and the pollen is formed in great quantities. These are the characteristics of the weeds that are found in empty lots, neglected gardens, and waste land generally.

HOW HAYFEVER PLANTS ARE RECOGNIZED.

All plants having the above qualities are suspicious from a hayfever standpoint. To place them definitely in this class, however, they must stand the biological test. A small amount of the pollen is applied to the nostril of a susceptible subject, or to the angle of the eye, and if this produces a hayfever reaction it completes the test and the plant is added to the hayfever list. This reaction must be capable of being produced not only during the hayfever season, but at any time of the year.¹

1. Hayfever and Its Prevention. W. Scheppegrell, M. D. United States Public Health Reports. July 21, 1916.

To establish a plant in the hayfever list, therefore, both the botanical and biological tests are required. The botanical test is not sufficient, as many weeds, in spite of being wind-pollinated and numerous and with insignificant flowers, may be harmless because they fail in the biological test.

On the other hand, many plants which pass the biological test do not enter the hayfever class because they are not numerous or wind-pollinated, and therefore their pollen is not in the atmosphere,

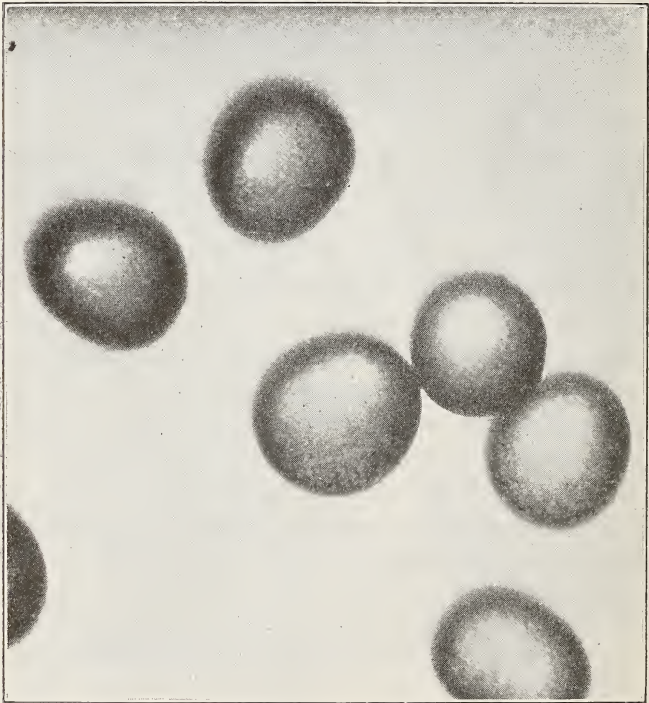


Fig. 1. Follen of Johnson grass. (*Andropogon halapense*), fresh from the anther. Magnified 500 diameters.

and cannot reach the nostrils of susceptible persons except by direct contact with the flowers. The failure to include the botanical test has resulted in placing many harmless plants, such as the daisy and golden-rod, in the hayfever list.²

2. Hayfever and Its Relation to 100 of the Most Common Plants, Trees and Grasses. W. Scheppegrell, M. D. Medical Record, August 11, 1917.

PROOF OF ETIOLOGIC RELATION.

The proof of the etiologic relation of pollen to hayfever is shown in various ways. Botanically, the pollination, for instance, of the ragweed, the principal cause of fall hayfever in the United States, is synchronous with the duration of this form of hayfever, and the beginning and end of the season may be accurately determined in this way.

The spring-summer hayfever season may also be observed in this

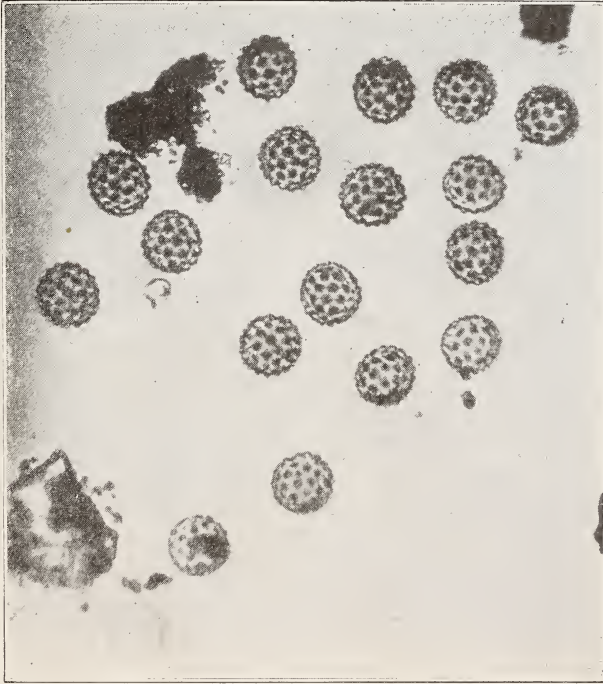


Fig. 2. Pollen of common ragweed, (*Ambrosia elatior*), from atmospheric pollen plate. The spiculated appearance is characteristic of the Ambrosiaceae group. Magnified 500 diameters.

manner, but the relation is not quite so apparent. The principal cause of this form of hayfever is the pollen of the grasses. These vary from thirty to eighty microns in diameter (Fig. 1.) as compared with fifteen microns in the common ragweed (Fig. 2.), and they have therefore a much more limited potential radius. On account of the buoyancy of the ragweed pollen, it is usually dis-

tributed uniformly over a large area, and the development of the fall hayfever season is therefore fairly uniform. With the grass pollen, however, on account of its lesser buoyancy, the infestation varies greatly in different localities, resulting in considerable variations in the time of the beginning and ending of the resulting hayfever season.



Fig. 3. Pollen of corn, (*Zea mays*). The large size of its pollens gives corn a restricted potential area in hayfever. Magnified 500 diameters.

The most conclusive evidence of the relation of pollens to hayfever, is in the inhalation test. If a fall hayfever subject (Eastern and Southern States) is allowed to inhale the ragweed pollens, an attack of hayfever is invariably produced, the intensity and duration of the attack depending upon the number of pollens inhaled. Not only may this reaction be produced during the normal hayfever season, but at any time of the year. This is therefore a most convincing evidence of the etiological relation of the pollens to hayfever.

For diagnostic purposes, the test of the hayfever reaction is now made by injecting the pollen extract into the skin, which determines not only the form of sensitization but also its degree.

From a scientific standpoint, the relations of the pollens to

hayfever is most accurately determined by means of the atmospheric-pollen plates. These are glass slides, which are coated with a film of glycerine, and exposed to the wind for 24 hours. They are then stained and traversed in the field of the microscope. The kinds of pollen, and their number, have an accurate relation to the clinical hayfever chart.

In this country, where hayfever weeds are usually found on

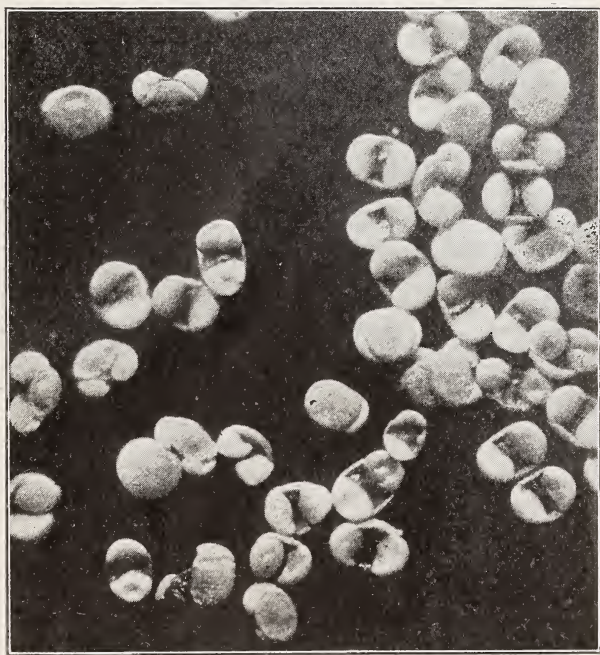


Fig. 4. Pollen of pine (*Pinus coulteri*), X 125. (Reflected light).
The wings enable it to traverse great distances.

neglected farms, the number of hayfever pollens in the air is much greater than in the city. As might be expected, therefore, but contrary to the popular belief, there is a larger percentage of hayfever cases in the country than in the cities. In the Questionnaire of the United States Public Health Service in Louisiana,* it was demonstrated that the class which suffers most from hayfever was that of the farmer, being 38 per cent of all cases! In

*Hayfever in Louisiana, W. Scheppegrell, M. D. New Orleans Medical and Surgical Journal, October, 1916.

a country section of another state, reported to the American Hayfever Prevention Association, nearly ten per cent of all the residents suffer from hayfever.

VARIATIONS IN THE NUMBER OF ATMOSPHERIC POLLENS,



Fig. 5. Giant ragweed, (*Ambrosia trifida*).

The recurrence of attacks of hayfever, and their intensity, depend upon the number of pollens in the air. This is influenced by (1) the season of the year, (2) weather conditions, (3) meteorological disturbances and (4) the size of the pollens.¹

1. Hayfever and Hayfever Pollens, W. Scheppegrell, M. D. Archives of Internal Medicine, June, 1917.

(1) Most hayfever plants have a season for their pollination, without which their pollen is not found in the air. Most of the ragweeds, for instance, have their floescence in August and September, and the artemisias in July and August.

(2) The growth of these plants is influenced by weather con-



Fig. 6. Common ragweed (*Ambrosia elatior*).

ditions. Favorable weather causes an increase in their number and in their growth, with corresponding augmentation of the resulting pollens in the air.

(3) As demonstrated by our atmospheric-pollen plates, meteor-

ologic conditions have a direct relation to the number of pollens in the air. When there is little wind, the pollens fall near the plant, but traverse increasing distances with the increase of the wind velocity. In the case of the common ragweed, *Ambrosia elatior*, a wind of 15 to 20 miles per hour will cause them to travel several miles, with a corresponding radius of infestation.

A local rain has only temporary effect, but a rain over a large area causes a general precipitation of the pollen with corresponding relief from the hayfever pollens.

(4) The size of the pollen has an inverse relation to its potential area. As already shown, the pollen of the common ragweed,

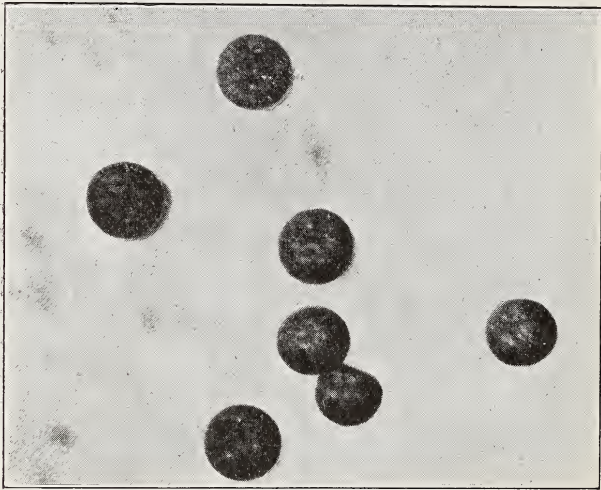


Fig. 7. Pollen of spiny Amaranth (*Amaranthus spinosis*). The appearance is characteristic of the chenopod group. Magnified 500 diameters.

15 microns in diameter, may travel several miles under favorable wind conditions, while the pollen of the corn (Fig. 3.), which measures 80 microns in diameter, and has therefore almost 800 times the volume of the ragweed pollen, will travel only a few yards from the parent stalk.

The potential area is also influenced by the formation of the pollen. In the case of the spiculated pollens, such as that of the ragweeds, the distance is increased by almost 50 per cent. Pines have winged pollens (Fig. 4.), which enables them to travel great distances. Fortunately, the latter are harmless from a hayfever standpoint.

CLASSIFICATION OF HAYFEVER POLLENS.

In the immunizing treatment of hayfever, if it were necessary to use the pollen extract of each plant responsible for hayfever, it would make it a hopeless proposition. There are several thousand varieties of grasses, for instance, and probably a dozen or more in any given locality whose pollen is in the air at the same time. This applies to a lesser degree, to other hayfever plants.



Fig. 8. Wormwood (*Artemisia frigida*).

Fortunately, from a biological standpoint, most of the hayfever pollens may be reduced to four groups, which simplifies our immunizing methods.¹ Most of the remaining hayfever pollens are comparatively local, and for these special extracts must be pre-

1. The Treatment of Hayfever, W. Scheppegrell, M. D. United States Public Health Reports, August 1, 1919.

pared. The four groups into which we have divided the principal pollens from a biological standpoint are, (1) *Gramineæ* (grasses), (2) *Ambrosias* (ragweeds), (3) *Chenopodiaceæ* (chenopods) and (4) *Artemisias* (wormwoods).²

1. *Gramineæ*. The biological tests of hundreds of hayfever cases, have shown us that a patient, who is sensitive to one of the grasses, is also sensitive to all other grasses, differing only in

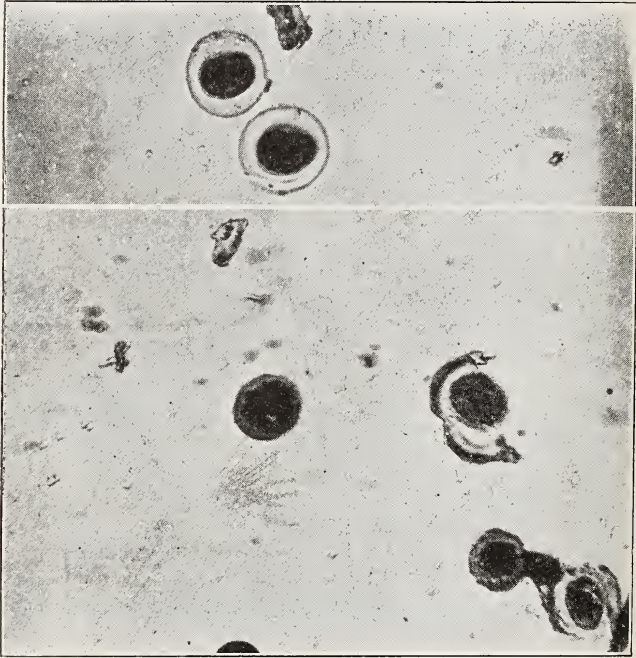


Fig. 9. Pollen of mountain cedar, (*Sabina sabinoides*). From atmospheric pollen plate, showing expansion of intine and rupture of extine from the glycerine. Magnified 500 diameters.

degree. The extract of one of these, or of several, may therefore be used for immunization to all members of this family.

2. *Ambrosiaceæ*. The ragweed group is an important factor in hayfever in the United States. It includes not only the common (Fig. 5.), giant (Fig. 6.), and western ragweeds (*Ambrosia elatior*, *trifida*, *psilostachya*,) but also the *Gaertnerias* (false ragweed), marsh elders (*Iva ciliata*, *Xanthifolia*), and cockle burs (*Xanthium americanum*, etc.). In some of the Western States,

2. The Classification of Hayfever Pollens from a Biological Standpoint, W. Scheppegeirell, M. D. Boston Medical Journal, July 12, 1917.

the development of hayfever has been closely related to the spread of cockle bur. Botanically, as well as biologically, the above belong to the Ambrosiaceæ group, and the resulting hayfever may be immunized by an extract of one of this number, the common ragweed being usually preferred as being most typical.

3. *Chenopodiaceæ*. The members of this group include the amaranths (Fig. 7.), chenopods, achridas, and dock (*Rumex*) families, and are not as closely related botanically as the other three groups. They have a wide geographical distribution, as some

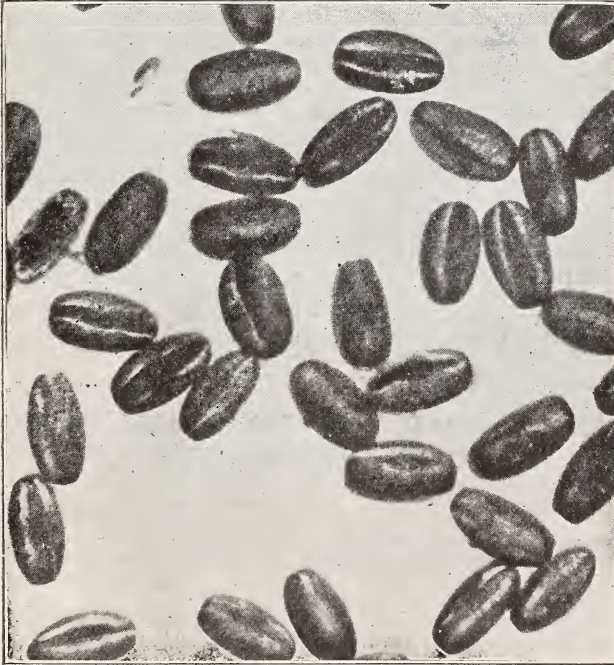


Fig 10. Pollen of live oak. (*Quercus virginiana*). The ovoid form is common with the tree pollens. Magnified 500 diameters.

members of their families are found in most sections of the United States. The Russian thistle (*Salsola pestifer*) is a prominent member of this group. It was naturalized from Northern Europe or Asia, and is a source of hayfever infestation from New Jersey to Ontario, the Northern Territory, Kansas and Washington.

4. *Artemisia*. (Fig. 8). The 50 or more members of this family form the principal cause of hayfever in the Pacific and

Rocky Mountain States, and the hayfever reaction from these pollens is much more marked than from that of the ragweeds. In Colorado, on the western slope of the mountains, the sage brush (*Artemisia tridentata*), covers vast areas almost to the exclusion of other plants. In this region, there is a great deal of "mountain fever" from August to October, which we have shown to be a form of hayfever, and due to the pollen of the *Artemisia tridentata*.*

By using extract of each of the above four groups, most cases of hayfever in the United States may be treated by immunizing methods.

The pollen of some of the trees, such as the mountain cedar, *Sabina sabinoides* (Fig. 9.), a common cause of spring hayfever in northern Texas, the oaks (Fig. 10.) elms and black walnut, are responsible for hayfever in localities where they are found in sufficient number, or occasionally from single trees in close proximity to a residence. These have not yet been classified into any special groups, and immunizing methods therefore depend upon the individual pollens.

*Hayfever and Its Prevention in the Rocky Mountain and Pacific States. W. Scheppegegrell, M. D. United States Public Health Reports, July 21, 1916.

CLINICAL AND ANATOMO-PATHOLOGICAL ASPECTS OF AMERICAN TRYPANOSOMIASIS.*

By CARLOS CHAGAS, Osvaldo Cruz Institute, Rio de Janeiro, Brazil.

Translated for the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL
by LODILLA AMBROSE, Ph. M., New Orleans.

[125]

PART I

At the beginning of this lecture I take pleasure in acknowledging my special indebtedness to Doctor Araoz Alfaro, the well known Argentine pediatricist, for to him I owe the opportunity of presenting to this meeting one of the subjects of major importance in South American pathology. Further, we students of Osvaldo Cruz hold in grateful remembrance this Argentine master. He has known how to make current in the scientific world of his native land a just appreciation of the scientific work of that eminent Brazilian, Osvaldo Cruz, and of his school of investigators.

*Chagas, Carlos. Aspectos clínicos y anátomo patológicos de la tripanosomiasis americana. Prensa médica argentina, Buenos Aires, 1916, iii, 125-127, 137-138, 153-158. [Pages of the original article are given in square brackets.]

We will not indulge in unnecessary repetitions, but will turn to the discussion of essential aspects of American trypanosomiasis. Since the publication of the first facts, we have gained new and exact information which assists us to better reasoning regarding previous interpretations and to description of the disease as a definitive etio-pathogenic concept. Working in regions of high endemic index, that is, in those most infected in our country by the transmitting agent, we possess today an immense fund of clinical and experimental data which constitute an abundant documentation for our studies. We can, thus, present for your judgment numerous examples of all the aspects of the disease, of all the manifestations verified in it,—examples collected during a long clinical observation and in laboratory studies which constitute a guarantee for our conclusions.

It is with sincere pleasure that we consult the works of Kraus, Rosenbusch and other Argentine investigators of this subject. We commend their safe methods and capacity for technic and observation. With their aid we hope for the ultimate truth in matters which may have escaped solution in our own studies. Without doubt we shall succeed in clearing up some points still obscure in this interesting chapter of human pathology. And even if there may exist between their interpretations and ours differences of small import, these will still be precious in continuing the work in hand, orienting our researches in better direction, indicating the selection necessary between the appearance and the reality in the ascertained facts.

We trust still more,—in this as in other subjects of medical experimentation,—in the results of your labor. We shall have solidarity in our guiding objective, truth, and we shall know how to applaud with enthusiasm your conquests.

Considering the natural limitation of time, we are obliged to restrict ourselves in the expository part of this lecture to the minimum compatible with the synthetic and clear idea of the facts. We shall study to confront the subject in its general outlines, but [126] with sufficient detail not to obscure the essential clinical conception of the disease. We intend now with all earnestness to delimit exactly this trypanosomiasis, defining its undeniable qualities, formulating and establishing by observations and decisive experiments that general physiognomy which individualizes it in the nosologic picture. And if in the history of this disease there

exist doubtful aspects, indecisive interpretations resulting from varying theories, we shall take up these and other allied problems and discuss them separately in the light of arguments which seem to us of value. However, such aspects do not nullify the exact conception of the trypanosomiasis, whose multifarious symptomatology is based on numerous anatomical confirmations, which explain well the etio-pathogenic processes in this entity and give it undeniable clinical autonomy. No matter about the remaining doubtful points: the trypanosomiasis ought to be defined in those constant etio-pathogenic and symptomatic aspects which are fundamental to it, and make of it a human disease with one of the best determined clinical histories.

Under this criterion we proceed to report on the disease.

Taking into consideration the parasitic and etio-pathogenic conditions of this trypanosomiasis, we can admit in it two distinct developmental phases related chiefly to the localizations of the parasite. In the first phase, that of recent infection, the trypanosome is found in the circulating blood; in the second, that of chronic infection more or less remote, the parasites disappear from the periphery and remain in activity in the interior of the tissues, or better said, in the interior of the anatomic elements, even of those most differentiated.

The clinical facts of the first group constitute the acute form of the disease; those of the second, the chronic form. In the first case the protozoan (protozoario) is found in the plasma under the aspect of flagellates, and its verification is easily realized by the direct examination of the peripheral blood. In the definitive chronic forms, on the contrary, the examinations of the blood as also the inoculations in sensitive animals, nearly always fail to reveal the parasite, verifiable then only at autopsies.

In the acute forms there is a sufficiently exact relation which exists between the number of the flagellates and the intensity of the morbid elements. The clinical cases which present the greater number of parasites are always more grave, and owing to the constancy of this fact it is possible to foresee the lethal end, when the trypanosomes are numerous in the blood examined. In the patients with few parasites, on the contrary, there can with certainty be prophesied the progressive attenuation of the symptoms and the subsequent chronic evolution of the disease. In general, the flagellates remain in the circulation and increase in number there

as long as the acute signs of the disease persist. When these have become attenuated, the parasites also diminish up to the point of disappearing completely from direct examination. According to our observation in the great majority of clinical cases we can find flagellates in the blood only during a period of less than thirty days; and in many patients after eight or ten days the most protracted examinations of fresh blood are negative.

The presence of the protozoan in the circulating blood is, therefore, transitory, observed only in the initial phase of the infection—a fact, this which constitutes in the parasitic diagnosis of the disease a difficulty not a few times unconquerable.

When the acute phase of the trypanosomiasis has once passed, and the signs which characterized it have become attenuated, then the flagellates disappear from the periphery and remain in the tissues. There the protozoan presents itself under the aspect of non-flagellate Leishmaniform corpuscles (corpúsculos) in the interior of the anatomic elements.

This is a biologic adaption of the protozoan which conditions its long persistence in the organisms attacked by it. Sheltered in the innermost parts (intimidad) of the tissues, protected in this manner from the injurious influence created in the blood-medium by reactionary procedures, the trypanosome does not undergo natural destruction, and the disease is not capable of spontaneous recovery. In the infected individuals the parasite survives indefinitely, exerting a pathogenic action more or less attenuated up to the point of the extermination of the life. The infections are prolonged through an entire existence: patients whose onset of morbidity is referred to the first months of extra-uterine life, live up to an adult age; and, when death has taken place as a consequence of this same disease or of some other intercurrent factor, the parasite appears in its habitual localizations.

It is in the tissues that this trypanosome is multiplied; in this one the binary division in the blood (true for other species of the same genus) is not observed.

