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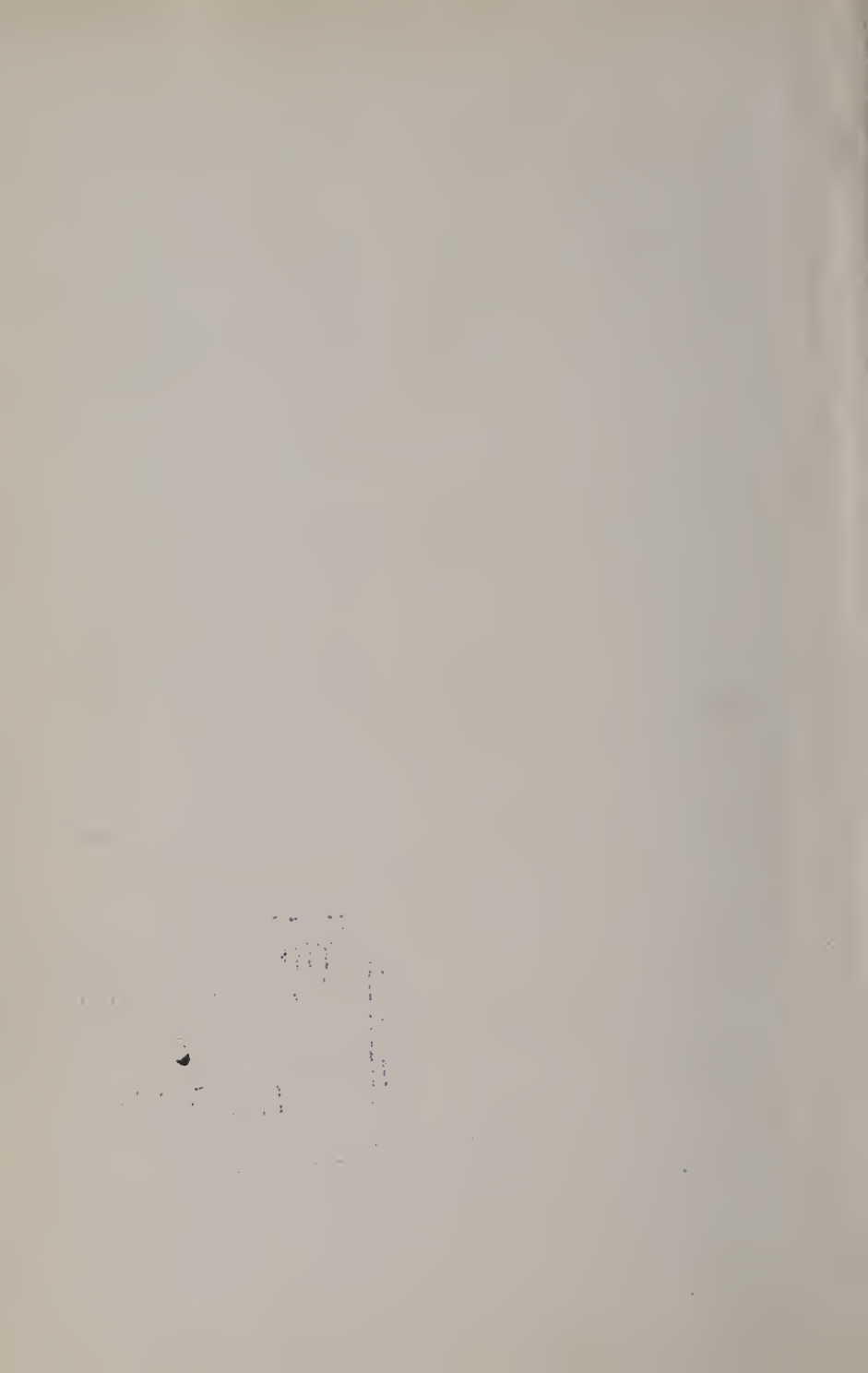


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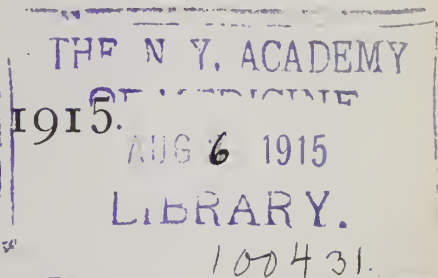
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JULY, 1914,

TO

JUNE, 1915.



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## Original Articles.

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

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### **GUNSHOT WOUNDS OF THE ABDOMEN—STATISTICS FROM CHARITY HOSPITAL, 1906-1913, AND REPORT OF TWO CASES OPERATED ON.\***

By L. B. CRAWFORD, M. D., New Orleans.