The parasites of the tissues undergo a continuous development, and, transformed from Leishmaniform corpuscles into typical trypanosomes, they return to the blood. This process, the progressive increase of the flagellates in the circulation, is more intense in the acute infections. In the chronic forms, undoubtedly, this cycle takes more time; yet, according to the results of distinct investi-

gations, here also it happens that there are demonstrated in the tissues along side of the non-flagellate parasite, transition-forms and others with the typical morphology of trypanosomes. If this is so, if the forms form the innermost part (intimidad) of the anatomic elements come to the blood flagellate, how shall we explain the fact of the absence of the parasites from the circulation in the chronic forms of the disease? How shall we explain this fact, when the autopsies of an increased number of chronic patients—in whom all the investigations during life have been ineffectual for demonstrating the protozoan in the blood—have revealed it in abundance in the tissues? This aspect of the chronic disease is comprehensible, that is, admitting in it a relative immunity of the blood established since the acute phase of the infection. The result of this immunity is the appearance of antibodies which make impossible or at least difficult the life of the trypanosome in the blood; because of this the parasites which come from the tissues to the circulation are very promptly destroyed by the elements of the organic defense, or else return to the initial localization and there are able to continue their vital cycle. Likewise in the acute infections the disappearance of the flagellates from the blood will be due to this biologic reason: by the reactionary procedures in the infected organism there is established a condition injurious for the protozoan in the blood-medium, in which, as we have seen, its continuance is transitory, limited naturally by the progressive increase of the immunity referred to.

Of the localizations of the *Trypanosoma Cruzi* in the tissues and of the histo-pathologic processes caused by this trypanosome, those of most pathogenic import deserve here detailed reports.

Some organs and systems of organs constitute localizations of choice, and among these, because of their high rank in the vital functions we should mention the cardiac muscle, the central nervous system, and the various glands of internal secretion. In the myocardium the trypanosome penetrates into the very fibre, where it multiplies forming great agglomerations of parasites distributed all through the muscular tissue of the organ. This localization is perhaps constant; at least we have always found it in all the autopsies of acute cases and in a great number of chronic cases; further, in the experiments on laboratory animals, after the incipient phases of the infection, the cardiac muscle is found to be infected with parasites (parasitado).

In this exceptional parasitic aspect of the disease, characterized by the attack of the germ on the anatomic element which constitutes in the organ the essential substratum of function, we are going to encounter a great quantity of indications serviceable for clearing up cardiac physio-pathology. Having recognized the exact nature of the functional alteration, having studied the semeiotics of the cardiac phenomenon, we shall be able from now on to refer its pathogenesis to constant anatomic conditions easily verifiable in autopsies. And in this manner will be determined the immediate reaction between the morbid phenomenon and its cause, which in its possible generalization, will throw great light on many obscure problems of the pathologic physiology of the heart.

As a consequence of the action of the protozoan, there are verified more than a few times in the myocardium histo-pathologic processes of great intensity. The cardiac fibre is destroyed, many times becoming reduced to a membrane within which persist the Leishmaniform corpuscles; or in other cases the membrane may be ruptured lodging the parasites in the interstitial tissue. In this case are observed intense inflammatory processes diffused through the whole thickness of the myocardium.

In some of our autopsies the alterations have been found in the degrees of greater intensity betraying themselves not only by the disintegration of the cardiac cells, but chiefly by the lesions of the connective tissues. And not infrequently these processes are demonstrated in such intensity that the general structure of the cardiac muscle is completely modified.

In the acute cases with lethal termination, we have also observed the constancy of the pericarditis; this in a varying degree constitutes an almost constant pathologic fact of trypanosomiasis, and results from the polyorrhomenitis, which is one of the anatomic characteristics of the disease. Not a few times there exists in the cavity of the pericardium a more or less abundant accumulation of liquid (derrame), lemon-yellow, with the reactions of true exudate.

The central nervous system in acute and chronic forms of trypanosomiasis is also the frequent site of parasitic localizations and of well defined histo-pathologic processes.

As shown by repeated findings, the cell of neuroglia is the only anatomic element affected initially. While still flagellate the protozoan penetrates it, and is multiplied in the interior of the plasma under the aspect of Leishmaniform corpuscles. In this manner

the cell is destroyed, and the parasites remain free, constituting isolated agglomerations in the nervous substance.

Sometimes the infiltration of leukocytes is begun when the protozoa are found still in the plasma of the cells of neuroglia, which in this case is observed between the spherical elements; but not infrequently the infiltration is effected only after the parasites have been set at liberty and the cells obstructed which served them as the initial focus. In the foci thus constituted, if they are recent, parasites are still found, but those soon disappear, and there remain only the infiltrated anatomic elements which constitute scattered foci, points for the onset of processes of cerebral sclerosis and subsequent definitive degenerations.

In all the regions of the neuraxis, in the gray substance as well as in the white substance, we have found parasitic foci and inflammatory processes resulting from them.

There is no interdependence of the localizations of the protozoan and the vascular system, a fact this which is related to very valuable differential aspects between the syndromes of trypanosomiasis and other etio-pathogenic factors. In the nervous system the protozoan does not act initially on the vascular apparatus, as happens in [127] syphilis and some other parasitic diseases; it is in the nervous substance itself that it is localized in the beginning, and here take place histo-pathologic processes evidenced externally in functional disturbances of great intensity, as we shall see further on.

Among the units of the endocrine apparatus affected by the protozoan and showing histo-pathologic changes more or less pronounced, are the suprarenal capsules, the thyroid gland and the the genital organs.

In the capsules, not only of acute but also of chronic patients, the autopsies have demonstrated parasitic agglomerations of the usual aspect localized in the cortical zone. And as histo-pathologic processes of greater import we have met with foci of hemorrhage and with well defined inflammatory changes. It is worth while to note the considerable reduction suffered by the medullar zone, which in the majority of patients almost disappears.

In the thyroid gland in distinct autopsies of acute cases we have verified parasitic localizations in the vesicular tissue itself. The protozoan penetrates into a cell of the thyroid vesicles, and, as happens in other anatomic elements, becomes flagellated, is

multiplied by successive binary divisions, and thus constitutes agglomerations with sometimes a great number of Leishmaniform corpuscles. The cell primarily affected is destroyed, and with the numerical increase of the protozoan the entire vesicle will possibly disappear.

Notwithstanding its observation in various patients, this localization of the parasite does not represent a fact as constant as is that verified in the cardiac muscle and other organic systems. In other words, the investigation of Leishmaniform corpuscles in the thyroid does not present the same facility which we realize in other tissues. In this case the parasites are not very abundant, even in the patients who show numerous flagellates in the circulating blood. Can this be explained by the special conditions of the structure of the gland, which is constituted of numerous vesicles in which the protozoan is scattered? Or is the gland in view of its abundant vascularization a favorable focus for long persistence of the trypanosome? Be that as it may: either by the direct irritative action or by means of its toxins, the protozoan acts on the thyroid and determines in it changes which we will describe presently.

In the testicles of man has been observed the presence of the protozoan, and this localization is common in the small laboratory animals. We will make the same statement in regard to the ovaries, in which in some cases of acute infection terminated with death the parasites have been found. These principal localizations of the protozoan thus rapidly reported have a direct reaction in the clinical aspects which we are about to describe.

PART II.

[137] Clinically the acute infections proclaim themselves by an aggregate (conjunto) of constant symptoms which renders diagnosis easy even before the parasitic verification.

Among the morbid elements of the onset of the disease, the fever is one of the most noteworthy for the constancy and intensity of the thermic reactions. Directly related to the presence of the flagellates in the circulation, the fever reveals a predominant action of the toxins elaborated in the blood. Whenever the microscopic examination demonstrates the existence of parasites in the periphery, the thermometer shows thermic reaction, and on the other hand the relation is constant between the intensity of that reaction

and the quantity of the parasites, and consequently the lethal prognosis is possible when the flagellates are numerous in the blood. In the infections with abundance of parasites the thermic reactions reach or exceed 40° C.; in the slight infections in which there is not infrequently difficulty in observing the protozoan the temperature rises little above normal, the patient remaining hardly subfebrile.

In the thermic picture of the grave cases there do not exist even simple remissions, and whenever the parasites are observed in the periphery, the fever appears in the patient. When the flagellates disappear, that is to say, when they pass to the exclusive localization in the tissues, the temperature will possibly continue high for a short period; but presently it returns to normal.

Febrile intermission will possibly be observed in the benign acute forms, but it is not in a constant manner nor does it present a special characteristic of the disease. Here, in contrast with that which occurs in malaria, there exists no relation between the biologic processes of the protozoan and the febrile reactions, this being the reason why we do not observe the alternations of exacerbations and of remissions peculiar to some blood parasitoses, even if we see perhaps the intermitting of greater or less phases of apyrexia.

The disappearance of the fever delimits in the clinical concept the acute phase of the disease. The chronic patients are apyretic, or at most transitory febrile accidents present themselves.

Among the symptoms the increase in the volume of the spleen possesses here value for the clinical diagnosis. The splenomegalia is as constant in this disease as it is in malaria, and in most cases the viscus presents itself as palpable below the costal border with more than its normal dulness. The same may be said with relation to the hepatomegalia, which is nearly always considerable in the acute forms. Further, the liver, although it does not constitute a focus for the [138] localization of the protozoan, is attacked by intense steatosis which transforms it into a great mass of fat comparable in aspect to that which yellow fever determines, and to that which other entities of more notable steatosing action determine. Without doubt the toxins predominate in the pathogeny of this process which in the local absence of the parasites would otherwise remain incomprehensible.

One of the most frequent, if not constant, symptoms in the acute forms of trypanosomiasis is myxedema.

When we have the anamnesis for the cases of this nature, we obtain the quite exact report of the time when—some days after the onset of the fever—the patients began to swell, were found tumefied, with face increased in size, with eyelids swollen, lips thickened, tongue bulky and soft, etc. This swelling, most accentuated in the beginning in the face, is rapidly generalized throughout in the clinical picture. When the fever has disappeared and the other acute elements have become attenuated and the flagellates have disappeared from the peripheral blood, the edema goes on diminishing up to a certain degree in which we note the features of the patient as scarcely swollen. This is the general rule verifiable in almost the totality of the acute forms which pass to the chronic condition at the end of twenty or thirty days; without doubt we ought to report the exceptional cases in which the greater intensity of the respective pathogenic processes determines a persistence of the accentuated myxedema during a greater or less, if not definitive, period of time.

No doubt can exist concerning the nature of this swelling: minute examination shows that it is a question of a hard edema with elastic consistency, and that it does not hold the impression of the finger which presses it, crepitating under compression in favorable regions. In a subsidiary manner the examination of the urine excludes the hypothesis that it may be a renal edema, all of which could be set aside on the evidence of the other symptoms. The histologic sections of the subcutaneous tissue by their specific staining also demonstrate the mucoid nature of the infiltration. It is undoubtedly a question of a myxedematous infiltration, and in the acute forms the said symptom is characteristic to such an extent that it authorizes immediate diagnosis of the disease even without further investigation. In the majority of the acute forms that we have observed, it has been possible to foresee the positive result of the examination of the blood solely from the myxedematous aspect of the feverish patients. And it is proper to state also, that in these patients previous to infection there was nothing that would possibly indicate myxedema. Our patients were infants of a few months of age, or at most in the first years of life, in condition of perfect health with absence of any morbid symptom whatsoever. The infiltration of myxedematosis began days after the infective process was revealed by the fever, and constituted according to all the indications a symptom of the disease. Along

side of the mucoid infiltration in such cases, existed other elements to characterize the myxedema: brittle hair, falling of the hair, dry skin, exfoliation of the epidermis, secretory endocrine disturbances, etc. Thus then the myxedema of acute form,—with this developmental aspect, appearing days after the primary symptoms of the infection and progressing in exact parallelism with the other morbid elements,—constitutes an aspect very peculiar to this disease (perhaps belonging exclusively to it, never observed in any other pathologic entity of man with the characteristics here reported). Certainly some infections can determine a thyroid insufficiency, and so place the patient in a condition very close to that which we are discussing; but in them the process is slow, of delayed evolution, and the syndrome does not attain the degree of intensity observed in trypanosomiasis. It might be said that in this it is a question of acute myxedema, comparable in its course to the consequences of total thyroidectomies.

How shall we interpret this syndrome of the disease? The myxedema is a pathologic equivalent of functional disturbance of the thyroid gland, and its presence in trypanosomiasis indicates without doubt a specific action of the parasite or of its toxins on that organ, inducing insufficiency.

Continuing, shall we be able to determine the exact mechanism of this action? The facts obtained do not yet enable us to do this, which, however, does not cause remote difficulty in our reasoning, nor diminish the reality of our conclusions. The reasoning is oriented by the observation of irrefutable facts, the conclusions are based on principles of pathologic physiology quite above differences of opinion. We have confirmed the localization of the protozoan in the gland, where it is found in the vesicular parenchyma, destroying it under the aspect of Leishmaniform corpuscles. Is it the direct irritative process of parasitic localization which determines the hypothyroidism? Or is the cause of the process the toxin originating in the parasite? We have as a correlated fact the intense steatosis of the liver, an organ in which notwithstanding we do not verify parasite localizations. This hypothesis agrees better with the difficulty which at times is encountered in verifying protozoa in the thyroid.

The mechanism of the process does not concern us essentially: the *Trypanosoma Cruzi* acts on the thyroid gland, either by direct action or by toxins, causing its functional deficiency.

We will not give a minute description of the histo-pathologic processes studied in the thyroid. We will limit ourselves to demonstrating them in our lantern slides.

As initial histo-pathologic changes we have observed in different glands from acute cases the following facts, which will be demonstrated in lantern slides and microscopic preparations:—proliferation of the cells of the follicle from whose borders are detached epithelial prolongations, which in the beginning communicate extensively with the lumen of the original follicle and later lose this connection constituting new follicles in which are established the fact of colloids. The structure of some follicles in determinate regions is altered. The epithelium is invaginated like a glove finger, and thus become constituted some prolongations in form of tubes which present salients in the lumen of the follicle, the general aspect being that of a tubular gland. The cells have characters which distinguish them from the normal glandular parenchyma. They are more densely congregated, the nucleus is stained crimson in an exceptionally intense manner owing to the greater abundance of chromatin content, the cells are to be seen as recently formed anatomic elements. Cells with such characteristics go on accumulating in the lumen of the follicle, so that the colloid disappears and very soon it is impossible to recognize in the said cellular accumulations the normal aspects of the glandular parenchyma. They are cells with strongly chromatic nuclei grouped in nodules which form salients in the connective trabeculæ. These histologic conditions betray the initial foci, well known, constituted of nodose stroma (*estroma nudoso*), characterized principally by the appearance and subsequent development of an adenoma in the gland. These are in outline the histo-pathologic facts. From the clinical point of view the evidence is absolute: the myxedema of the acute forms does not constitute an isolated phenomenon; on the contrary, it figures in all the clinical cases, and is positively an integral part of the symptomatology in this first phase of the disease. In the present state of the knowledge of the physio-pathology shall we be able to explain the syndrome without admitting the specific action of the parasite on the thyroid gland? This hypothyroidism of the acute forms indicates in a decisive manner the participation of the thyroid in the pathogenic processes of the trypanosomiasis. If this is not so, how are the facts to be interpreted? It is possible to argue in the

following manner: in the zone where trypanosomiasis abounds miopragia hereditaria exists, and this in the event of the infection would be merely aggravated—hence the appearance of the myxedema. Contrary to this reasoning we would account for the absence of the myxedema, that is to say, for the aggravation of the supposed glandular miopragia by other diseases which exist in the region, malaria, ankylostomiasis, exanthematic fevers, pneumonia, etc. Is trypanosomiasis alone capable of causing the appearance of that latent hypothyroidism?

PART III.

[153] In this case the disease has a specific action on the gland, and—in good logic, withdrawing the arbitrary hypothesis, remaining in the exclusive dominion of the facts—we believe it more reasonable to admit the hypothyroidism as the exclusive function of trypanosomiasis. This is the estimate reached from the morbid cases.

In the acute forms, therefore, the myxedema figures as a frequent if not constant syndrome. The most natural deduction from this fact of the clinical order is, that there is interference with the thyroid because of the functional deficiency in the morbid picture. And here is what observation teaches us, but this does not imply confusing nor much less identifying the acute trypanosomiasis with myxedema and endemic goitre. We observe the myxedema in almost the totality of the acute clinical cases, and we declare it in the symptomatology, but in addition to this other symptoms figure to characterize the disease and to differentiate it with absolute clearness from any other nosologic entity whatsoever.

Does myxedema exist, or not, in the acute forms? Certainly it does. Then how omit expressing the fact in the study of these patients? The acute forms can be recognized clinically from other symptoms, and even by those who—from the doctrinaire point of view—may deny specific action of the trypanosome on the thyroid and would make of the myxedema in the acute forms a simultaneous condition, also by those who consider the myxedematous infiltration of our patients due to another etio-pathogenic factor. Even so, there exist other elements to individualize the disease in its first developmental phase. So that then, reporting the myxedema in the acute forms, we place ourselves exclusively in

the clinical point of view without prejudicing the theoretical conceptions relative to the etiology of endemic goitre.

As exceptional symptoms, we ought also to report in the semeiotics of the acute forms inflammatory reactions in the eyes. Conjunctivitis may be observed; but keratitis is more characteristic, reproducing the symptoms observed in the experimental infections. From this with the presence of secondary pan-ophthalmias, may result the loss of the eyeball, as we have had the opportunity to observe.

Very frequently in the acute forms there is photophobia, not rarely persistent, causing great suffering to the patient. What is the reason for the ocular changes? Up to the present time we do not possess studies that explain them, which is our reason for proceeding with investigations of the material mentioned.

[154] As the testicle is attacked by the parasite, orchitis is frequent in the acute forms in man, and not a few times persists, even when the other elements of the infection have become attenuated. Will sterility possibly result from this? We do not possess data for considering as frequent this consequence of the parasitic action in the testicles; on the contrary, from the observations made it seems that the genital functions of the man do not in most cases suffer notable change, undoubtedly because the histopathologic processes of the testicles are limited to the initial acute inflammatory reaction without subsequent degenerations of great importance.

The facts of isolated observation show cutaneous processes, sometimes burning, in the acute infections. In one of our patients it was a question of many obscure intercallations with erythematous vesicles scattered over the entire superficies of the skin. Another case presented gangrenous plaques which became detached leaving the subjacent tissues exposed. In regard to these cutaneous manifestations as related to the pathogeny we are unable to advance any hypothesis.

Having thus characterized in a general way from the symptomatic and parasitic point of view the acute form of the trypanosomiasis, we are going to proceed in an identical manner to the analysis of the chronic forms.

The morbid elements which are typical in the acute phase of the disease have been attenuated or modified, the thermic reaction has disappeared, and flagellates are no longer observed in the circu-

lating blood—but for all this the pathogenic action of the trypanosome will not have ceased. The spontaneous recovery—the evolution being limited to the cases that escape death in the acute period—is not realized, for which reason all those infected pass to the condition of chronic patients. Further, distinct observations indicate, that the trypanosomiasis may present itself under the aspect of chronic infection without the great, excessive symptoms of the acute phases. This happens most of the times in adults recently arrived in the infected regions. In these people, the first phase of the disease will be revealed by transitory thermic elevations, by a subfebrile state which many times escapes clinical detection, or no acute element is observed, and little by little go on presenting themselves the symptoms which announce the chronic infections.

In the clinical manifestation of the chronic disease are better evidenced and defined great symptoms, which betray anatomic lesions and parasitic localization in the various organic systems. Of these symptoms some predominate in such manner in the general symptomatology of the trypanosomiasis that they give it a special aspect and establish well the differentiation of distinct clinical forms. This has been the criterion which we had when we were systematizing the disease in the first publications. At the present time, instructed by more extended observation and by the minute analysis of an increased number of cases, we interpret in another manner some variants of the infection; or, at least we systematize it on another basis. But we cannot now treat of this topic which will be discussed in a forthcoming publication.

At this moment we prefer to hold in view our principal objective, to report the most important chronic symptoms from the clinical standpoint and from that of general pathology.

Related to the profound alterations of the myocardium due to the localizations of the protozoan, the cardiac syndrome constitutes in this disease one of the most notable symptomatic characteristics and one of the most noteworthy physio-pathologic curiosities. The anomalies of the heart present extreme complexity. Without making minute analysis of the same but only synthetic reports, it is worth while to call attention to the facts that the semeiotic characteristics are always on the side of the cardiac muscle; that in the great majority of the clinical cases there is nothing to lead to suspicion of the lesions in the endocardium

or in the valves of the heart. The cardiopathies of this disease are essentially muscular; in it the affected functions have as substratum the cells of the myocardium,—altered by the localizations of the protozoan, or diverted from their physiologic mechanism by the reactions of the interstitial tissue which serves to support them. This is one of the aspects of major interest from the point of view of the cardiopathy: we find the immediate cause of the functional disturbance in striking anatomic processes, and we can thus make inferences from the concrete case, and also advance inductions for other similar cases of doubtful pathogeny. In this manner cardiac physio-pathology will be able to find in the abundant collection of notions furnished by the semeiotics of trypanosomiasis, the illumination of problems still under discussion.

The functions of the cardiac muscle, which are attacked with greater frequency and in preponderating manner, are those of excitability and those of conductibility. For this reason, the anomalies of rhythm, which are related to those functions, are most frequent. In the syndrome of all the clinical cases, the extrasystoles and the premature systoles of auricular or ventricular origin constitute constant phenomena, and present themselves with variants of most diverse modalities (*modalidades*) in accordance with the respective anatomic process. This arrhythmia is so frequent that we make of it one of the best clinical symptoms for the recognition of the disease.

The arrhythmia of the conductibility also is noticeable in trypanosomiasis both for its frequency and its peculiar aspects. In it we observe all the degrees of functional alteration—from the incipient phases expressed in the delay with which the contractile stimulus goes from its origin to the ventricular muscle, up to the complete block with definitive independence between the rhythm of the auricle and that of the ventricle. Between these two extremes there are all the intermediate aspects dependent on the pathogenic conditions of the cardiac syndrome at a given moment.

The attention is arrested by the frequency of the alterations of conductibility in this trypanosomiasis. In this case the symptom does not depend on the age, and it is observed even in children in the first years of existence.

With relation to this fact, which undoubtedly constitutes an exception in cardiac physio-pathology, we possess many observations in which the block—complete heart-block—has been noted in

children of less than ten years of age. Nor do we know any other etio-pathogenic factor which may occasion the symptom with the frequency and the variants of condition verified in this case. This is another pathogenic aspect of the disease which is of very great interest to general pathology.

Characterizing the cardiac syndrome, there figure also anomalies of rhythm in the musculature of the auricle and ventricle, which reveal variable histo-pathologic processes. Thus the perpetual arrhythmia betraying auricular fibrillation, the tachysystole of the auricle, the paroxysmal tachycardia,—these constitute aspects relatively frequent in the syndrome which characterizes the cardiac forms of the disease. We should not be surprised at so many anomalies in the functions of the myocardium. From the anatomic point of view, the profound alterations of structure in that muscle which are caused by the action of the protozoan are more than sufficient for their establishment. It would be a wonder if this were not so, in view of the notions now acquired in various autopsies with reference to the histo-pathologic processes observed in an increased number of patients dead from trypanosomiasis. At present we can consider this chapter of the disease definitively illuminated, the data being furnished by the physical semeiotics during numerous clinical observations in many cases of cardiac form.

In the high mortality which this trypanosomiasis causes, the decline of the myocardium is a preponderating factor. Death is most often the result of the exhaustion [155] of the heart, sometimes in progressive asystole more or less retarded, at other times in rapid cases of acute asystole. Still more curious undoubtedly in the clinical history of this trypanosomiasis, is the frequency of sudden death in the cardiac forms of the disease.

In the infected zone, there are but few families that have not lost some one. They die even young, in full activity, in apparently good health. Of this fact we possess abundant observations; patients who die suddenly in our services in the hospitals without our being able to foresee in the physical symptoms so swift a catastrophe. What is the immediate reason of the sudden death in these cases? Acute dilation of the right ventricle by exhaustion of the tonicity of the cardiac fibre, or detention in diastole of the organ by the loss of that function? Syncope of reflex nature connected with the conditions of the myocardium? Or will death be

the direct result of the ventricular fibrillation in some patients with profound disorders of rhythm? These facts will be discussed at a more opportune time, since it is impossible to analyze them here in detail.

Now we will take up the nervous alterations of trypanosomiasis.

In the acute forms of the disease, the action of the trypanosome on the nervous system is manifested by a meningo-encephalitis, which nearly always ends in death. Various autopsies of cases of this nature have demonstrated the localizations of the protozoan in the nervous substance, and have established in a definite manner the exact pathogeny of the inflammatory processes in the recent infections. The same is true of the chronic forms of trypanosomiasis, in which the central nervous system is a frequent focus of pathologic processes which make themselves evident in profound functional changes. With respect to these last in all the aspects of their extreme complexity, we possess at present an increased number of observations, all studied from the clinical point of view, and fully illustrated by histo-pathologic and parasitic examinations *post mortem*. The motility, the intelligence, the speech, etc., suffer also profound alterations which constitute different physiognomies of the clinical forms with predominance of a nervous syndrome. From the developmental point of view, what do the pathologic processes of the nervous system represent in the chronic forms? Possibly histo-pathologic residua of those inflammatory reactions of the acute phase? Or do they represent subsequent localizations of the parasite without the disturbing symptoms which make evident inflammations of the meninges and of the nervous substance? This last hypothesis, without excluding the first, is that which is verified in the larger number of cases, according to distinct clinical cases which we observe and in accord with reasoning whose exposition would be too lengthy. Trypanosomiasis in its nervous manifestations presents a pathogenic evolution similar to that observed in syphilis. In luetism we know that the great nervous syndromes, which likewise indicate localization of the *Treponema pallidum* in the nervous substance, are in general late phenomena initiated in an epoch remote from the primary infection. It is the case of general paralysis, whose etio-pathogeny the works of Noguchi have illustrated. In this late syndrome of lues, we are going to find the treponema localized, at a remote period, in the nervous substance, although in the course of the

successive years no symptom was indicating alterations on the side of the nervous centre. The process of American trypanosomiasis is comparable to that of syphilis, and if in general paralysis the search for the treponema has placed in evidence many times the etiological reason for the syndrome, the same has happened with relation to trypanosomiasis. In this case there is less difficulty in the searches in view of the larger dimensions of the parasite and the ease with which contrast staining can be applied to it. In various autopsies of the chronic forms of the disease, with pronounced nervous syndromes, we observe parasitic foci and inflammatory processes in the brain, which signifies that we have eliminated any objection whatsoever regarding the recognized etiopathogeny of the functional changes observed. It is certain that—in the nervous forms of long standing in which death may have been caused by virtue of the evolution of pathogenic processes of other organs—parasitic foci are not always abundant in the nervous centres, which fact not infrequently renders difficult their observation; the histo-pathologic processes identical notwithstanding with those observed simultaneously with the presence of parasites are constant, and demonstrate the *Trypanosoma Cruzi* as the indisputable etiologic factor.

In view of the objections of some investigators who estimate in a different manner the clinical aspect of the disease, we insist on establishing at length the existence of changes caused by the attack of the protozoan on the central nervous system. For instance, MacCarrison, in recent works on the etiology of endemic goitre and cretinism, reports the existence in cretins of alterations of motility, and creates on this account a nervous modality for this syndrome of hypothyroidism. We do not wish to contest the interpretations of MacCarrison concerning the nervous phenomena observed in the cretins, the object of his investigations, nor do we doubt the rigor of his observations. However, that which we cannot understand nor admit, is the identification of that nervous cretinism with the cases of diplegia, idiocy, aphasia, etc., from which we constitute the nervous form of the Brazilian trypanosomiasis. As initial argument, and for that matter the decisive one, we should make evident this fact, that many of our observations of diplegias as well as of other organic affections of the nervous system, were not realized in individuals with attenuated symptoms of cretinism. Ours are patients who,—presenting many

times hypertrophy of the thyroid, or others conserving the gland with its normal external aspect,—reveal nothing which authorizes the admission in them of a profound functional insufficiency of that organ. In some cases the thyroid gland, with apparent lesions, does not show itself insufficient to the point of constituting the syndrome of hypothyroidism, which will constitute cretinism; and many diplegics without even slight signs of thyroid hypofunction, can be recognized. That which we observe in our patients is the existence of motor alterations combined with histopathologic processes of the nervous centres. Will these processes be determined by the same etiologic factor as cretinism? In the first place, cretinism does not exist here; further, if we have verified in these patients the infection of a parasite which localizes itself in the nervous centres, causing there inflammatory processes easily verifiable, why seek in the indecisiveness of pathogenic hypotheses the interpretation which we find patent in all the autopsies? This is true for the anomalies of motility, especially for the cases of cerebral diplegia which predominate in the nervous forms of the disease. Concerning idiocy we shall be able to present similar arguments. The facts of complete idiocy which we have studied, represent in the majority of cases consequences of the (a) localization of the parasite in the nervous centers, and of the (b) anatomic alterations produced by them. In these patients we do not usually find signs of cretinism, and the glandular function does not present in any wise appreciable insufficiency. This idiocy is purely organic, quite distinct from that which, accompanying the profound signs of hypothyroidism, or rather of athyroidism, deserved from Bourneville the designation of myxedematous cretinism. Simultaneously with the alterations of the intelligence, there are in our patients others on the side of the motility, of the sensation, etc. Our cretins are generally also diplegics, and this co-existence of phenomena, involving motion, sensation, mentality, etc., constitutes the best argument in favor of the organic nature of the idiocy. It is certain that in patients of trypanosomiasis we observe different degrees of mental deficiency with the hypofunction of the thyroid; in this case, however, there exist other signs which proclaim the hypothyroidism and the alterations of the intelligence, which do not reach the intensity which the organic cretinism [156] presents most frequently in this disease. Besides all this, in the cases of simple mental weakness or of intelligence

retarded by hypothyroidism, the absence of the motor anomalies constitutes the precious element of differential diagnosis, making easily recognizable the nature of the mental deficiency.

The eminent Professor Kraus, whom we esteem as one of the most notable modern investigators, also gives a doubtful opinion respecting the existence of nervous forms of trypanosomiasis. The foundations of the indecision of our illustrious friend coincide in their general outlines with those presented in the works of Mac-Carrison: existence of nervous alterations in cretinism, where not only the intelligence, but also the motility and the sensation and other functions connected with the nervous mechanism, may appear compromised. This is the approximate verification of the works of Scholz on cretinism, which we do not undertake to discuss. Let us examine then our case: localizing itself in the nervous centres, the *Trypanosoma Cruzi* provokes in them in the acute forms of the disease inflammatory reactions which are expressed clinically by signs of meningitis, or rather of acute meningo-encephalitis. The autopsies of such patients have amply demonstrated parasitic foci in the nervous substance and also the histopathologic processes caused by them. Identical confirmations have been realized in the chronic forms: in the nervous centres in which the motor alterations predominate, the autopsies reveal foci of parasites and pathologic processes caused by them quite in harmony with the semeiotic signs.

Still, granted a case lacking this evidence, can we suppose that these relations of cause and effect expressed as existing between the action of the trypanosome and the nervous alterations which characterize the respective clinical form, are without basis? In view of our observations regarding the parasite in the nervous centres and the inflammatory processes determined by it, will doubt be possible concerning the etio-pathogeny of the great nervous syndromes which we have indicated in the disease? If this were so, we do not answer for the exact criterion for interpreting the facts in pathology, nor do we know where to find scientific logic. However, we ought to call attention to the fact, that none whatsoever of the aspects under discussion constitute pathogenic anomalies rendered unacceptable by the absence of similar phenomena in other diseases. No; in syphilis we are going to find comparable facts in a great syndrome resulting from the action of the treponema on the nervous centres. Other infectious diseases of acute

evolution can also provoke the inflammatory reactions in the central nervous system with resulting anatomic lesions which express themselves in changes of motility, sensation and intelligence. Besides we shall be able to detect in the majority of cases those morbid processes of the nervous system, acute or chronic, which can be attributed to the pathogenic action of micro-organisms, bacterial or protozoan. How doubt this pathogenic property of *Trypanosoma Cruzi*? How doubt, when this protozoan presents exactly the biologic characteristic essential for realizing part of its vital cycle in the interior (intimidad) of the tissues?

It is fitting that we should delimit the facts and fix well the clinical and pathogenic concept which we possess relative to the nervous forms of American trypanosomiasis. When describing in the disease nervous alterations, in no manner do we involve ourselves in the error of considering such alterations as simple clinical aspects of cretinism. It could not be so even if we did verify the symptoms of that syndrome of hypothyroidism absent in our observations. We recognize as nervous forms those patients with disturbances of motility, intelligence, speech, etc., which imply pathogenic processes in the nervous centres, and the etio-pathogeny of these processes is made evident in distinct autopsies which justify our conclusions completely.

With the clinical history of trypanosomiasis are connected dystrophic states which represent more or less remote consequences of the pathogenic processes of the disease. As the parasite localizes itself in organs of well defined morphogenic function, and acts on organic systems important in the phase of development, it is not strange that there should figure in the clinical picture of this disease very evident dystrophies varying in form according to the nature of the processes which give origin to them.

In units of the endocrine apparatus we report the occurrence of anatomic alterations connected sometimes with the presence of parasites, sometimes with the action of their toxins. In addition to the immediate glandular symptoms resulting from these facts, other late ones exist which show in some manner histo-pathologic or functional residua of the admitted processes.

It is under the aspect of great dystrophies that such symptoms usually present themselves; and this happens owing to the predominant influence of the endocrine apparatus over the trophic equilibrium and the organic development. Of those symptoms, the one

most important and best characterized is that of infantilism which merits a brief report.

Very frequently in the infected zones, this infantilism, which there constitutes a true endemic, presents variable clinical forms in distinct degrees. We observe it in the majority of cases in individuals with other symptoms of trypanosomiasis. How is it to be classified from the etio-pathogenic point of view? Will it be a purely thyroid dystrophy, or will it be pluriglandular? Do we encounter also in the analysis of the pathogenic processes elements which warrant us in placing infantilism in the late symptoms of the disease? The developmental aspect of the infection and the principal localizations of the protozoan establish at once the occasion of dystrophic conditions, among which is infantilism. Initiated in the earliest times of extra-uterine life, the infection produces the organic symptoms in the phase of the life's organization, naturally disturbing it, and that all the more as some among the organs infected exert a preponderant function in the general processes of morphogenesis.

In the etio-pathogenic operation of infantilism there figure processes which are not always of such intense action as that of trypanosomiasis. Syphilis, acquired or hereditary, is an indisputable cause of that syndrome, and according to the best theory, the endocrine alterations constitute a predominant casual factor in luetic infantilism. In the same manner, malaria acquired in the earliest period of existence and persisting through many years leads to a state of infantilism, whose morphology is comparable to that of hypothyroid infantilism. Tuberculosis likewise, as well as other infections of chronic course, acting in the phase of development, may figure in the etio-pathogeny of that syndrome. If this is so, there are abundant reasons for admitting infantilism as a frequent accident in trypanosomiasis, which in its chronic phase—when the parasite is definitely localized in the tissues—acts on the organic metabolism in permanent manner without disturbing reactions during an indeterminate period; and as this condition is allied with the localizations of the protozoan in the glands of internal secretion and in the nervous centres, as the onset of the disease in the first period of life is known, it can cause no surprise, it rather constitutes a fact of evident logic, that infantilism figures among the consequences of trypanosomiasis. We are not arguing from a hypothesis: clinical observation comes to confirm this, our

point of view, since it demonstrates the endemic character of infantilism in the zones of triatomas, and since simultaneously with the morphologic syndrome there are observed other symptoms of the disease.

Shall this infantilism be attributed exclusively to the deficiency of the thyroid gland? It is fitting to record to the fact that other organs which play a verified rôle in the morphologic evolution—among these the testicles, and sometimes profoundly.

In this case, is it not preferable to suppose the syndrome to be the resultant of the convergent action of distinct processes, all capable of disturbing the normal evolution of the organism? It will be, then, a pluriglandular infantilism; further, this interpretation seems the most perfectly in accord with the clinical facts in which are observed morphologic types which escape the classification of true thyroid infantilism. Hence the syndrome should figure among the consequences of trypanosomiasis as resulting from the lesions of the endocrine apparatus, even in the mind of those who do not admit that the thyroid gland acts in the pathogenic processes of the disease.

With relation to the etiology of endemic goitre in the regions of Brazil scourged by trypanosomiasis, some investigators take an attitude of doubt. The hypertrophy of the thyroid gland in the zones attacked by the triatoma—is a consequence of the infection, or does it represent a simple simultaneous condition which may be attributed to some other etio-pathogenic factor? It is a debatable question, but that will absolutely not be able to destroy nor to modify in any manner the clinical concept formulated respecting American trypanosomiasis. We insist on this point: the etiology of endemic goitre in the zones of the triatoma can be debated, our opinion according to divergent theories not being admitted, but the clinical history of trypanosomiasis and the concept which we have expressed concerning its distinct symptomatic modalities, that does not admit of the least doubt, because it has been demonstrated by the best elements of experimental proof, of clinical observation, and of anatomic verification.

We are going to report the chief arguments which lead us to constitute of the endemic goitre in Brazil and in the regions of the trypanosomiasis, a consequence of the infection. From the pathogenic point of view the primary argument, which has almost experimental value, is given by the myxedema of the acute cases.

This myxedema announces the attack of the protozoan on the gland and does not constitute an exceptional symptom: on the contrary, it is a constant fact, perhaps attenuated in some patients, but always possible of observation, all of which confirms the pathogenic interpretation which we are undertaking to prove. The myxedema is a pathologic equivalent of the anatomic lesion or of the functional alteration of the thyroid without taking account of the fact that lesion has been demonstrated in autopsies as well as the localization of the parasite which can provoke the lesion. For the same reason, it will be difficult to understand the physio-pathologic phenomena in the acute cases without admitting the specific action of the parasite on the thyroid gland; and if this is so, if in its initial phase the infection attacks in a more or less intense manner the glandular parenchyma, we cannot be surprised by the resulting alterations which betray themselves in sclerosis and distinct degenerative processes, as observed in chronic goitre. It is fitting, therefore, to call attention to the fact that trypanosomiasis constitutes a disease of long duration, acting on the organism in a permanent manner, provoking in the organic systems reactionary processes and variable degenerations, according to the nature of the tissues attacked, nor are the reactions which are produced in other organs differentiated essentially from those of the thyroid. In the liver in the acute phase is observed intense steatosis; when the infection becomes chronic, and after the lapse of some years we arrive at the recognition of the anatomic state of that organ, we observe in it interstitial sclerosis, which betrays precisely the prolonged reaction against a permanent irritating cause. [157] The same reasoning is applicable to the chronic myocarditis, the consequence of acute inflammatory phenomena in the initial phase of the disease, and of a prolonged action of the protozoan on the cardiac muscle. The processes in the central nervous system are also comparable to those already reported. Thus it is a valuable argument which results from the thyroid symptoms in a great majority of the patients of trypanosomiasis. In them on a par with nervous and cardiac symptoms of pathogeny more than evident, we find as a general rule symptoms which announce alterations of the thyroid gland.

The hypertrophy of the organ is observed in almost the totality of the patients, although not infrequently the increase in volume is small, sometimes inappreciable; and in the cases in which the

apparent hypertrophy does not exist, it would still be possible to suspect the existence of alterations of the parenchyma without sufficient exteriorization. All that does not imply that we affirm that the hypertrophy or the lesions of the thyroid are constant elements in the disease; we simply report the great frequency of the affection of the organ without excluding the possibility of clinical cases in which the thyroid may have escaped pathogenic processes.

In the epidemiologic and geographic conditions of endemic goitre and of trypanosomiasis in Brazil, we find new foundations for our conviction. In the regions where we have studied trypanosomiasis, goitre is always observed, constant in persons who live in houses infected by the transmitting triatoma. Up to the present time, there is no exception to this rule; but this fact is still more significant, that those who live in houses free from the infection by the insect do not present hypertrophy of the thyroid nor other symptoms of the disease. Of this we have abundant proofs. We ought to state, that in our investigations all the conditions of life among the inhabitants of houses infected by the hematophage and the inhabitants of houses free from it, were absolutely identical—the same alimentation, the same water, the same general habits of existence. There was only one distinguishing factor in the rooms of the children and adults who presented hypertrophy of the thyroid and other symptoms of the disease—the *Triatoma megistus*. Will it be possible to admit heredity as the exclusive factor in endemic goitre? No, since in persons recently arrived from zones free from goitre, and that even in Europeans, we have observed hypertrophy of the thyroid gland, when they live in habitats of the triatoma. We have identical observations in children, sons of fathers who did not have goitre.

Of great value are the facts which concern the distribution of the disease in the country and in the cities. We have made studies in infected zones, which show that the goitre is relatively rare in populated centres where the better constructed houses do not offer shelter to the insect; also in such conditions of housing, the symptoms of trypanosomiasis are scarce, while in the country where the human dwellings furnish abundant nests for the triatoma, the goitre is very frequent, as are also the clinical symptoms of the disease.

In the points obtained up to the present time concerning the

geographical distribution of the *barbero** and the endemic goitre, we find new elements which speak in favor of the relations of cause and effect, the object of our discussion. The endemic goitre in Brazil does not constitute an anomaly caused by topographic aspects peculiar to the conditions dependent on altitude. It is observed in mountainous regions, in the valleys of great rivers, at slight altitudes, and even in proximity to ocean coasts.

In this particular case, the extreme diffusion of the goitre is worth noting, for its endemicity does not present limited foci, but is observed in vast territories, being more or less intense in distinct zones. With the distribution of the trypanosomiasis and more especially of the triatoma, the same fact is observed. The greatest number of hematophages is found in the regions of the interior of the country, dominating above all in the rural zones: the disease is never observed in determinate foci limited to small regions: on the contrary, in the infected zones it is scattered over vast geographic territories.

In the regions of the interior, where we have observed the existence of endemic goitre, we never fail to find the transmitter, and to confirm in the inhabitants symptoms of infection. It has happened thus in the State of Minas Geraes,‡ where our observations have been most prolonged. On the other hand, in the data obtained in the scientific excursions of the Osvaldo Cruz Institute, is observed the simultaneous existence of the endemic of goitre and of the *Triatoma megistus*. The observations of Arturo Neiva and of Penna in Goyaz, Bahía and Pianhy, and those of Lutz and Machado in Minas and Bahía also attest this.

Ought we to identify with that of Europe the goitre endemic in some zones of Brazil, especially that observed in the regions near to the ocean coasts? Possibly, yes. As for the endemic goitre, which we consider a consequence of the infection by the trypanosome, between this and the European goitre appreciable differences are not to be disregarded, especially from the point of view of their physio-pathological consequences. Undoubtedly similar aspects exist, more largely in the anatomic and histopathologic conditions, which is easily understood, since the same organ would not be able to resist diverse irritating causes by processes essentially distinct. In the physio-pathologic aspects, how-

* In Portuguese, *barbero* (barber), the native name for the infecting bug which bites the face.

‡ All of the states mentioned in this paragraph are in Eastern Brazil.

ever, there exist with absolute evidence differential characteristics as between the European goitre and that endemic in the regions of our country. Thus then, those states of congenital athyroidism which express themselves in the myxedematous idiocy of Bourneville, a pathologic condition in which is observed life-long absence of analogy, in which the intelligence remains initial without any development, and the mucoid infiltration of the subcutaneous tissue reaches the maximum degree, this state which manifests profound insufficiency, or rather absence, of function of the thyroid, and is observed in the goitrogenous (bociogénicas) regions of Europe, never has been observed among us in the vast zones of endemic goitre.

Idiocy is undoubtedly very frequent in the regions infected by trypanosomiasis, but the said idiocy is of organic nature, determined by the localizations of the trypanosome in the central nervous system. The idiots in the said case are, in general, also diple-gics, or present monoplegias, announcing the affection of the nervous centres. There is no relation between this idiocy and that determined by the profound functional deficiency of the thyroid, the myxedematous idiocy, whose pathogeny is completely distinct from that which acts in the organic idiocy; for this reason, when we affirm—basing the affirmation on an increased number of clinical observations—the great frequency of the organic idiocy and the rareness of the myxedematous idiocy, we speak of distinct syndromes, and, we believe, not in contradiction to each other.

According to the exhibits of the best observers, cretinism constitutes hereditary hypothyroidism, or may betray a state of acquired thyroid insufficiency. Among us in the zones of endemic goitre and trypanosomiasis, it is not observed with the characteristics described by the European observers. Very few true types of cretinism appear in our works, unless it be permitted to give that designation to simple retardations of intelligence and of physical development, to cretinoid states which can be attributed not only to the hypofunction of the thyroid, but also to the convergence of various factors, and so on: in addition to these we would be able to find other elements which differentiate the goitre in the regions of triatoma from that which constitutes endemia in distinct points of Europe. There is no doubt that this diversity of aspects indicates the lack of identity in the etio-pathogenic factors.

In coming to a close, we wish to insist on the clinical conception acquired regarding American trypanosomiasis, especially in the manner of conceiving the relations between the disease and the endemic goitre. The trypanosomiasis transmitted by the *Triatoma megistus* and related species, is an autonomous disease, of evolution sometimes acute and sometimes chronic, characterized by a symptomatology well determined and well established in histo-pathologic lesions.

The lesions of the thyroid gland are announced in almost constant manner by the myxedema in the acute forms, and in the chronic forms the hypertrophy of that gland constitutes a fact of observations also very frequent.

[158] Is the endemic goitre in the zones infected by trypanosomiasis, a simultaneous condition or an element of the disease according to our concept? Be that as it may, the clinical history of this entity does not depend on the relations discussed, which we consider a problem annexed to the chapter of the trypanosomiasis. Whatever may be the points of view relative to the etio-pathology of the endemic goitre, the clinical and parasitic conception of the disease based on indestructible demonstrations remains unchangeable.

NOTE BY TRANSLATOR.

The illustrations of the original article showed the following:—*Trypanosoma Cruzi* in the peripheral blood; acute case of the disease [a young child]; acute case of the disease [emaciated child]; cardiac syndrome of trypanosomiasis, arrhythmia, extrasystoles; parasite in the interior of the cardiac fibre; cardiac form of the disease, interstitial myocarditis [microscopic section]; nervous form of trypanosomiasis, parasites in the cerebrum; nervous form [emaciated negro child]; cerebral diplegia, anthesosis [negro boy]; *Triatoma megistus*, specific transmitter of American trypanosomiasis [reproduced herewith from a pen-and-ink tracing of the original half-tone, no notation given as to scale of picture]; house infected by the transmitting insect [a sort of thatched hut with partly clothed natives in front of it, looked as if it might be infected with almost anything].

Laveran (*Trypanosomes et trypanosomiasis*, 2e éd., Paris, 1912) records the work of Chagas. Speaking of the necessity of knowledge of trypanosomiasis among European physicians, he says in his preface, "Les médecins européens sont donc exposés à trouver,

parmi leurs malades, des sujets atteints de trypanosomiase africaine; il peut leur arriver aussi d'être consultés pour les malades atteints de la trypanosomiase américaine." (In view of the rapidly increasing commercial relations between the United States and South America, the possibility of the introduction of cases of American trypanosomiasis into this country is even greater). For the transmitting agent, Laveran uses the name *Conorhinus megistus* Burmeister, and for the parasite, *Schizotrypanum Cruzi* Chagas 1909. He devotes an entire chapter (pp. 796-812) to American trypanosomiasis. The first announcement of the disease was made in *Arch. f. Schiffs-u. Trop. Hyg.*, xiii, February, 1909, with full details from 1909 on in *Mem. do Inst. Osv. Cruz* in articles by Chagas and by Vianna. The provisional name of the parasite was *Trypanosoma Cruzi*, subsequently changed to *Schizotrypanum Cruzi*, but as the result of later studies the earlier name was finally adopted, and is used throughout the article here translated. European experiments with the parasite are noted. Laveran summarizes the evolution and symptoms in man and sensitive animals from a memoir by Chagas. The studies on the pathologic anatomy by Vianna were still in progress when Laveran published his second edition (1912), as were also studies of the life-cycle of the parasite; and for this reason Laveran reserves judgment on various interpretations made by the Brazilians.

Under the heading of treatment, Laveran says, "Nous n'avons trouvé, dans les mémoires publiés jusqu'ici, aucun renseignement sur le traitement de la maladie humaine dont le pronostic est très grave." Manson (6th ed., 1917, p. 192) says, "We know no specific remedy. Arsenicals and antimony have failed in experimental animals. Treatment, therefore, must be on general lines."

Chagas in the present article refers to the insect transmitter as *Triatoma megistus*. Castellani and Chambers (2d ed., 1912) call it *Lamus megistus* Burmeister (synonym *Conorhinus megistus* Burmeister) in the entomological section of their Manual of Tropical Medicine, and do not describe *Triatoma* of any species. But in the medical part of the work (p. 986) they state, More recently Chagas has shown that *Triatoma geniculata* (synonym *Conor-*



Triatoma megistus, specific transmitter of American trypanosomiasis.

dinus geniculatus) of the family Reduviidae is one of the carriers of the same trypanosome. He also believes that *Triatoma infestans* and *T. sordida* may be carriers."

An editorial, "Brazilian Trypanosomiasis—Chagas' Disease," in the *Journal of the American Medical Association*, February 17, 1917, uses the older names, *Schizotrypanum Cruzi* for the parasite, and *Conorhinus megistus* for the insect. The latest article by Chagas cited was one published in 1911.

Manson (6th ed., p. 188), naming the bug *Lamus megistus*, comments in parentheses, "at first erroneously supposed to belong to the genus *Conorhinus*," and devotes to it a colored plate "after Chagas," which shows its striking red and black markings. In its general form it closely resembles the engraving in black and white given by Castellani and Chalmers, and also the tracing from Chagas' article here reproduced.