If by this short paper I can arouse a healthy discussion on the treatment of gunshot wounds of the abdomen, with a goodly leaning to the operative side, I will have done much. In modern warfare, without hospital facilities and where the steel-capped bullets of high velocity cause little destruction to soft parts, the expectant treatment is probably the best; but here, with our modern hospital equipment, and where soft bullets of low velocity are for the most part used, it seems to me that the operative treatment is the better plan.

The French have aptly called the abdomen "La boîte de surprise." This is especially true of gunshot wounds, for surprises

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\* Read before Orleans Parish Medical Society, December 13, 1913. [Manuscript turned over to Publication Committee May 21, 1914.]

are many and varied. The surgeon is not called upon to perform a definite operation, like the removal of an appendix, but often to arrest hemorrhage: to suture up wounds of the intestines; to deal with rents in the mesenteries, calling for resections; his judgment is taxed to the utmost, and at that he must think promptly and act quickly.

Cases are plentiful illustrating the curious pranks played by bullets in their course. I have in mind one in which the wound of entrance was in the epigastric region, and that of exit in the back at about the same level, and yet the cavity was not entered. We can easily understand how bony structures could deflect a bullet, but we must also realize that the soft parts also can do the same trick, as the above so clearly demonstrates.

Many claim, in cases where wounds of entrance and exit undoubtedly point to intestinal involvement, that perhaps the intestines escaped, and that is why the patient went on to uneventful recovery. This I do not think is true, for in looking over all the wounds from 1906, many cases that were sealed undoubtedly had perforations, as did the stormy convalescence prove. We all know that a small bullet hole in the intestines, especially if they be empty, in from four to six hours will close enough to prevent the contents from escaping. This has been proven conclusively at autopsies. But the point I make is, how are we to know that the wounds are not involving the entire lumen of the gut, or, perhaps, some part of the mesentery, calling for a resection?

There is no doubt that a great deal of judgment can be displayed in the selection of treatment in these wounds; if the patient is seen within six hours after the shooting, I think they should all be opened. Much can be accomplished if the intestines are involved; very little harm done if nothing is found. But if we see the victim only twelve or twenty-four hours after, and he is still doing well, we might rightly believe that he would continue to do so if let alone. If, on the other hand, there are signs of peritonitis, little else can be done than to provide for abdominal drainage. I saw one such case three weeks ago. The patient, a healthy negro, was shot in the right iliac region. The path of the bullet traveled inward, and finally entering the cavity two inches from the median line. He was brought to the hospital twenty-four hours after the shooting, and the wound was sealed and he was sent to the ward. The next day, that making in all forty-eight hours, I saw him and

decided to open the abdomen, using novocain, and not moving him from bed. I then inserted a large drainage tube, and for three days a great quantity of blood and intestinal contents discharged; but he succumbed.

Two great factors in causing death in these cases are, first, hemorrhage, and, second, peritonitis. We know that a blood vessel, even a small one, in the intestines or mesentery, will not readily stop spontaneously in the abdominal cavity.

In these cases, seen early, suffering from hemorrhage, much can be done with saline infusion, to bolster them up until the cavity can be opened and the bleeding arrested. I believe that with the method of direct blood transfusion, as practiced by Crile and others, still better results could be obtained in this class of cases.

Important points can be obtained from the patient, as to the caliber of the bullet, the distance from the shooter; did he exert himself after being shot; when had he eaten; what does the catheter show: does his pulse indicate hemorrhage; and finally, two most important points, has he a rigid abdomen, and does he suffer from a great abdominal pain?

I should like to report two cases operated upon, and to present a table of statistics obtained from all the filed histories of gunshot wounds of the abdomen since 1906. I wish to thank Dr. Jacobs, who gave me much time and many valuable suggestions in compiling these statistics.

Case I. Dr. Q., age 28, shot on morning of August 12, 1911, at about 7 a.m. He was immediately brought from Garyville to the Hotel Dieu, where I saw him four hours after the wound had been inflicted. He had eaten nothing since the previous night. Wound of entrance left hypochondriac region on the line with nipple and two inches below the costal arch; wound of exit on a little higher level, but practically on the same line. Complained of great abdominal pain and rigidity present on left side. I decided to open the abdomen, and, rather than wait for the then busy operating room, I had the dressing room prepared, on the first floor. An incision was made over the wound of entrance, the muscle divided, and the cavity opened. Very little blood was found in the cavity, and two coils of small intestines, probably jejunum, were easily found injured, making four small round openings in all. These I closed with Lembert sutures of linen. Nothing else was found involved. The kidney, spleen and colon had escaped. A small drain was inserted in the wound. In two days this was removed, and he progressed to a rapid recovery. The patient was discharged in something over three weeks. This is probably the type of case that sealing would have done as much for.

Case II. A. J., colored male, age 32; on October 12th, at 3:30 p.m., was shot with a 38 automatic steel-jacket bullet. The gun was discharged at close range, the patient struggling with assailant. He after-

wards tussled with another party, and walked two and a half blocks before he fell exhausted. He was brought to the hospital three-quarters of an hour after. Pulse almost imperceptible. Cold and clammy, but perfectly conscious. Point of entrance on right side in line with anterior axillary fold, and one and a half inches below costal arch; no wound of exit. Both abdominal rigidity and pain were present.

A great deal can be obtained from the bevel of the wound as to the direction taken by the ball. This was beautifully illustrated in this instance, the tract going towards the median line. By carefully palpating the abdominal wall, subcutaneous emphysema could be detected along the path of the bullet for about two inches. This was due to the laceration of the muscle and the extravasation of blood. I then detected a rounded soft mass, which afterward proved to be a loop of intestines herniating into the bullet wound as it entered the cavity.

He was immediately brought to operation and saline infusion begun. The center of incision was made over the herniating mass, and the cavity opened above and below the bullet entrance. My approach was then checked by a quantity of blood in the cavity. This I sponged away and soon found two perforations in the small intestines. But before closing these I took a more careful survey for the cause of hemorrhage and soon found a decided spurter in the intestinal wall. At this point there was no evidence of perforation. It was truly a brush burn, caused by the passage of the bullet. This constant jet of blood was arrested by a purse suture of linen. There being no more signs of bleeding, I then proceeded to close the openings, in all fifteen perforations.

In two instances, one in which five wounds came so close together and so much damage was done to the gut and mesentery, and in another in which two wounds had almost cut the lumen in two, I resected. In the first instance I resected seven inches of gut, not disturbing the mesentery at all, afterwards whipping the raw edges together and folding it on itself. I decided to adopt the Connell suture, end to end approximation. This suture is especially adapted to the mesenteric attachment, as it completely obliterates that space not covered by peritoneum. I did not end up the suture line as in the typical Connell suture, but closed the last small opening with generous Lembert, of linen.

In the second instance I had only two inches to resect, the same technic being used. This makes seven of the fifteen perforations accounted for. There remained eight, and of these three were small and only required but few Lembert sutures; and five were ranging from one-fourth to one-half of the lumen of the gut. These I sutured with a row of Lemberts in the vertical direction of the gut, so as to guard against obstruction of the lumen. As soon as a perforation was sutured, that coil was replaced and more brought out, thus at no time was there more than good working space of intestines kept out of the cavity.

The operation, though it seemed a year, lasted but forty-five minutes. Two large drainage tubes were introduced. In all patient had received one quart of saline by vein. Pulse rate 105 after operation. Fowler's position. Morphin when restless, and nothing by mouth for five days. Liquids started and soft foods on tenth day. Bowels moved of own accord on fifth day. Purgative, other than enema, on fourteenth day. On fourteenth day developed peri-rectal abscess. It was drained, and on twenty-fifth day patient was discharged cured.



This, I think, illustrates the other type of case, which do not get well if let alone.

TABLE.

	1906	1907	1908	1909	1910	1911	1912	1913	Sum Total.	
Total.....	68	37	43	36	48	40	24	31	327	
Operated.	{ Total.....	28	7	4	2	1	0	2	8	20
	{ Living.....	9	5	1	1	1	0	1	2	20
	{ Dead.....	19	2	3	1	0	0	1	6	32
	{ Death Rate..	66%	30	75	50	×	0	50	75	61%
Non-operated.	{ Total.....	40	30	39	34	47	40	22	23	275
	{ Living.....	22	9	7	9	20	15	6	12	100
	{ Dead.....	18	21	32	25	27	25	16	11	175
	{ Death rate..	45%	70	82	74	58	70	77	48	63%
Uncertain.....	3	2	3	8	6	7	4	2	35	

## DISCUSSION ON DR. CRAWFORD'S PAPER.

DR. DANNA: How many operations were there in 1906?

DR. CRAWFORD: Twenty-eight.

DR. DANNA: That was a rather high figure, if it means cases with perforation, as I don't think there were that many perforating gunshot wounds operated upon in the Charity Hospital in any one year. In my early experience there I operated on twelve cases, with five recoveries. After that my operative mortality in these cases was 100 per cent. I finally came to the conclusion that if we exclude moribund cases from the list of those not operated upon, the expectant treatment will show better results. We often exaggerate the effect of damage to the intestines. We might say that it is impossible for the patient to get well if the intestine is cut in two, but I saw one such case recover. We know that if the cut bowel is put at rest and walled off by other coils it may heal up and the patient get well; also, in a case where the intestine is injured I think that if we get these patients at once, give a big dose of morphin, put them in the Fowler position and enforce absolute rest, we get better results than by immediate operation, as we would thus do much damage and cause shock by manipulation. I think those of us who have treated any considerable number of these cases prefer the expectant treatment.