SPEECH DISORDERS AND CORRECTIVE WORK.*

By MISS S. SPYKER, New Orleans.

The systematic evolution of speech is a long process, and not an inheritance transmitted from parent to child in perfected completeness.

Heralded by the first wail of the infant at birth, we may trace its development, step by step, from inarticulate simplicity to articulate complexity; but the process is so slow and its fulfillment an experience so common that we do not reflect upon its wonder until we are confronted by some irregularity which deprives the sufferer of the conventional mode of expression.

It has been said that pantomime is the herald of thought, and the word its label. In this connection it may be stated that although the written or spoken word is the most precise, and the most highly polished mode of expression, that individual who voluntarily conveys his thought or feeling by pantomime action, by the manual alphabet, by the cry of pain or shout of joy, cannot be said to be altogether devoid of the speech function. Nor does the term "speech" necessarily imply social intercourse, requiring the presence of more than one person; yet such is the popular conception of the subject. The absorbed thinker frequently, usual-

* Read before the Orleans Parish Medical Society, February 23, 1920. (Received for publication April 12, 1920.—Eds.)

ly, pursues his train of thought by means of unspoken works, and in this sense it is quite possible to employ the process in silence and in solitude; but the discussion of the faculty of speech is a subject for the academician; not for the teacher. I shall ask your attention for a few moments to the disorders of speech found among, and the corrective work accomplished with some of my pupils.

Case No. 1. This case was reported several years ago in the February number of the *Volta Review*, and reproduced here because of its uniqueness.

The case was that of a young woman 18 years of age, who had considered herself a "deaf-mute," and had been so considered by others all her life.

The history of this case is vague; the girl came into this community as a stranger earning an insufficient livelihood by selling sundry articles to business houses on commission. Writing and the manual alphabet were the media of communication. She had learned to read and write at a school for the deaf. It is understood that she had heard no speech spoken during the developmental speech period; and it is believed that although possessed of a certain degree of hearing power, this power had been lost through disuse, through a lack of the exercise of the function of hearing. The child of deaf-mute parents, and reared with deaf-mute companions, her environment had offered no incentive for acquiring articulate speech.

She had made good use of such limited instruction as had been vouchsafed her. Books gave her pleasure, and she wrote fluently—not always grammatically. Her vocabulary measured by her opportunities was large and her use of words accurate. Her finger spelling was glib.

No lack of integrity in intellectual processes was disclosed by the neurologist's examination, and the aurist's examination attested a fair remnant of hearing power. Although unable to communicate with others by means of vocal utterance, her attainments in reading, writing, finger spelling—in a word, her ability to convey her own thoughts to, or to interpret the thoughts of others proved that she held within herself the potentiality of speech. Its actualization in so limited a period would otherwise have been impossible. On Monday, April 3, she presented herself for instruction—a so called "deaf-mute," with all the disadvantages ac-

companying this condition. By various tests made with the speaking voice in close proximity to the ear, it was discovered that she was capable at that time of hearing and uttering all the simple sounds of the language; but because the discovery was startling it was withheld during the first week of her instruction. The ear which had failed to listen to speech and the vocal organs which had failed to utter speech during 18 years, were untrained for the task imposed, and as a consequence the perceptive and executive performances were most imperfect and also highly discouraging. Let it not be inferred that during one week she had acquired a colloquial use of speech; far from it. She had acquired more or less imperfectly all the simple sounds of speech, some of their combinations and a few words.

At the expiration of the first week the discovery made during the first interview was declared to her in writing; "You can talk now; go home and do it." She returned the Monday following with a report from her room-mate of having talked in her sleep all night. It is understood that the words were simple ones and not grouped into sentences. So much was gained by suggestion! It was found that such success as might be attained through this instruction would depend upon awakening her latent hearing power and appealing to what she heard, not to what she saw; for her entire attention hitherto had been directed to fingers rather than to faces, but no foundation for the speech—reading habit had been formed, but the transfer of visual attention from hand to countenance was affected during a few weeks.

The first lessons were conducted in front of a mirror placed so that she could see both her own face and the face of the instructor. Her hand was held on the instructor's larynx and the sound or word used for practice at the moment was spoken distinctly and repeatedly in close approximation to her ear. She then attempted to reproduce the sound as she perceived it through the senses of hearing, sight, and touch. In every instance she acquitted herself of the task, but as has been already hinted, with more or less inaccuracy. At the beginning of the second week the aurist in the case advised the use of an instrument which enabled her to hear quite well, and her subjective hearing now began to improve quite rapidly; objectively it was as though she heard not. Reared as alien to the speaking community, and deafness and mutism the impress of her earliest and growing consciousness opportunity had

been wanting for the development of the auditory associational process.

Visual word memories had been already established; the kinaesthetic memories were quickly acquired—at the end of the second week she had learned to say her name, where she lived, when she was born, the days of the week, the months of the year, and one apparently spontaneous sentence; “I have a new skirt, do you think it is pretty?”

But the development of auditory word memories was a painfully slow, laborious process, and was accomplished only by visualizing the word or sentence at the same time that the instructor repeated it again and again, day after day. The average child listens to speech long before he makes use of it; the young woman in question reversed this order of procedure and made use of it before listening to it.

The instruction covered a period of 3 months.. The early days of April recorded her a “deaf-mute” without voice or articulation, and communicating by means of the manual alphabet and writing. The latter days of June witnessed the development of sufficient volume of voice to be heard through closed doors from one room into another, and the transition from the sign language and writing to the spoken word.

Case No. 2. This was a case of acquired deafness. At three years of age the child was stricken with deafness caused by spinal meningitis. Equipped with the vocabulary of three years of age no loss of speech was ever permitted by his watchful parents. The child was spoken to constantly and urged to return the compliment; so the instructor’s task was comparatively an easy one.

The boy is now fifteen years of age. He has acquired the English language, in which he reads, writes, and speaks. He also speaks French but does not read or write the language. The ability to do this presupposes, of course, the ability to read the lips of others. He is attending a school for hearing children, and I understand, keeping up with his class. Two years ago he became qualified as a boy scout and won a prize competing with normal boys for selling bonds in one of the “Victory” or “Liberty” loans.

Case No. 3. This case is cited as representative of a number of pupils who have presented themselves for instruction. The pupil under discussion was a young boy of twelve years of age, pleasing appearance and manner, with no structural irregularity

in the peripheral mechanism of speech. He was left-handed and the difference in the size of the two hands was quite marked, but this slight abnormality excepted, he manifested no peculiarity other than his speech defect. This latter was so conspicuous as to afford him scarcely an approximate means of communication with others.

Despite the fact that his language bore little resemblance to that spoken about him, indeed was unintelligible save to the few most intimately connected with him, he had attended school regularly and not only kept up with his class, but had held an honoured place.

The flushing cheek and gathering tear, however, attested his discomfiture when failing to make himself understood; and subsequent training revealed conclusively that his speech defect was having a most humiliating influence upon him.

Great complications of combined muscular movements arise during the processes of speech, and a study of these movements while talking proved the boy's inability to make any but the simplest combinations of the language. The articulatory mechanism having been inadequately trained to meet the needs of his developing intellect he found himself in the painful position of taxing it with the most impossible performances whenever he attempted to speak. Moreover this faulty articulation was making a deeper impress with every day of its continuance, and standardized modes of speech were becoming more and more unattainable.

Feeling the need of expert guidance in the case I sought the diagnosis of a skilled neurologist. Submitted to the Binet-Simon scale for measuring intelligence, the boy's mental age closely approximated his physical age; but the physician discovered that a slight injury to the brain, involving the speech centres, had been experienced probably at birth, and certain portions of the articulatory mechanism had failed to come under the control of the brain during the formative speech period, hence both its retarded development and eccentric character.

The task set for us was that of training or re-educating the speech faculty, and it was not a simple one; for the disturbance was central as well as peripheral. The boy could locate sounds readily and he could read and write from dictation; but he had a peculiar mental freak of hearing; akin to word deafness, but differing from it, in that he was deaf only to certain sounds of

his own speech, whereas these same sounds when produced by others he heard accurately and well, as already stated. Moreover he had grown so inured to his own speech that he could not distinguish the correct from the incorrect form. For instance he satisfied himself when he said "fanety-fane" for seventy-seven, or "Funday" for Sunday, and "Fink-Vou" for think thou. He was by no means keenly critical of the speech of others; but he was acutely conscious when any one else said "fanety-fane" or "Fundy" that he was the object of ridicule.

Studying his speech with untiring care, I found the disturbance arising from two causes. The primary and more potent cause was directly traceable to the injured brain diagnosed by the physician and manifested in the pathological language already referred to.

The secondary and minor cause of the trouble was the result of dialectal models of speech copied by the child during the developmental speech period. The latter was not inherent in his own organism as was the more potent, primary disturbance, but was directly traceable to his environment. Certain of his utterances were characterized by such glaring deviations from the accepted and standardized modes of speech that the nomenclature was easily made. For instance: "Fundy", "Fanety-fane" could be classified as "pathological language". The failure to pronounce final "r" in door, floor, etc., and final "g" in morning, building, was clearly the result of environment and could be called "provincial". But so subtly combined were the pernicious influences bearing upon his speech that in the greater number of instances it was impossible to separate the several impurities found in a single sentence and to say, such is pathologic, such provincial, or diacetal utterance.

The vowel sounds and coascescents with their fine shadings offered greater difficulty than that of the consonants.

This boy was under my care for eight or nine months and splendid results were obtained. He was taught the physiology of the alphabet of sounds recognized as the standard of the language and a failure on his part to meet the requirements of this standard was indicated to him and he was incited to surmount the difficulty.

This corrective work necessitated training both the eye and the ear. In visualizing a word he seldom made a mistake in its

consonantal elements after the 2nd. month of training. He was not so happy in the acquisition of the vowels, diphthongs and coalescents which offered greater elements of difficulty. This case was one of deepest interest, for while much depended upon the patience, tact and skill of the instructor, more depended upon the ambition, the determination, the sustained endeavor of the pupil—in a word upon his inherent phisic necessity, his necessity for communion with his fellows.

Case No. 4. A Cleft Palate.

The speech of the Cleft Palate pupil is defective in two important particulars, namely, resonance, and articulation.

If the closure of the cleft has been effected and the speech training begun in early life the prognosis for normal speech development is good. A child is under my care, now, for whom I think it safe to predicate this result. The operation was performed when she was quite an infant and followed at four years of age by systematic speech training.

When standing guard over her speech as in reading, and reciting poetry, she now has really beautiful tones of voice; and her articulation is distinct and graceful. When at play, however, she falls into very rapid utterance and at times even nasality of tone.

The child of wealthy parents, no expense is being spared and we hope to train her ear to exact, and her articulatory mechanism to render the most highly polished utterance at all times.

When the closure of the cleft is not affected until adolescent or adult life, the speech of the pupil may be greatly improved, but I have never seen a case where it had been brought up to normal; for it must be remembered that the pupil has been trying all his life to accommodate himself to faulty structural conditions, to the absence of the normal palate; and that, in his effort to do this, he has substituted, for purposes of speech, other organs lower down in the throat and in this process of substitution faulty musculatures have been developed, including a faulty development of the nerve centres supplying them.

Two children, one fourteen and one eighteen years of age, are under my care now. The younger has recently undergone a successful operation, but she is partially deaf, and the work of speech improvement is fraught with much difficulty. A plate has been prescribed by the physician for the older sister, an operation not having been deemed advisable. Both are improving and both are

being taught, as far as possible, to recognize normal speech and to make the best use of their still imperfect organs in its production.

I cannot close this very informal report without a word in regard to stammering, which is a disorder of speech due to a lack of promptness in the action of one or more of the cerebral speech mechanisms, and is characterized by hesitation, and varying degrees of spasmodic muscular actions and bodily contortions.

I have taught a great many stammerers and have been successful as well as unsuccessful. Two cases stand out rather prominently, one a young man who was practically relieved in two weeks, but who remained under my care for some time longer; as he expressed it to make sure of himself. This case was a simple one: our task was merely that of re-educating the speech faculty.

The other case was that of a pupil in my class at the hospital. She was under instruction but a short time, and I know nothing of her subsequent history; but she was relieved in a few lessons. Finding her to be a lefthanded subject, who had been forced to write with the right hand, and who had developed stammering about the period of entrance into school, I made the experiment of educating the left hand, and having all her work accomplished in this way. As I say it was an experiment, but it worked admirably for she ceased to stammer almost immediately. I have since lost trace of her, and do not know whether the habit has reasserted itself. Where stammering is a part of the individual himself it is very difficult to overcome. A child of three and a half years may be relieved in a short time; whereas a man of fifty would find the same process very difficult.

THE DIFFICULTIES OF SPEECH IN ACQUIRED DEAFNESS.*

By MISS SUE B. POWERS, New Orleans.

What does speech tell you? Listen to not the words but the voice and speech of a group of strangers, or the chance acquaintance. One can easily detect the characteristics of timidity, patience, self-possession, self-pity, extremely nervous, and that nasal dissatisfied quarrelsome drawl. These we know. There are other

* Read before the Orleans Parish Medical Society, February 23, 1920. (Received for publication April 12, 1920.—Eds.)

real defects of speech, as the lisper and stutterer. Again is noticed that sometimes peculiar deaf voice and speech. It is that too rapid or too slow nonmodulated speed with the poor letter blending, the final *s* and final syllable missing that we hear in the speech of many deaf people.

These difficulties of speech in acquired deafness are very often acquired with the coming of the deafness.

Here is where the trouble lies. Either the person had poor speech before deafness or because of the highly nervous condition since becoming deaf, and not hearing his own speech he is not aware of the mistakes.

The matter of retaining or of gaining good speech is of great importance. After having looked closely into the family, personal, physical, home, medical and social history, one is ready to begin work in the actual speech conditions.

The degree of poor or good speech will depend to some measure upon the age, degree of education, remnant of hearing, total deafness and mentality.

If the acquired deafness has occurred during the speech developmental period, the training must be more elementary. Then too, where a great sense of vibration, and the memory of voice sounds exist, one finds a help.

Another point to be determined is whether he has brought over any pre-deaf speech trouble. Suppose he has not. In the acquired deafness, we always find the nervous person. In these I find either the hoarse voice, low or whispered tones, the high-thin voice, the very deep loud voice or the indistinct speech.

Often the difficulty is mechanical, because of the lack of back and front oral activity. The tongue may be large and stiff, or too relaxed, the nasal passages closed, the arch of mouth high and narrow, the teeth poor, the lip movement bad and the lower jaw relaxed.

The trouble may be merely the negligent type of speech difficulty. Sometimes because he always had such, then again because he does not hear his own voice which may cause lack of inflection and emphasis. I have found the letter substitution as he may have previously done or as he sees it on the lips. Also the blend sounds, the final letters, and correct syllable division gives trouble.

With the child under ten and twelve the difficulty is often all

three types of speech, but with the adult most often only the neurotic speech.

With the neurotic speech I work for voice control. With the mechanical after the several specialists have done their work, the tongue and facial gymnastics, drills on letter positions, correct division into syllables and much speech is very beneficial. In the negligent speech the same letter positions, blend sounds, old memory work of simple rhymes, simple story telling, oral reading and much conversational work. The latter transfers the interest from self to more of the normal person.

As these deaf people are not at all unlike those having hearing but defective speech, we must always take into consideration the highly keyed nervous state in which they live. They hear with every square inch of their skin and bone.

Hence some physical activity must be arranged as the swimming, walking, rhythmic games and dances. Anything that brings into action the coarse muscle co-ordination will relieve the nervous pressure thus helping in that fine co-ordination which speech required.

In many cases of acquired deafness, the sense of equilibrium is destroyed, so the inability to swim head under, to walk straight and to not drag the heels has some effect on speech.

In acquired deafness not only must the lip reading be given but the difficulties of speech and voice must be watched as well.

One may work ever so hard to correct a fault and then not succeed, the chief reason for which rests on the back-ground information; by that I mean the complete history. To just the degree to which the medical history, the home history, the neurologist's report, the ear, eye, nose and throat specialists' reports, and the dental report, added to the psychological examination, will all the combined efforts work for that successful training these cases of acquired deafness should have.

Another thing needed is a greater knowledge on the part of the public that such work can be done and that there is real value to the one making the effort to have it.

How has it been done in some places? By those that have been helped continuing to help one another, by the knowledge on the part of the public of the work, by compulsory school laws, by the compulsory reporting to educational officers all the types of defects and then by the organizing of more day schools not in just

one city in the state but several centres can the training be given.

Like everything else in the whole world there must be co-operation on the part of those who understand with those who as yet do not.

How about the co-operation of the medical profession with the teaching profession for some of this corrective speech work? With united efforts prevent the speech defectives by taking care of the defective speech, and change the unhappy deaf to interested life-readers, thereby adding many useful men and women to society in the place of the useless self-pitied unhappy burden on society.

I have with me tonight two cases of acquired deafness, Irene aged 15, who was made totally deaf from spinal meningitis at the age of seven. She had attended school one year before becoming deaf. Irene entered the New Orleans School for the Deaf when nine years old. By that time she had lost all voice control and was not increasing her vocabulary for she was deaf and could not read the lips. She lived in a highly neurotic speech-atmosphere. During the five years and a half in the deaf class she has reached the fifth A. Grade, changed the speech from the rapid, neurotic high, uncontrolled speech to the conversational tone, acquired the ability to read lips and to converse with anyone with whom she is thrown.

She is a normal girl enjoying school, dances, and picture shows, mingles equally through the younger child and the older person. She was given this opportunity through the foresight of the specialist who knew the value of lip-reading and speech to the acquired deaf, and at the time of her deafness insisted upon the child's parents seeing that she had no other kind of instruction.

The other case, a returned soldier, now under training of the Vocational Board of this District, is Mr. Lee, 21 years old, and is 100 per cent deaf in one ear and 60 per cent deaf in the other. While with the Coast Artillery in France from exposure he had pneumonia, then measles and mumps. This left him with only a remnant of hearing. He is making use constantly of this remnant of hearing, thereby strengthening the auditorial center and correcting the neurotic-speech hesitancy that came with the deafness. He has not completed his lip-reading work, but is making more than the usual progress.

In this same work with the deafened soldiers another case of combined interest is a 22 year old boy whose hearing is minus in one ear and 50 per cent minus in the other. He had for a long

time middle-ear trouble before going into the service. With the deafness was the combined-speech trouble. Certain consonants and blend-sounds he seemed never to use in natural speech. These were worked over along with the lip-reading. In the two months he improved greatly in speech and acquired ability to read the lips rapidly. He is now taking a course in Mechanical Engineering under the Vocational Board.

Among the cases reported to me since I have been connected with the City Public Schools, is a boy. Charles was transferred from the Grammar School to the deaf class because he was too deaf to understand. His medical history gave a running ear during the first year of infancy, whooping cough at seven months, scarlatina at four years, adenoids removed at seven, radical mastoid operation at eight, ears operated again during the eighth year, measles at twelve. His social history shows that he does not enjoy play with other boys, probably because of lack of hearing. School history shows that he finished Grammar School at thirteen, and is now at fourteen and a half doing the second year High School Commercial course. By the close co-operation of the principal and departmental teachers of the Grammar School, Charles, with teachers of the deaf, he, in place of dropping out of school and being unprepared, is making preparation for useful citizenship. His speech-type is nasal, caused by a back oral inactivity, and a slightly relaxed jaw.

In the case of acquired deafness I have found that those caused by meningitis require the greatest care. Either the speech is neurotic and the voice low and deep, or high and non-volume in tone. The lip-reading work of these is not as satisfactory as of those gradually acquiring deafness. The difficulties of speech are very similar.

NEWS AND COMMENT

NATIONAL ANESTHESIA RESEARCH SOCIETY.—At a meeting of the Board of Governors of this Society held in Cleveland in March, it was voted to have the annual convention of the Society at Pittsburgh the week of October 4, the meeting to be in conjunction with that of the Inter-state Anesthetists Association, and the Pennsylvania Medical Society. There is also a possibility that the Western Pennsylvania Dental Association will join in the meeting. The Governors voted \$200 to be appropriated in prizes for the best papers on research in anesthesia, such papers to be read at the national meeting. The offer is open to all students, surgical, medical, and dental practitioners in the United States. A committee of three consisting of Drs. A. F. Erdman of Brooklyn, A. H. Miller of Providence and E. I. McKesson of Toledo was appointed to prepare a uniform anesthesia chart for use of hospitals.

DISABLED EX-SERVICE MEN now in Public Health Service Hospitals, or in certain private hospitals and sanitoriums, are receiving training for gainful occupations in vocational schools arranged by the Federal Board for Vocational Education. All work is being done under medical supervision and no work undertaken without approval of the medical officer in charge. Vocational schools are already started in P. H. S. hospitals at Perryville, Md., and Greenville, S. C., and in private sanitoriums at Saranac Lake, N. Y., Ruthland, Mass., El Paso, Texas, and Sanatorium, N. C. Work will soon be under way at P. H. S. hospitals at East Norfolk, Mass., New Haven, Conn., Alexandria, La., and Biltmore, N. C. General Horace H. Wood, director general of Soldiers' Homes, has offered the Federal Board space in all homes, and the home at Johnson City, Tenn., will have the first training class under this new management.

THE UNITED STATES DEPARTMENT OF LABOR announces the establishment of a national children's bureau in Belgium. The law establishing this bureau went into effect several months after the child welfare conference held under the auspices of our own Children's Bureau in the early summer of 1919. Three child welfare experts represented Belgium at that time. Their idea is to encourage and develop the protection of childhood, and especially to further education with regard to rules of child hygiene; to pro-

mote the organization of agencies interested in child hygiene, and to assist them by subsidies or otherwise; to assure supervision by the administrative authorities and physicians over the agencies thus protected.

PROF. F. DELAPERSONNE, assisted by Prof. Agrégé Terrien and Drs. Velter Prelat and Mombrun, Chief of Clinical Laboratory, of the Faculty of Medicine of Paris will on May 11, 1920, inaugurate a finishing course in ophthalmology, with clinical examinations, practical medicine and operative surgery and laboratory technique. The work will be conducted during May and June, and a special certificate of attendance will be issued on completing the course. Those desiring to follow the course should address the secretary of the Faculty of Medicine. The number will be limited to 40 and the fee will be 100 francs.

TYPHUS CURBED IN RUSSIA; SPREADS FAST IN SERBIA.—Announcement is made that the mortality from typhus fever has been reduced in Russia from 47 per cent to 6 per cent by the use of a new serum adopted by the Red Cross workers at Ekaterinodar, in the Kuban district of Russia. Confidence is expressed that the serum may save Russia from decimation by typhus. The disease has however again made its appearance in Serbia and is being spread with alarming rapidity by refugees fleeing from the bolsheviks on the south Russian Front. American Red Cross officers at the request of the government are preparing to disinfect every person entering the country.

THE UNITED STATES CIVIL SERVICE COMMISSION ANNOUNCES THE FOLLOWING competitive examinations:—Physician, Panama Canal Service, May 5 and July 7, 1920. Medical Interne, St. Elizabeth's Hospital, July 1, 1920. Junior Zoologist, May 19, 1920. Applicants must have graduated from college, university, reputable medical college or veterinary college of recognized standing as the case may be. Both men and women may enter the examinations for physician and medical interne. Applicants must submit with their application a photograph taken within two years of date of application. They should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., the Secretary of the United States Civil Service Board, Customhouse, Boston, Mass., New York City, New Orleans, Honolulu, Hawaii, Post Office, Philadelphia, Pa.,

Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Washington, San Francisco, Calif., Old Customhouse, St. Louis, Mo., Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R.

ASSOCIATION OF PHYSICIANS OF THE FRENCH LANGUAGE TO MEET.—The fourteenth French Congress of Medicine will be held in Brussels, Belgium May 19-22, 1920. The following subjects will be taken up and discussed: Syphilis of the Cardio-Vascular Apparatus; The Lipoids in Pathology and The Therapeutic Value of Artificial Pneumo-thorax.

RED CROSS COSTUME THE MODE IN THE BALKANS.—The American Red Cross uniform threatens to become the *dernier cri* in Albania and other Balkan countries where the organization is carrying on relief operations. Grateful children whom the Red Cross has fed and clothed insist that the costume of their benefactors must be the dress of Armenia, and they are eager to adopt it. In Scutari, Albania, hundreds of American sewing machines are humming to provide clothes for needy refugee families and labor for women who must have employment. Sewing classes have been opened in all the large Albanian towns, where hundreds of young girls are being taught plain sewing. Invariably their first attempt at designing clothes for themselves is a copy of the uniform worn by their Red Cross teacher.

THE SOCIETY FOR VISUAL EDUCATION was recently incorporated by a group of educators mostly prominent in university circles; the stated purpose of the society being for the promotion of visual education. It is not proposed to do away with text-books, models, maps or other educational apparatus, but on the contrary to supplement them and make them more available. The society also proposes to publish a monthly periodical called *Visual Education*, and has already issued the first number. In addition to the officers, Rollin D. Sailsbury, University of Chicago, president; F. R. Moulton, University of Chicago, secretary, and H. L. Clark, Utilities Development Corporation, vice-president, the personnel includes a board of directors which represents most of universities, a large general advisory board and special committees in all the various sciences and educational departments. The address of the organization is 327 South La Salle St., Chicago.

FIRE WOOD BY WIRE CABLE.—A steel cable stretched across an unbridged chasm in Montenegro is serving as a means of transportation for fire wood brought from neighboring mountains to the coal-less population of Podgoritza. An American Red Cross officer devised this scheme, which enables the people to utilize the great quantities of fire wood all dried and ready for burning left in the mountains by the Austrians in their hasty retreat a year ago. Destruction of all the bridges by the enemy made this fuel inaccessible to the people of the shivering town.

THE VISITING NURSE SERVICE of New York City is conducting a city-wide campaign to raise an amount of \$1,000,000, part of which will be used to establish day and night maternity centers. The center now established at 234 East Seventy-second Street is taxed to its limit.

CHILD RELIEF WORK IN HUNGARY.—Since August, 1919, American child relief workers in Hungary have distributed the following articles: 170 tons of sugar, 414 tons of milk, 290 tons of peas, 146 tons of fats, 37 tons of soap and 613 tons of flour. 105,000 children are being given one meal daily by this American relief organization.

DECORATION FOR SMITH COLLEGE RELIEF UNIT.—For work among the civil population in the retreat from Montdidier, the French Government has bestowed on the Smith College Relief Unit the silver medal of "Reconnaissance Francaise."

RED CROSS RECEIVES DONATION FROM JAPANESE.—A fund has been established by the Empress of Japan, the income of which will be used to promote public health and preventive medicine, under the direction of the International Committee of Geneva. It is intended to use the fund for the following purposes: 1, for work which the International Committee of Geneva consider advantageous for the general interest in their peace-time program; 2, to increase the popularity of the methods adopted by the Red Cross Societies and recognized by the best authorities for the prevention of or extirpation of tuberculosis and other malignant contagious diseases; 3, to aid the rescue work of the Red Cross Societies for victims of great disasters. Red Cross Societies desiring to obtain grants of funds should apply to the International Committee at Geneva.

AT A RECENT MEETING OF THE BOARD OF TRUSTEES, UNIVERSITY OF ALABAMA it was ordered by a vote of eight to two to remove the University medical school from Mobile, Ala., to the university site Tuscaloosa, Ala. The new ruling becomes effective at the end of the present session. (Daily Press.)

IN HIS ANNUAL REPORT, Dean H. H. Rusby of the College of Pharmacy of Columbia University emphasized Pharmacy as a field for women. With the increased popularity of pharmacy as a profession for women, there is a corresponding increase in the number of women who are preparing themselves to take up this line of work. In commenting upon the large increase of women in attendance during the past year Dean Rusby says that they have won their full share of class honors.

ORDINANCE FOR VENEREAL CLINIC.—On March 2, the city council of Peoria, Ill., passed an ordinance for the establishment of a municipal clinic for the treatment and isolation of venereal diseases. The ordinance provides for a commissioner of the dispensary with a salary of \$3,000 a year and authority to declare quarantine if certain phases of the ordinance are not observed.

MEETING OF AMERICAN UROLOGICAL ASSOCIATION.—The seventeenth annual meeting of this association was held at the Hotel Commodore, New York City, March 23-25, under the presidency of Dr. Arthur L. Chute, Boston. Officers elected for the ensuing year were as follows: President, Dr. W. F. Braasch, Rochester, Minn.; vice-president, Dr. H. G. Bugbee, New York City; secretary, Dr. Henry L. Sanford, Cleveland, Ohio, re-elected; treasurer, Dr. James A. Gardner, Buffalo, re-elected. Montreal, Canada was chosen as the next meeting place.

FEES RAISED IN CHICAGO.—A new scale of fees amounting to fifty per cent increase was adopted at a recent meeting of the council of the Chicago Medical Society. Some of the new fees adopted are as follows: House visits, former maximum \$5, now \$15; night visits, formerly \$3 to \$10, now \$10 to \$50; operations involving fractured ribs, formerly \$25 to \$50, now \$50 to \$500; toe amputations, formerly \$15 to \$50, now \$50 to \$200; major operations will range from \$200 to \$10,000. The scale will be flexible, and will be governed by the patients' ability to pay.

THE BAPTIST MEMORIAL SANATORIUM is working out plans to make Dallas, Texas, the medical center of the southwest by the building and equipment of a hospital and medical college to be the equal of any of the larger institutions of the country. Funds are being raised for the purpose. The Baptist Memorial Sanatorium, Baylor Colleges of Medicine, Dentistry and Pharmacy, and the Baptist Training School for Nurses will be used as the basis to elaborate and form such a medical center.

TO BUILD NEW WOMAN'S HOSPITAL.—It was decided at a meeting of the board of directors of the New Orleans Woman's Hospital to begin a campaign to raise funds for a new hospital. Reports showed a waiting list of women desiring admittance from all over the state, scores of applicants being disappointed owing to present inadequacies. During the month of March 749 cases were treated, 386 old and 363 new cases. 316 prescriptions were filled.

PERSONALS.—Among the Louisiana doctors who have returned from service in this country and abroad are the following: A. S. J. Hyde, Baton Rouge; H. L. Ballowe, Buras; R. S. Kemp, New Orleans.

REMOVALS.—Dr. W. B. Singletary, from Wilson, La., to Baton Rouge, La.

DIED.—On April 1, at San Francisco, Cal., Dr. William Martin, aged 71 years; medical inspector of the United States Navy, retired, and noted for his work in combating yellow fever in Florida and Louisiana.

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.

Geriatrics, by Malford W. Thewliss, M. D. C. V. Mosby Co., St. Louis.

Among the philosophies of conserving the longevity of human life, not a few have ventured the exceptional theories, notably Metchnikoff. Now comes a systematic study of old age from the physical, psychological and practical sides. The essay is worth while and is recommended to all physicians who have the humanity interest in old age. The author concludes his book in proposing particular treatment for the ills which overtake the aged.

DYER.

Pellagra, by H. F. Harris, M. D. McMillan Company, New York.

The author has brought together a large amount of material from many sources, covering all phases of pellagra. While a zeist himself, the author presents the various theories until now advanced to explain the origin of pellagra. It is interesting to note the importance the author attaches to the work of the Strambios in the late eighteenth and early nineteenth centuries, a proper tribute when it may be stated that no one has since so clearly presented the clinical entity of pellagra as these early writers.

Dr. Harris has overlooked the rather interesting observation of Strambio (G.) on the relation of pellagra to the scarcity of fuel in the Piedmont, during the severe winters of his time. Thru this, the people lived in the stables among the cattle, because of the incidental warmth of the animals. To the association with the cattle is attributed a possible occasion of pellagra.

Dr. Harris' contribution to pellagra is wholly creditable and should be widely read. It is interesting to note that this is the fourth extensive work on pellagra to appear from the pens of Southern writers (five if we include the translation of Marie). The review of the arguments of the author with the analysis of the views of other theorists still leaves the cause of pellagra an open problem.

DYER.

Electricity in Medicine, by George W. Jacobs, M. D. and Ralph Jacobs, A. B., M. D. P. Blakiston's Son & Co., Philadelphia.

This valuable work is comprehensive covering the study of the pure physics of electricity, its technical methods and its application to conditions of a medical nature to which this physical remedy best applies. It is a work too important to be overlooked by the physician engaged in such practice and too valuable to be missed by the man who wishes practical knowledge well presented.

DYER.

PUBLICATIONS RECEIVED

- W. B. SAUNDERS COMPANY**, Philadelphia and London, 1920.
Physical Diagnosis, by John C. DaCosta, Jr., M. D., 4th edition.
Orthopedic and Reconstruction Surgery, by Fred H. Albee, A. B., M. D., Sc. D., F. A. C. S.
Diseases of Infants and Children, by J. P. Crozer Griffith, M. D., Ph. D., Volumes 1 and 2.
The Medical Clinics of North America, Vol. 3, No. 4, January, 1920.
Surgical Clinics of Chicago, Vol. 4, No. 1, February, 1920.
- THE MACMILLAN COMPANY**, New York, 1920.
Common Diseases of the Skin, by G. Gordon Campbell, B. Sc., M. D., C. M.
The Treatment of Syphilis, by H. Sheridan Baketel, A. M., M. D.
- WILLIAM WOOD & COMPANY**, New York, 1920.
Manual of Surgery, by Albert Carless, C. B. E., M. B., M. S., Lond., F. R. C. S., 10th edition.
Manual of Practical Anatomy, by Arthur Robinson, Prof. of Anatomy, University of Edinburg, 7th edition.
- F. A. DAVIS COMPANY**, Philadelphia, 1919.
A Laboratory Manual of Physiological Chemistry, by Elbert W. Rockwood, M. D., Ph. D., 4th edition revised and enlarged.
Laboratory Manual of Pharmacology, by A. D. Bush, B. Sc., M. D.
- WASHINGTON GOVERNMENT PRINTING OFFICE**, Washington, D. C., 1920.
Special Tables of Mortality from Influenza and Pneumonia in Indiana, Kansas and Philadelphia, Pa., September to December 31, 1918.
Mortality Statistics 1918, Bulletin 141.
U. S. Department of Agriculture, Service and Regulatory Announcements Supplement. Notes of judgment under Food and Drugs Act.
Public Health Reports, Volume 35, Nos. 9, 10, 11, 12, 13.
- MANILA BUREAU OF PRINTING**, Manila, P. I., 1919.
Report of the Philippine Health Service, for the fiscal year from January to December 31, 1918.
- REPRINTS.**
- Perils from Faculty Postures, by J. Madison Taylor, M. D.
Fibromyositis of "Rheumatic Conditions," by J. Madison Taylor, M. D.
Tonic Spasm as a Cause of Disability, and the Remedy, by J. Madison Taylor, M. D.
Tremor, With Special Reference to Obstinate Types, by J. Madison Taylor, M. D.
Self-Regulation, by J. Madison Taylor, M. D., Cardio-Vascular-Renal Regulation, by J. Madison Taylor, M. D.
The Greater New York; Insured and Otherwise by Job. E. Hedges, General Counsel the Association of Life Insurance Presidents.
Salines Incidentally and Dorsey's Magnesia Solution with Formula Particularly, by Samuel E. Earp, 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, 1920.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1		1
Intermittent Fever (Malarial Cachexia)			
Smallpox	3	29	32
Measles	1		1
Scarlet Fever	1		1
Whooping Cough			
Diphtheria and Croup	4		4
Influenza	48	27	75
Cholera Nostras		11	11
Pyemia and Septicemia		1	1
Tuberculosis	33	36	69
Cancer	22	8	30
Rheumatism and Gout		2	2
Diabetes	2	1	3
Alcoholism		1	1
Encephalitis and Meningitis	3	2	5
Locomotor Ataxia	1		1
Congestion, Hemorrhage and Softening of Brain	34	11	45
Paralysis	4	2	6
Convulsions of Infancy			
Other Diseases of Infancy	10	9	19
Tetanus		2	2
Other Nervous Diseases	2	2	4
Heart Diseases	74	36	110
Bronchitis	3	2	5
Pneumonia and Broncho-Pneumonia	58	77	135
Other Respiratory Diseases	6	2	8
Ulcer of Stomach	2		2
Other Diseases of the Stomach	1	3	4
Diarrhea, Dysentery and Enteritis	15	7	22
Hernia, Intestinal Obstruction	3	3	6
Cirrhosis of Liver	3	3	6
Other Diseases of the Liver	1	2	3
Simple Peritonitis	1		1
Appendicitis	3	1	4
Bright's Disease	27	20	47
Other Genito-Urinary Diseases	11	12	23
Puerperal Diseases	5	2	7
Senile Debility	5	1	6
Suicide	4		4
Injuries	17	13	30
All Other Causes	43	22	65
TOTAL	451	340	791

Still-born Children—White, 27; colored, 17; total, 44.

Population of City (estimated)—White, 290,000; colored, 110,000; total, 400,000.

Death Rate per 1000 per annum for Month—White, 18.66; colored, 37.; total, 23.73. Non-residents excluded, 20.76.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure	30.07
Mean temperature	60.
Total precipitation	3.28 inches
Prevailing direction of wind	southwest.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL

EDITORS:

CHARLES CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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JUNE, 1920

No. 12

EDITORIAL

THE A. M. A. MEETING.

With a registration of nearly 3700, the seventy-first meeting of the national association, held in this city at the end of April, passes into history as at least one of the big meetings of the body. In fact, the only criticism which could be urged fairly against the meeting was its large size, as it led to some overcrowding at a few of the functions.

The officials of the association consider the meeting a successful one and have expressed and published many favorable comments; the exhibitors were all delighted at the immediate results obtained, many having booked more orders than at any previous session;

the great majority of the members were pleased and had a good time.

The arrangements were convenient, for the various section meeting-places were within easy walking distance of the hotels and the greatest distance between each other was only six or seven blocks.

The entertainments were more numerous than usual and were evidently much enjoyed, the only disgruntled being the ones who could not get in. It is regrettable there were any such, but the buildings, though roomy, were not elastic and we had more people than had been expected. The great feature of course, was the carnival ball held in conjunction with the president's usual reception. It furnished a beautiful sight and gave the uninitiated a good idea of what a regular carnival ball is like. Three tableaux were staged, representing scenes from Moliere's "Le Malade Imaginaire." The queen of the ball was crowned, the members of the cast went through some evolutions, then the dance was on—first only the maskers and the lady guests were permitted on the floor, but after eight dances the members in general were granted the privilege. The entertainment committee deserves much credit for the execution of the plan. The out-door festival at the City Park was also declared a beautiful affair and was different from the every day function. Then there were many teas, daily excursions in the old French part of the city; steamboat rides to view the harbor, etc., not to mention the many smokers, banquets, and reunions held by the various affiliated societies, fraternities, and fellow alumni.

The weather, in the main, was quite agreeable. On the first day our visitors were treated to a regular tropical downpour, but that was worth while in its way and did no damage even to the exhibits in tents. For the rest of the time, the air was balmy, not sultry, and there was plenty of sunshine.

While no epoch-making discovery was announced, much of the section work was instructive and edifying, while the discussions were interesting.

Dr. Hubert Work, of Colorado, was elected president; Dr. Isadore Dyer, of this city, was named vice-president, while Dr. Alexander Craig and William Pusey were re-elected secretary and treasurer, respectively.

Boston was chosen as the place for the next annual session and

we can only hope that everything will be as well next year as it was when the association met last in Boston, for we have the most agreeable remembrance of that occasion.

THE HOSPITAL SITUATION IN NEW ORLEANS.

New Orleans has an estimated population of about 400,000. For a city of that size, the liberal estimate of hospital provision necessary to care for the indigent sick would place the bed space at about 2,500 free beds.

Other cities of about the same size as New Orleans have like needs. Some cities have met the deficiency by provision in private hospitals which have part-pay beds (i. e. beds for which nominal charges of \$1 or \$2 a day are made). Cincinnati has 1,701 beds in general hospitals; Minneapolis, 1,482; Newark, N. J., 944; San Francisco, 2,385; Washington, D. C., 2,116.

New Orleans has 1,554, with the following distribution: Charity Hospital, 1,219; Touro Infirmary, 100, (with 140 private beds); Hotel Dieu, 57, (with 100 pay beds); Presbyterian, about 10, (with 80 pay beds); Illinois Central Hospital, 50, (with 20 pay beds); Eye, Ear, Nose and Throat, 30; Hospital for Women and Children, 38; Flint-Goodridge (colored), 50, a total of over 1550.

With the large Charity Hospital, we would seem to have enough public beds, were it not for the fact that the only hospital of any size near New Orleans is at Shreveport (a State Charity Hospital), three hundred and twenty-seven miles away. There is no large hospital in Texas, Mississippi, Arkansas or Alabama, and because of the traditions of exceptional efficiency of the Charity Hospital, all sorts of patients come for treatment. It is safe to estimate that the daily service of the Charity Hospital is discounted 25% by patients from territory outside the State. Again, the Charity Hospital is a State institution and not a city hospital. It is under State political direction and the city has no voice in its management. The use of the hospital for purely city cases is limited by space available, and it may again be estimated that fully 50% of the remaining bed space is used by Louisiana patients not resident in New Orleans and our total of 1,219 beds at Charity Hospital, then, may be reduced to less than 500 beds for city patients. Of

the 335 beds at other New Orleans institutions, probably 50 are likewise used for outside patients, so we may figure that New Orleans in reality has only about 750 hospital beds available for its own people, against a 2,000 or 2,500 bed requirement. The deduction is obvious:—NEW ORLEANS NEEDS MORE HOSPITAL PROVISION.

As the Charity Hospital is under State political control and administration, it can not be a first-class institution because the State does not provide adequate sustenance, and the City will not do so. More than this the methods of administration of the Charity Hospital will not invite private endowment sufficient to modernize it, or to increase its capacity, and the State will not increase the facilities of a hospital which already is insufficiently supported. If the Charity Hospital were a purely municipal hospital, put under the direction of a perpetual Board, and connected with a stable educational body, capable of modernizing its methods and thereby inviting endowment, expansion in bed provision would be possible, and no additional public hospital would be needed here. Such a consummation, however, is at this time, impossible of realization.

The purpose of a hospital is first of all the care of the sick, but to care for the sick properly there is needed a fixed organization, which must embrace a proper personnel, including the administration, the nursing, and by far the most important, an efficient and adequate medical and surgical staff.

It is the experience of hospital management in all large cities in the civilized world that the best staff physicians are found among those who study and who teach medicine. For eighty-five years New Orleans has had a medical school, the faculty of which has consistently for all of those eighty-five years given free service to the Charity Hospital. As a matter of fact, the faculty of the Tulane Medical College has made Charity Hospital possible and the brilliant achievements in surgery and in medicine have been accomplished in the Charity Hospital by members of its faculty. The house surgeons of Charity Hospital for years were teachers of the Tulane Medical College.

This leads to the general proposition that no hospital should be projected in New Orleans until an adequate medical and surgical staff is provided and that such a staff, to represent a modern efficiency, should be made up of teachers in medicine and surgery.

In other words, any hospital in New Orleans, to have a proper purpose should be scientifically planned and conducted and manned, and only college and hospital trained men are fitted for such tasks.

Accepting the general proposition, then, that New Orleans needs more hospital facilities, the next proposition is, How is the deficiency to be met?

We have stated that New Orleans needs 2,000 or 2,500 free beds; in addition New Orleans needs hospital service for the care of the sick in New Orleans and from adjacent territory who can pay small or larger charges. As a matter of fact, if properly educated, the population of a city the size of New Orleans would support a hospital service of as many beds as the free service above projected, if a scaling charge could be made. Havana, Cuba, has two or three large private hospitals, wonderfully equipt, which take care of the membership of the respective fraternal bodies concerned.

At present New Orleans has only a total of about 400 beds for private patients (140 at Touro, 100 at Hotel Dieu, 80 at the Presbyterian, and the rest at several smaller institutions). There are over 600 physicians of all sorts in New Orleans, over three hundred of them drawing patients from the State at large and from neighboring states, yet there is daily complaint that patients can find no hospital accommodation. The larger private hospitals, Touro, Hotel Dieu and Presbyterian, are like the crowded hotels, with waiting lists.

A student of the economics of the situation submitted the argument that the public is so educated to the advantages of systematic care in medical institutions that those who are able prefer to go to a hospital when sick rather than to stay at home. The net cost to the individual, after paying for nurses, medicine and supplies at home, is often less at the hospital than at home. He submitted that New Orleans will soon need 2,500 private beds to meet such a demand.

The deduction carried further, then, would be that New Orleans needs hospital facilities estimated at a total of 2,500 for public service and planned for as many private beds ultimately.

Any large conception of a new hospital for New Orleans must contemplate a combined part-pay and charity hospital, or, if the maintenance is considered, there must be a sufficient number of private beds at full pay.

How far can these needs be satisfied?

In Liberty Bond sales, in Red Cross drives, in Y. M. C. A. contributions, in the allied charity donations, New Orleans grew accustomed in war time to think in millions. The time is about ripe for the New Orleans people to think of their own needs. There is urgent need of more beds for patients, private and pay. There is real need for a *first-class* hospital.

The Harvard Medical School had one gift of \$10,000,000, which made a first-class out of a second-rate medical school. Since, several million dollars have accrued to this school. Johns Hopkins Medical School has had a number of gifts, totaling about \$7,000,000. Washington University (in St. Louis) has had gifts amounting to fully \$12,000,000. The medical school of the University of Chicago has about \$11,000,000 to work upon in making a first-class school. Cornell University Medical School, in New York, has received almost \$6,000,000 in the last ten years.

The Tulane Medical School has received altogether a little over \$1,000,000 in its eighty-five years of existence, and yet ranks with the best schools in the country because of the excellent and unselfish work of its faculty. This has been a direct service to the people of New Orleans, for among New Orleans' many features, none is better or more favorably known than this same medical school.

Tulane needs a hospital for teaching purposes, which it may direct and control in its medical and surgical features. It needs such a hospital now while the medical schools are reorganizing. We cannot hope nor ask New Orleans for ten million dollars, but if Cincinnati and Atlanta can give to their medical schools, why not New Orleans? If New Orleans gives, others will follow.

With a first-class medical faculty freely giving its service to a first-class institution the New Orleans hospital situation would be relieved.

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. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

CHOLELITHIASIS ASSOCIATED WITH ANGINA PECTORIS. CASE REPORT.*

DANIEL N. SILVERMAN, M. D., New Orleans, La.

The advent of intensive studies in gastro-enterology has brought us many special and direct methods of examination in that field of medicine. The successful application of the gastric and duodenal tubes, string test, proctoscope, Röntgen-ray and others has sufficiently advanced so that they may now be placed among the better methods of medical diagnosis. Due in great part to them we are to-day able to recognize new conditions, as well as to more readily determine the presence of those that previously existed. This wide scope of diseases includes affections of nearly every organ of digestion.

As is well known a great number of digestive disturbances are secondary to maladies in other parts of the body but their relationship is not always a clear one. In turn, the cause is very often aggravated by the effect. For example, Osler and McCrae¹ called attention to the increased incidence of gall-stones in heart disease, particularly mitral and aortic regurgitation. While on the other hand, Chlapowski² many years previously discovered that "dyspepsias" were prematurely terminating or at least aggravating some of his cases of angina.

Because of the comparative rarity of a combined cholelithiasis and angina pectoris, the close association in this case of those two clinical entities in many respects, namely origin, development, progress, and diagnosis accounts for a detailed report.

Case Report: Mr. W., white male, factory foreman, 56, married, was first seen in emergency on January 20, 1920. He was sitting upright with both feet elevated, perspiring profusely, and gasping for breath, evidently in very distressing circumstances. The main complaint was severe pain over the heart and a feeling of approaching death. The pulse rate was 110, radials equal and regular but of high tension with sclerotic walls. Blood pressure readings were 175 MM. systolic and 105 MM. diastolic. Immediate relief was instituted by the admini-

* Read before the Orleans Parish Medical Society, April 12, 1920. (Received for publication May 10, 1920.—Eds.)

stration of nitroglycerine. Two days later the patient was able to give satisfactorily some information relative to his physical status. This was the first attack of such severity and was marked by a continuous agonizing pain over the heart with a feeling of compression around the left side of the chest. The pain was sticking in character and radiated from an area near the center of the heart to the left shoulder and down the left arm to the tips of the small and ring fingers of the hand. These symptoms came on suddenly as he was walking home from work. Upon reaching home, complete exhaustion overcame him but there was no loss of consciousness.

Family History: His father died of Bright's Disease at the age of 46. His mother died at the age of 82. There are two brothers. One has high blood pressure and the other age 50 has attacks of unconsciousness, thought to be due to heart disease. His wife has not had any miscarriages and he is the father of 5 healthy children.

Habits: Has used alcohol moderately on occasions but did not smoke or use drugs.

Personal History: The patient has had the usual diseases of childhood. He did not have typhoid or any other acute illness thereafter. Gonorrhea and venereal sores of any character were never acquired and are always emphatically denied in the history. The first real illness of any note came at the age of 18, when his nose became sore internally and scabs formed. The latter would fall out occasionally, accompanied by a muco-purulent discharge. This occurred at intervals for the ten years following. Then he was advised to go to Hot Springs, Arkansas, for treatment because of ulceration and necrosis of the bone dividing the nose. In that year, 1892, he received courses of mercurial inunctions, potassium iodide and hydrotherapy. With this and the removal of a small piece of the septum he was somewhat relieved. Nevertheless, some obstruction to free nasal respiration persisted.

Being possessed of a fairly good state of health, the patient did not receive any further anti-specific treatment for the next eight years. In 1900, the disease showed itself again with the appearance on the right leg above the instep internally of a small ulcer. This exacerbation was accompanied by the first gastro-intestinal disturbances of a disagreeable nature. They consisted of dyspepsia, which was marked by excessive belching and regurgitations of sweetish water-brash immediately after and sometimes one or two hours after meals. In a few weeks, he had painful sensations in the epigastrium, worse after ingestion of food, but sometimes when fasting. He became afraid to eat, especially at night. Since that time, 1911, there has been some dyspepsia at irregular intervals of two or three months with one severe attack of pain over the lower portion of the liver causing him to remain in bed for a week. There was slight fever but no jaundice. The diagnosis was pleurisy as well as he can remember.

Present Illness: Two weeks previous to this heart attack he would witness slight pressure pains in the chest over the heart, coming on after eating and lasting about fifteen minutes. These sensations occurred about three times during that period, gradually increasing in severity. The pain becoming worse radiated to both shoulders and down the arms, more so in the left. This passed away under the term "indigestion."

Within the next few days, he was seized with agonizing and ex-

cruciating pain while walking. This ushered in a typical paroxysm of angina which lasted about twenty minutes. The picture was a very discouraging one for the short interval.

Physical Examination: The patient presented a well developed and nourished body, somewhat obese. His skin was perfectly clear. The temperature was normal and pulse rate had been reduced to 90.

Eyes reacted to light and accommodation. A subsequent ophthalmologic examination revealed a few dilated retinal veins, discs were clear and there was no evidence of sclerotic changes.

The nose externally presented a short scar within and about one third the length of a bridge depression which appeared to be a partial saddle-back condition.

The ear and throat were negative to any gross changes.

All of the lower teeth were decayed and were said to be bad since the age of 16. The upper set were mechanical.

Most of the lymph glands, including the epitrochlear and cervicals, were not palpable. The inguinal and femoral chains were small.

Lungs were normal. There was an increased dullness above the upper border of the heart extending into the right and left second interspaces for about three-fourths inches. The percussion note over the manubrium was duller than the note over the body of the sternum, a sign suggested by Lemann (3) and found in neoplasms, enlarged glands, aneurisms, and other abnormalities in the upper portion of the mediastinum. Cardiac sounds were feeble and hardly audible, the rate being 90, the same as that of the pulse which was characterized by high tension.

The liver and the spleen were not palpable and the abdomen was negative with the exception of slight sensitiveness in the right hypochondrium at the level of the right costal margin.

Reflexes were normal.

Urinalysis was negative chemically but the sediment showed a few leucocytes. Blood picture was normal with a total white count of 7500, and no abnormalities in the smear. The Wassermann reaction was weakly positive.

Blood pressure readings were reduced to 135 MM and 75 MM diastolic and the pulse rate to 72.

Slight sticking pains over the heart persisted for a few days but the general condition improved under absolute rest in bed, potassium in increasing doses and purgation. This well-being continued for twenty days when I was asked to see him as soon as possible as he was having another acute attack. To my surprise, it was apparent that he was a victim of an abdominal condition with a symptom-complex entirely different from the previous one. He tried to hold his breath and complained of an intermittent colicky pain in the stomach on the right side and around into the back. Breathing aggravated the pain and the body could not be shifted easily from side to side. The abdomen was distended and there was a desire to belch. The muscles over the right hypochondrium were very rigid and resistant to pressure which produced severe pain over the gall-bladder area with nausea. His bowels had been active up to this time. Hot applications and enemata did not give relief but morphia did. The blood pressure was 145 MM systolic and 95 MM diastolic. The following day the dull aching pain with rigidity of the muscles and sensitiveness to pressure continued.

Fluoroscopy of the chest demonstrated a moderately dilated aorta throughout without enlargement of the heart. Radiographic examination was negative for biliary calculus.

The urine and blood picture remained normal.

Feces were negative for parasites and occult blood.

The gastric contents one hour after an Ewald test-breakfast gave a free HCl 36 and total acid 42 with no abnormal constituents macroscopically or microscopically.

The fasting stomach contained bile. Aspiration of the duodenal contents revealed a turbid golden-yellow bile containing flakes of mucus.

A second examination of the same character, two weeks later, gave similar results from the stomach and duodenum.

Soreness persists and the gall-bladder remains sensitive to pressure with the muscles slightly rigid one month after the acute seizure. Meanwhile, he has had increasing doses of iodide, mercury by mouth and three doses of neosalvarsan intravenously.

Comment: The subjective and objective manifestations of angina pectoris major, according to the simple classification of Russell⁴, clearly presented themselves in the above case. There is proven evidence of permanent anatomical change in the heart's vessels producing the paroxysm.

In favor of the diagnosis of cholelithiasis we have firstly, the inaugural symptoms of Moynihan previously spoken of by Molly as "gall-bladder dyspepsia;" secondly, the localized abdominal colic with its accompanying phenomenon. On these symptoms alone, in an otherwise simple case, we could base our opinion when it is learned that the percentage of gall-stones is 5.94 in 80,802 autopsies recorded by 19 different American and European authors⁵, Stanton⁶ reports 10 per-cent of positive cases in all autopsies above 30 years of age.

The value of röntgenology in gall-stones disease has been determined by the average results of many authors, Holmes and Ruggles⁷ have shown a negative diagnosis to be of no positive value and conclude that the stones must contain a sufficient amount of calcium salts to cast a shadow. This is true in only 20 to 30 per-cent of their cases. Case, Cole, and Carman, quoted by Carman and Miller⁸, do not give higher than 50 per-cent of positive cases.

In the last few years duodenal intubation for the diagnosis of biliary affections has gained considerable prominence. Among the very first advocates of this method are Einhorn⁸ and Hemmeter¹⁰. Their experiments, confirmed by others, demonstrated that turbid

bile, varying in color and intensity of color in different cases represents a diseased gall-bladder.

For the present, the two pathological states in this one patient cannot be considered as having any definite causal relationship. Syphilis as a cause of the cardio-vascular lesions producing angina is an established fact. Whether this systemic disease may be a predisposing factor in some cases to the formation of gall-stones, either by the spirochetes or their toxins producing a hypercholesterinemia or in some other manner remains unsolved.

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DISCUSSION OF DR. D. N. SILVERMAN'S PAPER.

Dr. A. L. Levin: I am not familiar with the case which Dr. Silverman described very well, but it seems to me that there is not enough evidence that the case really was one of cholelithiasis. Cholecystitis probably always precedes cholelithiasis, and although the assertion is often made that it is uncommon as an independent affection, nevertheless, we must recognize the fact that a non-calculous inflammation may occur with symptoms that might simulate an attack of gall-stone colic. I believe it is wise to adopt the tactics of those physicians who no longer make the diagnosis of gall-stones, but merely of gall-bladder trouble, avoiding thereby embarrassing explanations. W. F. Cheney and D. Riesman, several years ago, have discussed this subject very ably and classify symptoms of chronic cholecystitis under two headings—local, pointing direct to the gall-bladder and reflex, disturbances of digestion, suggesting the stomach as a seat of disease. One must be very careful in recognizing the gall-bladder as a causative factor of indigestion. Of late, I realized it more than ever and will probably be able in the near future to give you a paper on syphoning of the gall-bladder for quick relief of pain.

The relationship of gall-bladder trouble and angina pectoris is not uncommon. Cheney and Riesman make the following statement: "It should be remembered that the gall-bladder may be the seat of focal infection giving rise to disease of the heart; quite frequently, a systolic

murmur is found in patients suffering from gall-bladder disturbances, and in some the myocardium is evidently affected giving rise to such symptoms as dyspnea, cyanosis and even pain of anginal character." Reisman, in such cases, advises an operation and claims that the heart symptoms have disappeared after the operation. Attention should be paid to such conditions.

Dr. Eustis: The two conditions referred to in Dr. Silverman's paper have been associated in a fair proportion of my cases and that surgical interference is advocated as the cardiac disturbance subsided when the cholecystitis is corrected.

PROPHYLACTIC INCISIONS OF THE VAGINAL OUTLET DURING LABOR.*

By WALTER E. LEVY, B. Sc., M. D., New Orleans.

* Read before the Orleans Parish Medical Society, April 12, 1920. (Received for publication May 10, 1920.—Eds.)

To those of us doing obstetrics, the delivery of a primipara without a tear, either anteriorly or posteriorly, is considered quite an accomplishment. But, in doing so, are we aware of what might have occurred, and in the greater percentage of cases does frequently occur beneath the "intact mucous membrane," viz: a stretching of the pelvic diaphragm to such an extent as to ultimately favor the condition of a rectocele, a cystocele, and later a descensus uteri.

Let us stop for the moment, and consider briefly the anatomy and embryology of the soft parts of the birth canal. As all of you well know, the vagina is a muscular, membranous passage, which extends from the vulva to the uterus, and is formed by the fusion of the caudal ends of the Muellierian ducts. The inner tunic of the vagina, consisting of mucous membrane and its reduplication, the hymen, is embryologically and anatomically continuous with that of the corpus uteri. External to the mucous layer is a muscular coat, consisting of two layers, an external longitudinal and an inner circular. In addition to this, there is a fibrous coat, which connects the vagina to the surrounding organs. In its upper part, the vagina is in relation to the base of the bladder, and lower down to the urethra. The greater portion of the posterior wall is interposed between the rectum and the vagina. The sides of the vagina are enclosed between the levatores ani muscles. The vagina of a nullipara, graphically viewed, would show the relationship of its constituent parts forming two lines which cross at

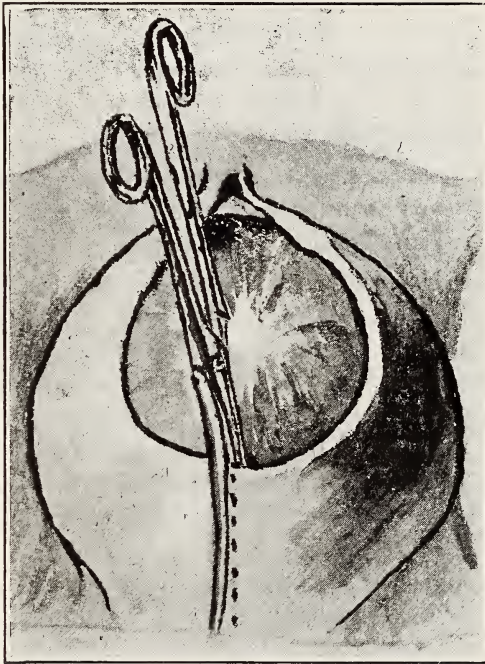
right angles; this is, the labia fall together forming the perpendicular line, and the anterior and the posterior walls approach each other forming the horizontal line. It is the relationship that we should strive to maintain.

The part of greatest obstetrical interest and importance is the pelvic floor. The structures entering into its formation are the pelvic fascia, levatores ani and coccygeus muscles, perineal muscles, sphincter vaginae and sphincter ani, the uro-genital septum, fat, skin, and the connective tissue. The levatores ani are the structures of prime importance, and, acting as a sling, practically form, along with the pelvic fascia, the support of the entire pelvic floor. Contrary to the general thought, however, only a few, and relatively few fibers, of the levator meet between the rectum and vagina. These are Luschka's fibers.

The subject of enlarging the vulva outlet and the importance of the prevention of lacerations of the perineum were appreciated even in the days of Hippocrates. Various methods of treatment were designated to accomplish this end, including dilatation with fingers, employment of lubricants, the use of colpeurynter, etc., all of which ultimately lead to the employment of prophylactic incisions. These resolved themselves into the lateral incision, or episiotomy, (or bilateral episiotomy), and the median incision, or perineotomy. Neither of these two has been frequently described in the literature, but I shall attempt in this paper to contrast their relative merits, and hope to show where perineotomy, from an anatomical and surgical standpoint, is preferable.

First, let us consider the more usual indications for the employment of either of the above. These are resistant perineum, especially of the type found in old primiparae, abnormalities in the size of the child, and when an indication presents for a rapid delivery. That either an episiotomy or a perineotomy are considered good obstetrical procedures may be gathered from the numerous men of prominence who recommend their use. One of the earliest to recommend a prophylactic incision, as I like to term it, is Jewett, who in the American Text-book of Obstetrics, says that no method yields better results for the ultimate integrity of the pelvic floor. Brodhead, writing in the *New York Medical Journal*, under the title of "Episiotomy, and a Plea for its More Frequent Use" says that the operation is simple, and devoid of all danger. De Lee also highly recommends its use with the above indications

present, and at present uses it in the majority of his primiparous deliveries. C. G. Child, Jr., in an article entitled, "Episiotomy: Its Relationship to the Proper Conduct of Labor," strongly recommends episiotomy, giving a series of 116 cases, of which 112 were primiparæ. Harrar, writing in a recent issue of the *American Journal of Obstetrics*, states that in 44 percent of the primiparous labors at the New York Lying-In Hospital, definite lacerations requiring repair occur, and strongly recommends, as we do, the median incision, or perineotomy.



Now as to the advantages of the median incision over the lateral one, I consider the following the salient ones, viz: The median is the more anatomical of the two, and being in the mid-line, which is the weakest point of the perineum, it naturally tends to prevent further tearing, and it allows for an equal enlargement of the vaginal outlet. This is just the contrary with perineotomy. Better union, due to its very position, is obtained in the median position. The chief advantage, and one which it seems to me that lateral episiotomy defeats, is that the muscles constituting the pelvic floor are not injured.

As to the actual operation of perineotomy, we proceed as follows: The patient is anesthetized to the surgical degree and then put in the lithotomy position. The perineum is sterilized with tincture of iodine and the rectum is then protected as in ordinary perineorrhaphy. Then, inserting two fingers between the advancing head and the tensed perineum, an incision is made between the two fingers, adhering strictly to the mid-line of the perineum.

The length of the incision, which is sometimes carried down to the sphincter ani, depends upon various factors, viz: the size and rigidity of the outlet of the birth canal, and the relative size of the presenting part.

Closure of the wound is made as follows: Each side is grasped by a Smith hook placed just at the level of the fourchette. If the incision has been fairly deep, two or three buried sutures of twenty day chronic No. 3 catgut are employed. The more superficial structures, including the skin, are then approximated by interrupted sutures. There are two points in the tying of these sutures that I wish to stress and that is, do not put too much tension on them as a swelling of the parts always occurs, and the sutures are likely to cut through, and secondly, tie at least three or four knots, so as to make sure the sutures do not become untied when they become moistened.

In concluding, I wish to stress the following: Perineotomy, as such, or in the combination with low forceps, is an excellent surgical and obstetrical procedure as it relieves the undue strain upon, and lessens the stretching of the structures entering into the formation of the pelvic diaphragm and, furthermore, in reducing the time of delivery, relieves a great deal of pressure upon the child's head, a feature which is so often passed over lightly by the average physician.

DISCUSSION OF DR. LEVY'S PAPER.

Dr. J. W. Newman: I have listened with great interest to Dr. Levy's excellent paper and wish to heartily agree with him on all the salient points that he has brought out.

Two points, however, I wish to stress more emphatically than did the Doctor, and those are the prevention of injuries to the anterior vaginal wall, and to tears in general. The former are of importance due to the fact that they are so often overlooked after delivery, and are dangerous, not only favoring injuries to the urethra, the formation of a cystocele, etc., but are also open avenues for the entrance of infection.

As to the prevention of tears in general, the procedure recom-

mended by the essayist is highly commendable, as very few men properly repair them.

I heartily agree, that in selected cases, the prophylactic incision is of incalculable value. For the last few years, however, I have been using only the median incision, or perineotomy.

THE INTERMEDIARY HOST OF SCHISTOSOMUM MANSONI IN VENEZUELA.*

By JUAN ITURBE and EUDORO GONZÁLEZ, Caracas, Venezuela.

Translated for the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL
by LODILLA AMBROSE, Ph. M., New Orleans.

[3] The frequency with which the ova of *Schistosomum mansoni* are observed in coprologic examinations made in Caracas, and the verification of this parasite by Rísquez¹ in 20 per cent of the cadavers brought to autopsy recently in the School of Medicine have attracted our attention for a long time, and have led us to investigate the means of transmission of this disease in our capital.

In July of last year [1915] we learned from a note published by Ward², that Leiper³, of the London School of Tropical Medicine, after making a voyage of a thousand miles along the course of the Nile, succeeded in infecting certain mollusks of that region by placing them in water contaminated with miracidia of *S. hamatobium*. A particular species of snail, *Katayana nosophora*, an operculate gastropod with eight spirals, included in the genus *Pyrgulopsis*, was demonstrated to be extraordinarily sensitive to the miracidia of schistosoma. In the liver of different specimens the author cited found large sporocyst tubes which contained cercariæ characterized by the absence of pharynx and by bifid tail.

In all truth, to Miyairi and Suzuki⁴ belongs the credit of priority in tracing the biologic history of *S. japonicum*, from the penetration of the miracidia into the intermediary host up to their transformation into cercariæ, passing through a cycle of embryonic states of transition. These cercariæ, [4] which swim freely on escaping from the intermediary organism, arrange themselves on

* Iturbe, Juan, and González, Eudoro. El huésped intermediario del *Schistosomum mansoni* in Venezuela. Edición especial ordenanda por la Academia Nacional de Medicina. [Caracas, 1917.] 8vo.

[Brochure received by translator following publication in this JOURNAL, May, 1917, of Note on the Invasion of the Lymphatic Glands by the Ova of *Schistosoma Mansoni*, by Jesus Rafael Rísquez. Pages of the original are given in square brackets.]

the surface of the water in order to infect the definitive host through skin or by ingestion.

The intermediary mollusk of *S. japonicum* is a small snail of dark gray color which lives in a yellowish or brown shell; its spiral is actually conical; its dimensions are from 6 to 9 mm. in height by 2 to 3 mm. in width; the spirals are from 8 to 8.5 in number; but the animals in complete development usually lose 2 or 3; the suture is deep and of brown color; the operculum is horny and is coiled to the left; gills in form of comb; buccal cavity provided with a pair of jaws and a radula whose dental formula is $3 + 1 + 3$.

In order to begin our investigation regarding the intermediary host of *S. mansoni* in Caracas, we collected the most common mollusks of the district, *Ampullaria luteostoma* Swains, *Physa rivalis* Maton, *Planorbis cultratus* Orb, and *Planorbis guadelupensis* Sowerby. With the exception of the *P. rivalis*, we were able to obtain infection of the mollusks by exposing them to contact with water contaminated with miracidia. However, the contamination of the *P. cultratus* and of the *A. luteostoma* was realized with difficulty; and in spite of the fact that both mollusks showed on their heads slight infarcts due to penetration by the miracidia, the digenetic evolution arrived at its conclusion only on very rare occasions. On the contrary the vital cycle of the parasite was realized in almost all the specimens of *P. guadelupensis*: in the sixth week we were able to observe in them the presence of the typical cercariae.

The infecting material, sanguinolent mucus coming from dejecta which contained a large quantity of ova of *S. mansoni*, was left two or three days in the incubator at 34° ; part of the experimental material had water added to it and was placed in vessels which contained some specimens of the mollusks already mentioned. The observation having been prepared in this manner, the miracidium promptly abandons its reticulum, and is ready to seek the intermediary host. A half hour after the miracidia begin to swim freely in the water where the experiment is being conducted, it is observed that nearly all the mollusks move themselves with great swiftness: the ampullariae thrust out their four tentacles and expel a mucous substance; [5] the specimens of planorbis rise to the surface of the liquid and then descend in a rapid manner. Some days later I was able to observe in certain snails which

I examined, the existence of punctiform tumefactions situated at the level of the tentacular base, of the labial commissure, and in some other points of the head which correspond to the different places by which the miracidia have penetrated.

During the course of the experiments the water of the aquarium was changed on the fifth day, and then remained at rest until the end of the observation. On various occasions the precaution was taken of throwing into the vessel some detritus of mollusks, then it was verified that the specimens of planorbis very especially are inclined to cannibalism: in this manner it would be possible to explain how some non-infected specimens might serve as secondary hosts to the cercariæ.

After the lapse of 24 hours from the time of the penetration of the miracidium into the snail host, there is verified a series of phylogenetic transformations which have been studied in perfect manner by Miyairi and Suzuki⁶ and confirmed by us: the miracidium loses its ectoplasmatic membrane; solely the lanceolate cells of the excretory system persist; its size increases gradually and in its interior is observed the formation of spheres of rudimentary cells which ultimately go to produce the rediæ. Every sporogenic cyst gives birth to fifty rediæ; these may be elongated or in ovular form with mouth widely open and rudimentary digestive system. In the liver of the snail is observed a great quantity of very long tubes of rediæ and frequently in form of spiral, which contain elliptoid cellular masses, future cercariæ with caudal rudiment, mouth and central orifice in state of formation.

In the course of the sixth week could already be observed the adult cercariæ with the following characters: strong tail and *bifurcate in its distal third*; mouth larger than the acetabulum; body covered with minute spines and filled with three pairs of spherical glands, without trace of digestive tube and presenting only at the bottom of the mouth a blind cavity; *there is no pharynx*. The movements of these cercariæ examined under the microscope are characteristic: the muscular ring of the acetabulum bears upon the surface of the slide, the body then [6] diminishes two-thirds of its size, while the tail stretches itself out considerably and its bifurcations are directed outward. In this manner the animal can change position with the greatest rapidity. But when the cercaria swims freely on the surface of the water, its tail is agitated

with a movement of lateral vibration which gives it the aspect of a figure 8.

The dimensions of these cercariæ taken in 15 different specimens, and expressed in hundreds of millimetres are, as follows:

Body: Length from 0.100 mm. to 0.130 mm.
Width from 0.040 mm. to 0.050 mm.

Tail: Length from 0.140 mm. to 0.150 mm.
Width from 0.020 mm. to 0.025 mm.

Bifurcation: Length from 0.040 mm. to 0.050 mm.

In the microphotographic plate* which accompanies this explanation, may be seen various cercariæ with the characters described above. We have always employed for the preservation of our material aqueous solution of formol at 5 per cent.

The cercariæ, after abandoning the intermediary host, remain for the space of 24 hours at least, in the water of the aquarium which contains the snails, and disappear from the surface of the liquid—as far as we were able to verify it—3 or 4 hours after an animal had been submitted to contamination. The penetration of these organisms through the skin—such as has been observed by Leiper⁶ under microscopic examination—this it has not been possible to follow in spite of having taken the pains to make successive examinations of the integument of the animals subjected to the experiment.

In the laboratory there were exposed to contamination male white mice, newborn rabbits and dogs; we employ as routes of infection the skin or the digestive organs.

In the first case, the animals were subjected during two or three hours to the action of the water which contained snails infected six weeks before. Two months after making the experiment, [7] there was verified in the vena porta of two male white mice the presence of specimens of *Bilharzia mansoni*.*

In the second case, we obtain better results by means of contaminating the food with livers of some *P. guadelupensis* carrying a large quantity of adult cercariæ. The infection *per os*, according to our personal observation, was nearly always positive.

The *Planorbis guadelupensis* Sowerby, intermediary host of *Distomum mansoni*‡ in Venezuela, is a fresh-water mollusk in-

* Plates are half-tones which would not reproduce well.—Translator.

‡ Authors use these various synonyms.—Translator.

cluded in the class *Gastropoda Aquatilia*, genus *Limnæcea*. This snail of six spirals may attain in the adult state up to 24 mm. of width by 7 mm. of height. Its distal extremity is not prominent. Examined on its superior surface one notes that the spirals sink sensibly and form a conical depression; its inferior surface is less depressed. Its teeth are placed in a regular manner, and it carries filiform tentacles.

The well developed specimens resemble *P. cumingianus* Dunker and *P. olivaceus* Spix*, both natives of Brazil; they are differentiated from them by their smaller size and by the levelling of the last spiral.

The color of the adult specimens collected by us in the drains of the outskirts of Caracas is a yellowish brown, and according to Martens⁷, this coloration is paler than that of the specimens coming from Puerto Rico. The youngest specimens are differentiated from *P. Bahiensis* Dunker, in this that their last spiral is more convex, for which reason the superior part appears more excavated, and said convexity when it reflects the light gives the appearance of having a superior margin. The degree of the inclination of the base of this snail seen in front, varies much according to the specimens; but generally it is directed outward.

The ova of the *P. guadelupensis* have a clear yellow color, and they are easily observed in agglommerations of 20 to 30 adhering to the superior surface of the snail by means of a glutinous substance.

In special conditions of experimentation, as we have already affirmed, we have been able to produce infections of some specimens of *A. luteostoma* and *P. cultratus*; but these [8] snails in the natural conditions of life do not serve as intermediary host to *Schistosomum mansoni*; solely the *P. guadelupensis* ought to be considered as the intermediary organism of this trematode in Venezuela.

In some drains of the environs of Caracas we have found the *P. guadelupensis* infected naturally in an alarming proportion. In this connection we give a table showing the quantity of mollusks examined and the proportion of natural infection:

* Intermediary host of *S. mansoni* in Brazil; see Manson, 6th ed., p. 748.—Translator.

Source	Planorbis	Infected	Per Cent.
Rincón del Valle, Acequia No. 1....	400	120	30
Rincón del Valle, Acequia No. 2....	200	18	9
Paraíso	120	11	9.1
Puente de Hierro.....	50	4	8
Valle Abajo	76	11	14.4
Los Chorros	71	0	0

In 100 specimens from Los Teques, we find 7 infected.

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CLINICO-MICROSCOPICAL OBSERVATIONS ON FILARIASIS.*

By A. MARTINEZ ALVAREZ, San Juan, Puerto Rico.

Translated for the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL
by LODILLA AMBROSE, Ph. M., New Orleans.

[17] I will divide this sketch into two parts:

- I. Clinical observations.
- II. Microscopical study.

The first includes two subdivisions: statistics of the cases of filariasis which have been treated by me in my district of Puerta de Tierra, and my clinical observations and practical deductions.

The second consists of certain original experiments, which are included as a preliminary note of a more lengthy and precise series which will follow this in due course.

* Alvarez, A. Martinez. Observaciones clínico-microscópicas sobre la filaríasis (trabajo leído ante la Asamblea de la Asociación Médica de Puerto Rico, Diciembre 11 y 12, 1915). *Bol. Med. de Puerto Rico*, San Juan, 1916, xiii, 17-21. 2 charts. [Pages of the original article are given in square brackets. This number was lent by the Medical Society of the City and County of Denver, Colorado.]

I. CLINICAL OBSERVATIONS.

(a) I know that fifty cases cannot make a scientific truth evident no matter how clearly they may be presented; but they can form a point of departure for the verification of the same.

These fifty cases cover a period of a year, and are distributed over *paradas* 2 and 5 and the middle of the *barrio* of Puerta de Tierra. Making an approximate calculation, I shall consider that they constitute 8 *per mille* of the inhabitants. I do not attribute importance to these figures; certainly, in no way do they approach the actual number of filariasis cases in the district. These fifty cases occur in four large foci which are limited and well defined, and in three or four other small foci which are shown on the map placed before you. On this basis I shall rest my clinical observations.

(b) No one is ignorant of the fact that the medical opinion of the day is inclined to believe that the filariases, *per se*, do not produce symptoms, and that these are secondary to other bacterial invasions. It is not my purpose [18] to discuss possible reasons for such a hypothesis, nor yet to examine the contrary opinion. My only desire is to arrest medical attention in a practical direction; that is, the determination by regions of the existence of certain diseases which prevail more than others in given localities. I will give an example: Barceloneta and Salinas are essentially malarial. In Yauco the typhoids prevail, and similarly I may say that Puerta de Tierra is essentially filarial and rich in worms (*vermes*).

As for the various obscure clinical forms which have presented themselves to my observation, I will designate them for greater clearness under five headings:

1. Comatose form in children.
2. Epileptoid form.
3. Pseudotyphoid form.
4. Premature childbirth and abortion as premonitory symptoms, or symptoms subsequent to the attack of acute filariasis.
5. Certain class of abscesses.

The comatose form in children has a sudden onset, and presents itself with unconsciousness, convulsions, pupils dilated then contracted, high fever which continues about 40° for one day and then returns to normal, rapid pulse, stertorous respiration—a very grave picture which terminates fatally or satisfactorily in not over 24 hours. Quite contrary to the supposition that filariasis does not

occur in children except rarely, I can present cases from five to ten years of age in which this form predominates. The blood gives us a leukocytosis of polymorphs in the first hours which is subsequently replaced by eosinophilia, as I shall show more fully in the second part of this article. If I examined the feces and urine of these children, in some cases worms (vermes) were found, but in the majority I did not have them on repeated examinations. As for the urine, it always showed albumin, which disappeared the third or fourth day. I should call attention to the fact that some of these cases die and are subsequently diagnosed as meningitis. There is no glandular infarct.

The epileptoid form has all the symptoms of epilepsy, but the fever which is present in the attack goes as high as 40° at times, or even beyond that point; but it is always close to it. In these cases it has been the practice to make a Wassermann test but with negative results; in those which I have observed there is also a [19] negative history of traumatic and hereditary antecedents. It occurs almost always in adults. There is no glandular infarct.

Of the pseudotyphoid form I have had two cases, which, without having suppuration nor the curve of septic fever and without chills, have been prolonged for four or five weeks with fever which reminds one of the typhoid type. A painful gland without any local inflammation is all that these patients showed externally. The Widal reaction was negative in both, but the blood showed embryos of filaria in large numbers.

The most common and extraordinary are the cases of premature childbirth and of abortion which the attacks of acute filariasis provoke. Aside from the profuse hemorrhage which is present in some of these cases, the fact merits mention as a basis for future investigations and because of the error which the physician may make believing that he is confronted by a puerpera.

Finally, in certain filarial abscesses, I have noted that the physical aspect of the pus did not present the peculiarities of a pyogenic pus, and I have almost come to believe that these abscesses are in some cases consequences of the puncture of the infected mosquito and that on that ground they could be interpreted as the local protest of the organism against the parasite at its port of entry. Perhaps these abscesses indicate the effort of nature to direct us to the removal of the localized evil, when she so wisely shows it to us.

Summarizing the clinical part, I may say:

1. That Puerta de Tierra is a filarial district and that it ought to be recorded as such.
2. That there are forms of filariasis in which the clinical diagnosis is so obscure, that it is unpardonable not to confirm it by the laboratory.
3. That we ought always to proceed to the investigation for filaria in every patient in this district who shows fever.
4. That filariasis does not respect ages, presenting itself just the same at five as at forty years.
5. That the absence of glandular infarcts ought never to be taken as negative evidence of filariasis.

II. MICROSCOPICAL STUDY.

With frequency enough I have observed filarial patients (filaríacos) complaining to me according to their own expression, "As soon as the horns of the moon come, the attacks of filariasis appear." And that which seems [20] absurd and at first sight incongruous proves to be in accord with the observations of the blood of these individuals. These declarations agree with something abnormal which occurs in the leukocytic and differential curve of said blood in which I observe the following phenomena:

The leukocytic curve increases extraordinarily at the moment of the attack of filariasis and at times arrives at the figure of thirty thousand leukocytes; the differential accompanies it and the neutrophiles increase; the attack passes, always corresponding to the period of the moon included between the fourth quarter and the new moon, and then the curve descends; but always, or at least in the majority of cases, there is a periodic nocturnal rise, said rise co-existing with the appearance of the *microfilaria*. If we look at Chart No. 1 we shall see how almost always the curve is maintained low for the day and high for the night. The monthly leukocytic periodicity occurs in my cases, which are six, and which I have been observing for four months in the course of those lunar periods which I have explained above, and it is always present, even though there is no explosion of the febrile attack nor other abnormal manifestation. The individual feels well, but has a leukocytosis more than moderate. When this moment arrives the nocturnal periodicity disappears and the curve is maintained almost horizontal without sudden drops during the day.

The nocturnal leukocytosis is almost always eosinophilic and lymphocytic at the expense of the neutrophiles, as is clearly seen

in Chart No. 1. I call attention emphatically to the lymphocytes first of all, which maintain an almost mathematical solidarity with the sudden nocturnal rises of the curve.

The tally of hemoglobin always descends in all the cases, and is maintained at the same level.

In Chart No. 1 it will be seen that this patient [female] has had the microfilariae present in the blood at night. The other cases of which I preserve graphic charts, present a little more or a little less the same characteristics as this one. Two things seem to be necessary in order that this periodicity may be present: first, that the case has no glandular manifestations, nor suppurative ones, in which event the neutrophiles would already come into line—as happens—in accord with my statement, when the acute attacks occur; second, the existence of microfilariae in the blood.

The count of erythrocytes is less than normal. The observations which I have presented are from cases in which intestinal [21] parasites had not intervened, and I have made a careful selection to avoid errors.

In order to complete these observations I have wished to determine the times when the maximal and the minimal fluctuations in the curve take place. I shall offer later complete information on this point.

Finally, I have to say that I have carried through my experiments with extreme care in order to avoid leukocytoses which might be artificial; for instance, such leukocytoses as would be obtained by taking the blood from the same place night and day. In order to avoid this, I have drawn the blood from a different finger each time; thus I eliminate the local leukocytosis produced by trauma. I took special care also not to use much friction on the place where the blood was to be drawn, which would bring about a moderate but fictitious leukocytosis. To these precautions may be added that of taking the blood within the strictest possible limits of uniformity as to time; and lastly, I have avoided the physiological leukocytoses which follow baths, exercises and eating. And besides that I have been able to avoid those medicinal leukocytoses; instead of medicines, I have given the patient a dose of hopes in order to persuade him to constancy in the test.

To summarize I will say:

1. That during the acute attack there exists a polymorphonucleocytosis arriving at times at thirty thousand.

2. After the attack is over, in some cases there is a periodical nocturnal eosino-lymphocytosis.

3. That the changes of the moon between the fourth quarter and the new moon mark in many cases a monthly eosino-lymphocytosis when the attack is not present, and always when there are microfilariae in the peripheral blood; but if there is an explosion of the acute attack then a polymorphonucleocytosis is present.

4. That the count of erythrocytes and of the hemoglobin both descend below the normal figure and are maintained there.

In closing this article, I fulfill a duty of courtesy in commending to my colleagues the exquisite kindness of the members of the Tropical Institute of Puerto Rico, and of the young Doctor S. Giuliani; and I hope from them the honor of sane criticism just as I have had that of their counsels in this undertaking.

TRANSACTIONS OF THE LOUISIANA STATE
MEDICAL SOCIETY

COMMUNICATION FROM THE PRESIDENT.*

E. L. HENRY, M. D., Lecompte, La.
(Read by Chairman of the House of Delegates.)

Like Prometheus bound to the rock of torment, I lie here bed-ridden in the little town of Lecompte, visualizing the alluring vistas stretching out to our big sister New Orleans, girding and bedecking herself for the coming events. Long have I waited for Medicine in the South to array herself in full panoply, and then—when all is set, just as the bridegroom whose bride was stolen by young Lochinvar, I am willing but not of the party.

It is an honor, which to me is beyond compare, to preside over such a galaxy of medical minds as your body here represents, and one to which I have long looked forward, the occasion is here but the pleasure I must forego.

This is not a lament, it is an expression of facts.

Our Society by its activities has made me proud of my connection with it. Our membership has greatly increased. Our financial condition is magnificent, and medicine is firmly entrenched on an organized basis.

In accomplishing these results I have been greatly assisted by every member of this organization and it gives me pleasure indeed to extend to them my full quota of thanks.

To the Executive Committee whose diligence and earnestness has been a source of assistance and gratification to me, I especially extend thanks.

To the Secretary-Treasurer and his assistants I am indeed very grateful.

To all Committees and their Chairmen I will say that were I President again I would re-appoint them.

As this writing is being done against medical orders, I shall conclude.

I shall conclude with that which indeed is nearest my heart—**SUCCESS.**

Success for the Louisiana State Medical Society meeting.

* Read at the 41st Annual Meeting, Louisiana State Medical Society, New Orleans, April 24-26, 1920.

Success for the American Medical Association convention, and a world of work well done.

Realizing the inability of conveying to you, from a sick bed, the intense feeling I have for you, I nevertheless wish to say to each one of you, as if I were grasping your hand and feeling again the old clasp which means so much to me,—BROTHER in MEDICINE—FRIEND.

PRESIDENT'S ADDRESS.*

By DR. T. J. DIMITRY, New Orleans, La.,
3rd Vice-President, in absence of Dr. E. L. Henry, President.

It is with hesitancy and difficulty that I assume this duty of the President. I am called upon to report that our President, Dr. E. L. Henry, of Lecompte, is ill and it is impossible for him to attend this meeting. I am informed that he underwent a very serious operation this morning. The Secretary notified me that I would be called upon to preside and to address you. I dare say you sympathize with me, for it is embarrassing to attempt an address with so little opportunity for preparation. I have but limited qualifications in entertaining and I have no particular message to carry to you. It is difficult for me to select something to talk about that might prove interesting. The Secretary and Treasurer's report is very instructive; I should have liked to rob him of some of his thunder, but I dared not do so. Some one suggested as an entertaining feature that I get my hammer out and stimulate reform in things medical. Another suggestion was that I take as my remarks "The Miracle Man." A final suggestion received my approval, that I ride my hobby. My hobby is: Unit work in the Practice of Medicine, and my remarks will be pertinent to that subject.

By Unit work in the practice of medicine is meant a unit existing among a number of specialists practicing different specialties all associated together as one. They are provided with complete paraphernalia, they have a common domicile that is to offer an opportunity for intimate association and an established system all tending to stimulate thoroughness. This plan of organization has received recognition throughout the entire country and those who

* Delivered at the 41st Annual Meeting, Louisiana State Medical Society, New Orleans, April 24-26, 1920.

are carrying out this Unit work claim that great strides will be made in medicine, for it stimulates completeness and thoroughness in an examination, and the opportunity of intimate cooperation and consultation with members of the unit.

The justification for the need of such a plan is to correct faulty conditions that we know are to be found in the practice of medicine. The physician working alone needs stimulus for thoroughness, he generally tends to backslide and certain it is that with our country practitioner he tends to neglect his studies and the modern advance in medicine. The physician is human and he notices that the practice of medicine is an everlasting drive with always something new to learn, that at times he fatigues when so much is demanded of him. When he is much of a student, a good diagnostician, and has at his disposal every advantage though working alone, he contends with the personal equation and it is with difficulty that he can draw a broad deduction in diagnosis. The unit work is a stimulus and corrects the personal equation. The medical profession is awake to the evil of individual specialization where the student of medicine has prepared himself from the beginning for a chosen specialty. His training has been by the elective route and always with a certain specialty in view. The specialist does not seem to realize that in his narrow sphere the pathology is a local manifestation of a morbid process elsewhere in the system, hence the necessity of broad grounding and keeping up to date in matters in the whole domain of medicine. Again, we are awake to the fact that the general practitioner, though often a well informed man, unless he can and will realize his limitations, is to be deprecated. A well educated man is one who knows something about everything, and he knows one thing well. We cannot put the general practitioner under this heading and much less can we put the specialist, for the latter is usually obsessed with the idea that all disease is located in his domain. He views all from a limited angle, he sees that which concerns himself alone, and he is often a scientific automaton. As it is impossible for anyone to know all, such unit work offers the answer to the problem.

The patient is entitled to thoroughness and completeness of examination and certainly demands it in unusual and difficult cases. Unit work is at the disposal of such cases, not as a feeder to the individual in the unit, but to the assistance of other members of

the medical fraternity so that he may use these advantages to the benefit of the patient. Any plan that is selfish destroys the ideal of unit work. The unit is as an individual at the call and to assist the other members of the profession, and the information and knowledge obtained is given to him for the benefit of the patient and of himself.

We have so often heard it said that the practitioner of medicine should be paid to keep his patient well, is it by Unit work that this ideal is to become a reality? It is acknowledged that by unit work the principal difficulty is ferreted out, not alone the particular ailment for which the patient is seeking relief, but all possible difficulties and causes for future difficulties. In unit work the result of examination is committed to writing and a copy given to the patient, this becomes a valuable manuscript to him and to his offspring. Then if reasonable care and if no unfortunate incidents occur and periodical examinations made, the ideal becomes a possibility.

I predict that unit work will replace the many compensation schemes, will give superior attention to the individual, and the poor man as well as the rich will reap a reward by receiving satisfaction through completeness of examination. Shall our profession aim to greater cooperation and make possible that which appeared to be a dream—Receive Compensation To Keep A Patient Well?

MISCELLANY

NOTES ON TROPICAL DISEASES

FROM THE

Bulletin de l'Académie de Médecine, Paris.

By LODILLA AMBROSE, Ph. D., New Orleans.

MALARIA.

Roux¹ has carried on experiments with basic quinine in colloidal form, using intravenous injections in weak doses. He has worked in two malarial centres, La Réunion and Madagascar. His preliminary note is based on 99 cases (controlled by other physicians), and all of these patients had been previously treated with quinine in the usual ways, and many of them were followed for a month or more after treatment with basic quinine. Light cases were checked by one injection of 2 cc, moderate cases by two or three injections of the same quantity; and in severe cases 4 cc was the dose at the start, repeated the following day, or replaced by a dose of 2 cc each of the two succeeding days. The reaction was found to be in direct proportion to the degree of intoxication, but the symptoms disappeared quickly. The favorable effect on the hypertrophy of the spleen, the appetite, sleep, and neuralgias, was marked. The investigations still in progress in Madagascar will be reported on at a later date.

The Académie de médecine appointed a commission to investigate and report on the destruction of mosquito larvæ, because in the absence of any specific law the prefecture of police in Paris refused authorization for entering premises in search of breeding places of mosquitoes. Wurtz² reported for this commission.

Malaria has been reduced in France in the last century by draining and cultivation and by the use of quinine. The present increase is explained by the large number of infected persons who have come into France since the beginning of the war. *Culex* and anopheles are found in France. This means all the elements necessary for an epidemic of malaria. There have always been mosquitoes in Paris, and malaria has been endemic until a very recent period. Some parts of Paris are now infested with mosquitoes.

1. Roux, F. Les injections intraveineuses de quinine basique, à très faibles doses, dans la fièvre paludéenne. 3. s., lxxv, 122-124.

2. Wurtz, R. Rapport sur la nécessité de donner aux autorités sanitaires, en France, le droit de rechercher et de détruire les larves de moustiques (au nom d'une commission composée de MM. Laveran, Blanchard, Roux, Mosny, and R. Wurtz). 3. s., lxxvi, 189-195.

Even if the pathogenic mosquito has not now been identified in Paris, the *Anopheles maculipennis* is known to exist in the vicinity. The prefecture of police is now distributing, Destruction des moustiques, a brochure published by Laveran in 1913. The present increase in mosquitoes in Paris is attributed to water standing in exposed plumbing (closets, etc.). Frequent compulsory flushing would be the remedy. The commission recommended "that the powers given to the sanitary authorities for the prophylaxis of epidemics be extended to the searching for and destruction of mosquitoes. These powers include the right to visit premises and to prescribe the necessary measures."

Paisseau³ and Lemaire reported three cases of sudden death from pernicious malarial attacks, in which autopsy showed severe lesions (to the point of hemorrhages) of the suprarenal glands, and lesions of the kidneys, liver and spleen were relatively discrete and did not afford adequate explanation of death. The hematozoon was found in the impaired suprarenal capsules. The use of adrenalin in the algid malarial states was suggested.

Blanchard⁴ presented a poster issued September 19, 1916, by Joly, prefect of the department of the Alpes-Maritimes, with the heading: "Lutte contre les moustiques." The poster indicated the measures to be taken to destroy the mosquitoes, and was to be followed by a second one. It was the first time such an initiative had been taken in France. The fight against the fly was to be undertaken in a similar way. The prefect derived his authority from existing laws.

3. Paisseau, G., and Lemaire, H. Surréalites aiguës dans les accès pernecieux palustres.

3. s., lxxvi, 300-301.

4. 3. s., lxxvi, 345-346.

SPIROCHETOSIS.

Martin¹ and Pettit experimented at the Pasteur Institute with an icteric guinea-pig inoculated with the blood of an English soldier dead with a febrile hemorrhagic icterus (guinea-pig obtained from Dr. Adrian Stokes), and they undertook the investigation of the possible parasitic origin of 9 selected cases of icterus among French soldiers. The *Spirochæta ictero-hæmorrhagiæ* of Inada and Ito² was suspected. They verified apparently the re-

1. Martin, Louis, and Pettit, Auguste. Trois cas de spirochétose ictero-hémorragique en France. 3. s., lxxvi, 247-253.

2. J. Exp. Méd., 1916. xxiii, 377-402, and 557-562; Bull. Inst. Pasteur, 1916, 241 and 593-598.

sults of Stokes and of the Japanese workers. They recommended the use of the urine in the search for the parasite, and warned against the facility of contagion from the urine. They established a period of incubation of from 6 to 8 days. They insisted on the differentiation of icterus produced by the spirochete of Inada and Ito from other infectious forms of icterus.

Chauffard³ reported for the commission composed of himself, Laveran and Robin, to whom was referred the work of Martin and Pettit. He said their investigation completed and confirmed the previously known data. In summarizing the history of this spirochetosis, its identity with the disease of Weil was denied. In the clinical picture was emphasized the injection of the conjunctiva and myalgia particularly of the calf, to which was added special mention of albuminuria and frequency of relapses (*rechutes*). As to pathogenesis, the account of Martin and Pettit was repeated in its essentials. The demonstration of this spirochete was considered complete.

“Like all the great infections, spirochetosis is first a *septicemia* with its incubation which corresponds to the development of the pathogenic germ in the organism; then this manifests itself in the blood, although it is only later that the lesions of organs take place, and the eliminations of the spirochetes in the feces and especially in the urine.”

Inoculation can be produced in various parts of the body. For tests on laboratory animals the blood is to be used in the early days of the disease, later centrifuged urine; or, as suggested by Martin and Pettit, the two guinea-pigs may be inoculated simultaneously. Clinical and therapeutic data are still very indefinite. Relapses should be distinguished from recurrences. Facts already ascertained exceed the limits of the name assigned—there is icterus without hemorrhage, and also pure febrile septicemia without clinically appreciable hepatic localization—ictero-hemorrhagic spirochetosis is a provisional name. The value of metallic medication—arsenic, antimony, silver—remains to be demonstrated; but it could only be effective before secondary lesions of the organs had taken place. The Japanese have found a serum (has been so found 5½ years after recovery) in the blood of convalescents

3. Chauffard. Rapport sur un travail de MM. Louis Martin et Auguste Pettit, ayant pour titre: Trois cas de spirochètose ictero-hémorragique en France, au nom d'une commission composé de MM. Laveran, Albert Robin et Chauffard. 3. s., lxxvi, 346-361.

destructive of the spirochetes, which means that their blood contains antibodies; but the Japanese do not recommend its use in relapses.

Extreme prophylactic care is necessary in human and experimental autopsies. Specially liable to infection are men in un-drained coal mines (pumping out and lime disinfection recommended); mud, stagnant water, sewers carry the infection (infectious icterus frequent and severe among sewer cleaners); similar conditions are too easily found in the trenches. These spirochetes have been found in the urine and feces even 40 days after complete recovery. A new disease—further study demanded.

In discussion of Chauffard's report, Blanchard distinguished sharply between spirilla and spirochetes, condemning the term spirillosis: "The spirilla are neither pathogenic nor parasitic; a good number of spirochetes are both parasitic and pathogenic." Laveran said that he doubted the correctness of classifying spirochetes among protozoans.

BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

By F. T. TALBOT, M. D., Sect'y-Treas.

Report of the House of Delegates to the General Assembly.*

The House of Delegates met on April 24-26, 1920, at 10 A. M., at the Hutchinson Memorial Building of the Tulane College of Medicine.

The Meeting was called to order by Dr. Bernadas, Chairman. The Chairman stated in opening the House that he regretted very much that it was his duty to notify the members that our President, Dr. E. L. Henry was forced to be absent on account of serious illness. Upon motion of the House a Committee composed of Dr. Homer Dupuy, Dr. Pierson and Dr. Knighton was appointed for the purpose of drawing up suitable resolutions on same.

Dr. Chalaron, Dr. Roy and Dr. Unsworth were appointed by the Chair as a Committee on Credentials. This Committee afterwards reported.

* Read at the 41st Annual Meeting, Louisiana State Medical Society, April 24-26, 1920.

Roll call of the House was made.

The Secretary then read the Minutes of the Meeting of the 1919 Meeting, and the Minutes of the three executive meetings, held during the last year, all of which were approved.

REPORT OF OFFICERS.

Dr. Bernadas read a written report from Dr. E. L. Henry, President of the Society, as Dr. Henry was sick and unable to be present. This was ordered received and filed.

The Secretary-Treasurer's Report was then read and ordered referred to the Executive Committee for action.

Upon motion of Dr. W. H. Harris, duly seconded, a vote of thanks was extended to Mr. J. C. Henriques, attorney for the State Medical Society for his diligent services during the past year.

The Financial Report of the Secretary-Treasurer was then read:

He reported total receipts of.....	\$8,194.58
Total Expenditures	4,941.63

Leaving Balance in Bank, April 21, 1920.....	\$3,252.95
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Subsequent thereto the Secretary read the report of the Medical Defense Committee, which showed a balance to date in the Bank for the Medical Defense fund of..... \$1,104.95

Securities held by the Whitney Bank...	3,400.00	4,504.95
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Making total assets of the Society.....	\$7,757.90
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REPORT OF COUNCILORS.

There was no report from the Chairman of Councilors.

The Reports of the Councilors of the 1s, 2nd, 4th, 6th, 7th and 8th Districts were read, received and ordered filed.

The Councilor of the Third District asked for an extension of time.

The Councilor for the Fifth District was absent.

Dr. Seemann then spoke at length in regard to the proposed conference with Governor Elect Parker for Monday afternoon. Upon his recommendations, it was proposed to hold a conference on

Monday morning preliminary to the conference of Monday afternoon to discuss and come to some definite conclusions in regard to proposed matters which could be presented to him.

REPORT OF COMMITTEES.

Report of Scientific Committee read, received and ordered filed.

Report of Committee on Public Health was called, and the Chairman granted an extension of time.

Report of Committee on Publication was read, and referred to the Executive Committee.

Report of Committee on Memorial was called for, and Dr. Seemann asked for an extension of time, as he had not a complete list. This was granted.

Report of Medical Defense Committee was read by the Chairman, and ordered referred to the Budget and Finance Committee.

The Report of the Committee on Health and Public Instruction was read and referred to the Executive Committee.

There was no report from the Committee on Cancer Research.

There was no report from the Committee on Hospitals.

The report of the Budget and Finance Committee was called, read, and referred to the Executive Committee.

The Report on Industrial and Economic Relations to Medicine was passed owing to the absence of Dr. I. Cohn.

The Committee on Medical Education asked for an extension of time.

There was no report from the Hospital Standardization Committee.

The Report of the Committee on Legislation was called, and Dr. Pierson as Chairman asked for an extension of time to form a later Report, which would be possible after the Monday morning conference referred to above.

The Report of the Committee on Journal was called, read and ordered filed.

At this time Dr. Cohn arrived, was given the floor, and made a Report as Chairman of the Committee on Industrial and Economic relations to medicine.

This report was referred for further action to the Monday morning conference referred to above.

The Reports of the District Medical Societies were then called and there was no response.

A permanent charter was issued to the Fifth District Medical Society by a vote of the House.

A communication was read from Dr. C. P. Gray as Vice-President regarding his inability to be present at the meeting.

The Chair announced that the appointment of Committees would be laid over.

Nomination of officers was then made, and the list thereof will appear at the end of this report.

It was moved and carried that New Orleans be the next place of meeting. Dr. T. Wright of Monroe spoke at length in regard to the invitation from the City of Monroe to hold the 1922 Meeting at the City of Monroe.

The date of the next meeting was referred to the Executive Committee.

The House of Delegates met on the second day of the meeting, April 26th.

The Second Meeting of the House of Delegates was called to order by the Chairman on April 26th, at 10 o'clock A. M. by the Chair, Dr. Bernadas.

After Roll Call, the House proceeded to business. There were several corrections necessary in the official Roll Call due to new members coming in and others being supplied for those who were absent.

The Report of the Committee on President's Report was called for, was first passed and read later on.

The Report of the Committee on Secretary-Treasurer's Report was called and passed.

The Report of the Committee on Public Health was called, and the Chairman was granted an extension of time.

The Report of the Committee on Memorial was called, and the Chairman granted an extension of time.

The Report of the Committee on Medical Education was then read by Dr. Knolle, the Chairman, and after considerable discussion indulged in by Dr. Mahler and Dr. Roy, the report was ordered received and filed. Dr. Mahler then made a motion that the Secretary of the State Medical Society extend an invitation to the Board of Nurses of Louisiana to confer with the Executive Com-

mittee of the State Medical Association relative to the Nurse Problem in the State.

After some discussion of this motion, it was seconded and carried.

The Report of the Committee on Hospital Standardization was then called. The Secretary-Treasurer stated that the report as submitted to his office consisted only of extracts of finances of the various hospitals throughout the state. Upon motion, duly made and seconded, it was the sense of the House that a fuller report be sent in by this Committee.

The Report of the Special Committee on resolutions was then read, ordered received and spread upon the Minutes as follows:

New Orleans, April, 24, 1920.

We, the Louisiana State Medical Society, this day assembled, have learned with the sincerest regret of the serious illness of our beloved President, Dr. E. L. Henry, and of the probable necessity of a remedial surgical operation.

This Society extends to him our warmest sympathies and expresses the fervent hope of his speedy and permanent restoration of good health, and assures him that his presence and counsel are indeed greatly missed at this annual meeting.

RESOLVED, That a copy of this Resolution be conveyed to Dr. Henry and that same be spread upon the minutes of this Session.

J. E. KNIGHTON, M. D.

HOMER DUPUY, M. D.

CLARENCE PIERSON, M. D.

Committee.

An invitation was then read by the Chair from Dr. and Mrs. Dowling for Monday evening, 9 to 11, 218 Audubon Boulevard, to visiting physicians of the A. M. A. and their wives.

Upon motion duly made and seconded the House of Delegates then went into a Meeting of the Whole to consider various subjects which would be expedient to report at the proposed conference with Governor-Elect Parker on Monday afternoon. Dr. Dupuy was appointed Chairman of the Committee as a whole.

After this Committee acted, the Chairman, Dr. Dupuy, reported to the House of Delegates that the Committee had recommended

that the incoming Governor be memorialized to arrange for a hospital for drug addicts.

The House then indulged in considerable discussion in regard other proposed recommendations for consideration at the conference with the Governor on Monday afternoon. These recommendations were as follows:

1st. The establishment of a State Institution for the drug addicts.

2nd. The recommendation of certain changes to be made in the present Workmen's Compensation law in regard to two objectionable features:

(a) To grant to individual laymen the privilege to employ his own physician.

(b) That the compensation fixed in the law is not sufficient to guarantee proper service, and some arrangement should be made for satisfactory adjustment of same.

3rd. The formation of a circulating Medical Library for the State Medical Society with State funds.

4th. To take the Hospitals out of State politics.

5th. The abolition of the Doctor's occupational tax.

It was then moved and seconded that the Health Officers now in Session under the supervision of the Louisiana State Board of Health be invited to attend the conference with Governor Parker Monday afternoon at three o'clock.

Recommendations were then in order for vacancies on the State Board of Medical Examiners. Dr. Menville was nominated and seconded to succeed himself. Dr. Knighton was also nominated for this appointment. Seconded and carried.

There was considerable discussion in reference to another vacancy on the State Board of Medical Examiners which would be brought about by the resignation of Dr. J. C. Henderson, who had for the past two years been in the service of the United States Government. Upon motion duly made and seconded, the Secretary-Treasurer was instructed to communicate by telegram with Dr. Henderson and ascertain his intentions with reference to his present tenure of office. Tentatively to his answer the House recommended two names in case such a vacancy should be declared.

Dr. Roy Harrison of New Orleans and Dr. Unsworth of New Orleans were then nominated and duly seconded for this recommendation.

The Report of the Councilor of the 5th District was read and ordered received and filed.

The Report of the Secretary of Council, Dr. Gelpi was received, and the Council was requested to meet immediately after the morning session of the House of Delegates.

A communication was then read from Dr. Guthrie, Chairman of the local Arrangements Committee for the State Medical Society in reference to the conference with Governor-Elect Parker for Monday afternoon. This was ordered received and filed.

Dr. Seemann gave notice that he desired to offer an amendment to the Charter adding six additional members to the Executive Committee. It was requested that same should be put in writing.

Dr. Wallace of Rapides, then moved and it was duly seconded and carried that the delegates of the Louisiana State Medical Society to the A. M. A. use their influence in securing a resolution memorializing the A. M. A. to print a history of the Medical Men in the recent World War.

Dr. T. A. Roy, Dr. Beverley W. Smith and Dr. Louis Abramson were appointed a Committee on Resolutions.

Dr. H. E. Bernadas was re-elected Chairman of the House.

The following Officers and Committees, which were duly nominated on Saturday, were elected by unanimous vote as follows:

Homer Dupuy, New Orleans, La., President.
 Beverley W. Smith, Franklin, La., First Vice-President.
 William Harris, New Orleans, Second Vice-President.
 D. O. Willis, Leesville, Third Vice-President.
 P. T. Talbot, New Orleans, Secretary-Treasurer.

Councilors:

First Congressional District.....Paul J. Gelpi, New Orleans
 Second Congressional District.....Geo. S. Bel, New Orleans.
 Third Congressional District.....Francois Gouaux, Lockport, La.
 Fourth Congressional District.....J. E. Knighton, Shreveport, La.
 Fifth Congressional District.....T. S. Wright, Monroe, La.

Committee on Scientific Work:

P. T. Talbot, Chairman, Adolph Henriques, S. M. Blackshear.

Committee on Public Health:

T. A. Roy, Chairman, Louis Abramson, W. A. Swords.

Committee on Medical Education:

W. H. Knolle, Chairman, J. E. Knighton, Carroll W. Allen.

Committee on Memorial:

W. H. Seemann, J. A. O'Hara, A. E. Fossier, J. N. Thomas, R. G. Holcombe.

Committee on Medical Defense:

J. C. Willis was elected to succeed himself.

This Committee is as follows:

P. T. Talbot, Chairman, H. Leidenheimer, J. C. Willis.

Committee on Health and Public Instruction:

R. B. Wallace, Chairman, Drs. Bernhard, Simmons and Graffignini.

Committee on Cancer Research:

Drs. Harris, Henriques and Willis.

Committee on Hospitals:

J. K. Newman, Dr. Weis of Baton Rouge, Drs. Harrison and Men-
ville.

Committee on Industrial and Economic Relations to Medicine:

Dr. Isidore Cohn, Chairman, A. E. Fossier, W. H. Block, Geo.
Roelling.

Committee on Legislation:

Dr. Clarence Pierson, Chairman, serving with the old Committee.

Committee on Hospital Standardization:

Dr. Simmons, Chairman, J. C. Willis, H. W. Kostmayer, J. A.
Estopinal, Isadore Dyer, L. Abramson, G. Gray, W. Mahler.

Committee on Publication:

Dr. P. T. Talbot, Chairman, J. E. Knighton, Dr. A. Granger.

Upon motion duly made and seconded, it was decided that at the next Annual Meeting one delegate to the A. M. A. should be elected for one year and one for two years.

On Monday afternoon there was a conference held with Governor-Elect Parker, at which time he spoke at some length in regard to proposed legislation and other matters of Medical affairs. Other than the speech of Mr. Parker, there were no other matters that came up at this conference.

Monday night there was a general meeting held, at which time the acting President, T. J. Dimitry of New Orleans, and the Governor-Elect Hon. John M. Parker, Annual Orator, addressed the meeting.

NEWS AND COMMENT

MEETING LOUISIANA STATE MEDICAL SOCIETY.—The forty-first annual meeting of the Louisiana State Medical Society was held in New Orleans April 24-26, and the following officers were elected for the year 1920-21: Dr. Homer Dupuy, New Orleans, president; Dr. B. W. Smith, Franklin, 1st vice-president; Dr. W. H. Harris, New Orleans, 2nd vice-president; Dr. D. O. Willis, Leesville, 3rd vice-president; Dr. P. T. Talbot, New Orleans, secretary-treasurer. Councilors: First Congressional Dist., Dr. P. J. Gelpi, New Orleans; Second Congressional Dist., Dr. Geo. S. Bel, New Orleans; Third Congressional Dist., Dr. Francois T. Gouaux, Lockport; Fourth Congressional Dist., Dr. J. E. Knighton, Shreveport; Fifth Congressional Dist., Dr. T. S. Wright, Monroe, La.

MILITARY SURGEONS MEET.—The annual meeting of the Association of Military Surgeons was held in this city April 22 and 24, under the presidency of Col. Joseph A. Hall, M. C., Cincinnati, Ohio. Following are the officers elected for the ensuing year: President, Asst. Surg-Gen. John W. Kerr, U. S. P. S., Washington, D. C., vice-presidents, Med. Dir. (Captain) Frank M. Pleadwell, M. C., U. S. Navy, Washington, D. C.; Col. Charles Lynch, M. C., U. S. Army, Washington, D. C. and Col. David S. Fairchild, Jr., M. C. Clinton, Iowa, and secretary-treasurer and editor, Col. James Robb Church, M. C., U. S. Army, Washington, D. C., re-elected. Washington, D. C. was chosen as the meeting place for the 1921 meeting.

AMERICAN SOCIETY OF TROPICAL MEDICINE MEETING.—The sixteenth annual meeting of this society was held in New Orleans April 26 and 27, and the following officers were elected for the year 1920-21: Drs. John M. Swan, Rochester, N. Y., president; Karl F. Meyer, San Francisco, first vice-president; Victor G. Heiser, New York City, second vice-president; Sidney K. Simon, New Orleans, secretary-treasurer, re-elected; Allen J. Smith, Philadelphia, Pa., ass't secretary. Councilors: Drs. George Dock, St. Louis; C. L. Furbush, Philadelphia; J. F. Siler, Washington, D. C.; J. H. White, Philadelphia, and Charles S. Butler, Philadelphia.

MEETING AMERICAN ASSOCIATION OF ANESTHETISTS.—The annual meeting of the American Association of Anesthetists was held in this city April 25 and 26. Thirty new members were admitted to the association. Drs. John J. Buettner, Syracuse, N. Y., and Paul Lux, Kansas City, were appointed to the executive committee and the following officers were elected: Drs. Joseph E. Lombard, New York City, president; F. L. Richardson, Boston, first vice-president; Eleanor Seymour, Los Angeles, second vice-president; F. H. McMechan, Avon Lake, Ohio, secretary, re-elected.

CIVIL SERVICE EXAMINATIONS.—The United States Civil Service Commission announces competitive examinations for the following positions: Physicians July 7, and September 8; Bacteriologist June 22. All citizens of the United States who meet the requirements must submit with their applications their unmounted photographs, taken within two years. Proofs or group photographs will not be accepted. Photographs will not be returned to applicants. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Customhouse, Boston, Mass., New York City, New Orleans, Honolulu, Hawaii, Post Office, Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Calif., Old Customhouse, St. Louis, Mo., Administration Building, Balboa Heights, Canal Zone, or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, including the medical certificate, but excluding the county officer's certificate, and filed with the Commission at Washington without delay.

THREE HUNDRED CASES OF HEARING AND SPEECH DEFECT.—The Federal Board for Vocational Education estimates that there are among the injured veterans of the World War between 90 to 100 cases of men whose speech became absolutely unintelligible as the result of mouth or neck wounds, aphasia or other causes. 25 percent of these men are still in the hospital and 50 per cent are in training or approved for training. The courses followed are agriculture, auto mechanics, commercial courses and chemistry. There are probably several thousand men throughout the country who became deaf in one ear, or who have suffered slight impairment of hearing in both ears. However, there are only about 200

for whom lipreading is necessary. Therefore, the approximate number of hearing and speech defect cases will be about 300.

U. S. WARNED TO GUARD AGAINST EUROPE'S PLAGUES.—The United States health officers at foreign embarkation ports must exercise the greatest caution to prevent immigrants importing typhus and bubonic plague from "infected Europe," Surgeon General H. S. Cumming of the United States Public Health Service warned upon his return from Europe recently. General Cumming declared that "sanitary and health conditions all over Europe are bad," and that the foreign health officials "are not as yet able with their facilities to combat diseases that threaten public health." "A new form of sleeping sickness has also become epidemic in Vienna," he added, and a careful watch should be kept over the admission of this disease, about which but little is known.

ORLEANS PARISH MEDICAL SOCIETY SELLS HOME.—The Orleans Parish Medical Society has sold to the local order of Elks its home located on the corner of Elk Place and Gasquet Street. The price secured was \$50,000 which it is contemplated will be used in the erection of a domicile. The local society had outgrown its home and the need for more spacious quarters had been felt. The society reserved the right to retain the name-block over the entrance, the flagstaff and the caduceus, the military emblem of the profession. The society, with its research library, will be temporarily located in the Hutchinson Memorial building, 1551 Canal Street.

MEETING AMERICAN MEDICAL EDITORS' ASSOCIATION.—The annual meeting of the American Medical Editors' Association was held in this city April 24 and 25. Among the distinguished foreigners present were Professor Gustave Roussy, editor of the *Annales de Medicine*, Paris, and Dr. Norman Walker, formerly of the *Edinburgh Medical Journal*, Edinburgh, Scotland.

MEETING AMERICAN ASSOCIATION FOR THORACIC SURGERY.—The third annual meeting of this association was held in New Orleans April 24 and the following officers were elected for the year 1920-21: Dr. Rudolph Matas, New Orleans, president; Dr. Walton Martin, New York City, vice-president; Dr. Nathan Green, New York City, secretary-treasurer. Ten new members were elected. A number of scientific papers were read and discussed.

UNIVERSITIES CONTEMPLATE SIX YEAR MEDICAL COURSE.—A conference was held recently in Montreal at which there were present representatives of the medical department of the University of Toronto and McGill University. There was no final decision reached at the conference, but a preliminary discussion of the curriculum to be adopted by both institutions from the first to the sixth year was held. Toronto and McGill Universities had decided on the six year course prior to the war.

MILITARY HOSPITALS TO HAVE TUBERCULOSIS BOARD.—The director of military services of the Soldiers' Civil Re-Establishment has recently appointed a board of tuberculosis sanatorium consultants. The board is composed of the following: Drs. Charles D. Parfitt, Gravenhurst; John R. Byers, Ste. Agathe des Monts; William M. Hart, Qu'Appelle, Sask.; Arthur F. Miller, Kentville, N. S. and David A. Stewart, Ninette, Man. The twenty-three sanatoriums throughout Canada in which patients of the department are receiving treatment will be visited by the board. It will also study the whole situation in Canada with regard to the treatment of tuberculosis occurring among the soldiers and will as far as possible endeavor to bring about uniform standards of treatment, equipment, records and other matters. Instructions have been issued to the medical superintendents of the sanatoriums to cooperate in every way possible with the board.

UNIVERSITY OF MISSISSIPPI MEDICAL SCHOOL TO HAVE NEW BUILDING.—An appropriation of \$250,000 has been made by the legislature of the state for a new chemical building at the University of Mississippi, and will provide laboratories and other facilities for the students in the medical school. An additional appropriation of \$10,000 to secure permanent equipment exclusive of chemistry was also made. Additional funds were appropriated for the university with which salaries of all teachers could be reasonably increased. The total appropriations for the university exceed \$1,000,000.

MERIDIAN DONATED A HOSPITAL.—The board of trade of Meridian, Miss., has presented the city with the Matty Hersee Charity Hospital buildings, land and equipment. The property was recently acquired by the board of trade by raising a public subscription fund from the city and the institution has been deeded to the city free from all debt or other incumbrances.

FIFTH INTERNATIONAL SURGICAL CONGRESS.—Announcement is made that the fifth congress of the International Surgical Association will be held in Paris, July 19-23, 1920. Addresses on cardiovascular surgery will be delivered by Tuffier of Paris on the heart; by Sencert of Strasbourg on the large vessels; Jeanbrau of Montpellier on transfusion of blood, and by Alessandri of Rome on the heart and large vessels. Surgical radiology will be the second subject discussed. Régaud of Paris and N. S. Finzi of London will speak on treatment of tumors with röntgen and radium rays. Surgical hematology will be taken up by Depage and Goovaerts of Brussels, and will be entitled "Analysis of the Blood and the Biological Reactions in Surgical Affections." Fractures of the thigh is the fourth topic and the discussion is to be opened by Patel of Lyon and Major Maurice Sinclair of Fairport. Tetanus, will be the fifth topic and has been entrusted to Donati of Modena and Commins of London. The names of the American speakers have not as yet been announced. Plans are under consideration for a seven day trip to the battlefields of France, the cost of which will be 815 francs per person. The address of the Secretary is 72 rue de la Loi, Brussels.

PERSONALS.—Dr. Urban Maes, of New Orleans, was made Secretary of the Section on Surgery of the American Medical Association; he was elected a member of the American Surgical Association at the St. Louis Meeting.

Dr. W. S. Leathers, Dean of the School of Medicine of the University of Mississippi and head of the public health activities in Mississippi, was elected Secretary of the Section of Hygiene and Public Health of the A. M. A.

Dr. Edmund Souchon, of New Orleans, was awarded the gold medal for the best exhibit at this year's convention of the A. M. A. Dr. Souchon's exhibit was of specimens from the Museum of Anatomy of Tulane University.

REMOVALS.—Dr. H. J. Dauterive, from 621 Macheuca Bldg., New Orleans to New Iberia, La.

Dr. B. Manhoff, from Charity Hospital, New Orleans to 215 E. Main St., Spartanburg, S. C.

Dr. J. N. Thresh, from Danvers, Ill., to Baton Rouge, La.

Dr. Anna B. DeChene, from Reno, Nev., to San Diego, Calif.

PUBLICATIONS RECEIVED

W. B. SAUNDERS COMPANY, Philadelphia and London, 1920.

Diseases of the Chest and the Principles of Physical Diagnosis, by George Wm. Norris, A. B., M. D., and Henry R. M. Landis, A. B., M. D.

Pasteur, The History of a mind, by Emile Duclaux. Translated by F. Smith and Florence Hedges.

Sexual Impotence, by Victor G. Vecki, M. D., 6th edition, revised.

Surgical Shock and the Shockless Operation Through Anoci-Association, by George W. Crile, M. D. and William E. Lower, M. D.

Text-Book of Physiology, by Russell Burton-Opitz, S. M., M. D., Ph. D.

The Medical Clinics of North America, Vol. 3, No. 5, March, 1920.

C. V. MOSBY COMPANY, St. Louis, 1920.

Arteriosclerosis and Hypertension, by Louis M. Warfield, A. B., M. D., F. A. C. P., 3rd edition.

Handbook of Diseases of the Rectum, by Louis J. Hirschman, M. D., F. A. C. S., 3rd edition.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D. C., 1920.

Standard Nomenclature of Diseases and Pathological Conditions, Injuries and Poisonings, 1919.

U. S. Department of Agriculture, Service and Regulatory Announcements Supplements.. Notes of Judgment under Food and Drugs Act. Nos. 65, 66, 67.

Public Health Reports, Volume 35, Nos. 14, 15, 16, 17.

MISCELLANEOUS.

Forty-Second Annual Report of the Department of Health of the State of New Jersey, 1919.

Augustin's Medical and Dental Directory of New Orleans, 1st edition.

Is Leprosy Increasing, address by Frederick L. Hoffman, LL. D., F. S. S., F. A. S. A.

REPRINTS.

The Bromides; Medicine From a Business Standpoint; Educating the Laity in Matters Medical; Camptocormia; Syphilis As An Etiological Factor in Epilepsy; Rational Psychotherapy, by David S. Booth, M. D.

Cancer Death Rate in New York City, 1917; Cancer Death Rate in New York City, 1918, by L. Duncan Bulkley, M. D.

Tick Caused Paralysis; (1) The After-History of Trypanosomiasis in Africa; (2) Concerning Immunity to Human Trypanosomiasis; The Granules of Spirochæta Duttoni, by John L. Todd, M. D.

Clinical and Pathological Notes on a Fatal Case of Bilharzia Treated by Tartar Emetic, by Major R. G. Archibald, M. B., Major Arthur Innes.

Epithelial Xerosis of the Conjunctiva in Natives of the Sudan, by Major R. G. Archibald, M. B.

A Peculiar Group of the Coccaceæ, by Albert J. Chalmers, M. D. and Major R. G. Archibald, M. B.

Trichophyton Currii, by Albert J. Chalmers, M. D. and Alexander Marshall.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for April, 1920.

CAUSE.	White.	Colored.	Total.
Typhoid Fever	1		1
Intermittent Fever (Malarial Cachexia)			
Smallpox	8	15	23
Measles			
Scarlet Fever			
Whooping Cough	2	1	3
Diphtheria and Croup	1		1
Influenza	2	7	9
Cholera Nostras			
Pyemia and Septicemia			
Tuberculosis	38	31	69
Cancer	26	7	33
Rheumatism and Gout			
Diabetes	5	1	6
Alcoholism			
Encephalitis and Meningitis	2		2
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	25	5	30
Paralysis	2	4	6
Convulsions of Infancy			
Other Diseases of Infancy	2	10	12
Tetanus			
Other Nervous Diseases	3	1	4
Heart Diseases	36	32	68
Bronchitis	1	2	3
Pneumonia and Broncho-Pneumonia	31	21	52
Other Respiratory Diseases	2	5	7
Ulcer of Stomach			
Other Diseases of the Stomach	3	2	5
Diarrhea, Dysentery and Enteritis	11	9	20
Hernia, Intestinal Obstruction	2	2	4
Cirrhosis of Liver	4	2	6
Other Diseases of the Liver	3		3
Simple Peritonitis	1		1
Appendicitis	6	1	7
Bright's Disease	27	16	43
Other Genito-Urinary Diseases	6	8	14
Puerperal Diseases	5	3	8
Senile Debility	2		2
Suicide	3		3
Injuries	20	11	31
All Other Causes	27	12	39
TOTAL	307	208	515

Still-born Children—White, 17; colored, 14; total, 31.

Population of City (estimated)—White, 280,000; colored, 110,000; total, 390,000.

Death Rate per 1000 per annum for Month—White, 12.70; colored, 22.69; total, 15.45. Non-residents excluded, 13.44.

METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. 29.86
 Mean temperature. 69.
 Total precipitation. 7.84 inches
 Prevailing direction of wind, south.

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