DR. H. D. KING: This is the second important paper on Charity

Hospital statistics on this subject by a New Orleans man, the first being published by Dr. Fenner some time since in the *International Journal of Surgery*. I think the comparison between military and civil practice is not good. The soldier is in prime physical condition; the patient in civil life is not, for as a rule he is either a drunken negro or a depraved white man. These factors are bound to affect the mortality rate. I think this accounts for the greater mortality at the Charity Hospital than in the military field. Dr. G. Farrar Patton published a paper in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* some years ago on the "Negro as a Medical Subject." I read a report from the Bellevue Hospital some years ago comparing results in Northern and Southern hospitals, but we must remember that the Northern gunmen are better physical specimens than the Southern negro. I think in publishing this paper Dr. Crawford should make note of such points as the length of time since the injury, the distance the patient was transported and the kind of transportation, the color, etc.

DR. RUDOLPH MATAS: Drs. Crawford and Landry have done well to present their interesting experiences to the Society. Not only are the cases reported of great interest to all surgeons, but they are also most acceptable and timely because they reopen the discussion of a great subject, which we have inexcusably neglected in recent years. When we consider the unrivaled opportunities offered by our Charity Hospital for the study of gunshot wounds of all kinds, and especially of the abdomen, the scarcity of detailed, accurate and authorized reports on this most important class of injuries is not creditable to this institution as a center of medical light and learning. I do not mean to disparage or minimize the work done by individual observers who have availed themselves, at various times in the past, of the material so plentifully offered by the Charity Hospital. On the contrary, some of the reports that have emanated from this institution are among the most important that have been contributed to the literature of the subject. But I refer to the failure to utilize this extraordinary and unrivaled field of observation in a systematic way, as a *yearly institutional duty* by those in authority and who are responsible for the management of these cases. If there is anything in which the surgical practice of the Charity Hospital is distinguished from that of other similar State institutions in the country, it is in the great number and variety of gunshot wounds. Considering the great

number of gunshot wounds in proportion to other injuries, we may claim that the experience of the Charity Hospital is greater than any six hospitals of the same size combined, North of the Ohio River.

Up to about two years ago the number of casualties caused by firearms was equivalent, when summed up at the end of the year, to a state of war. This was due to the fact that almost every man shot, not only in Louisiana, but in the Mississippi Valley and adjoining States, who could be transported along railroad lines, was dumped into the Charity Hospital. Since the Board of Administrators a year ago restricted the admission of patients to the citizens of this State, the number of such injuries has grown perceptibly less, though I am not able to make any comparative statements with any degree of accuracy. Nevertheless, and in spite of this restriction, we are still in a position to give more clinical instruction in gunshot injuries than in any military school in the world, outside of the actual seat of war. With this great mass of material at our command, the surgical world expects more collective information from us. It is quite evident that, whatever the progress accomplished in abdominal surgery at the present time, there is still much to learn and a great deal to improve in our methods of dealing with gunshot wounds of the abdomen and other visceral cavities. Whether we adopt the attitude of the "abstentionists" or of the "interventionists," it is quite plain that our hospital statistics, which are alone dependable for purposes of study, exhibit a mortality that is in no way satisfactory or indicative of a genuine and substantial progress. It is not that our results are worse than those obtained by operators in other institutions in this country or elsewhere, but it is the large numbers that we deal with that make the mortality more striking. We are in great need not only of accurate collective data, but of a minute, detailed and analytical study of the observed cases, in order that we may discover better means and methods of reducing the total mortality, which, by either "abstention" or "intervention," is scarcely ever less than 60 per cent. It is quite evident to my mind, that the adoption of either an "abstentionist" or an "interventionist policy" *à outrance*, *i.e.*, as an exclusive or fixed principle, in the treatment of these cases, is, in civil practice at least, not only unsound, but injurious to all further advance in the treatment of this formidable class of cases. What we need is a better appreciation of the diagnostic and

prognostic indications offered by each individual case, so that we may apply to each that mode of treatment which experience has taught is indicated in his particular condition. This is not the time to enter into a general discussion of so complex and important a subject, but I trust that the excellent example set by the readers of the papers to-night will encourage the hospital surgeons at the Charity and other institutions to prepare and present at least yearly reports in which the total collective institutional experience of this city in gunshot wounds will be thoroughly threshed out. We cannot ventilate too freely the subject of gunshot wounds; not only because of our great professional interest in improving the results thus far obtained, but also because, from the sociologic point of view, the frequent and free discussion of this opprobrious class of injuries is likely to be far-reaching in its salutary effects upon the community. It is only in this way that we may hope to make headway and to make the success of our efforts commensurate with our opportunities.

DR. G. FARRAR PATTON: Dr. Matas is right in stating that New Orleans is so fruitful in these injuries. In analyzing these statistics we must bear in mind that the surgeon is taking great chances, no matter what method of treatment he has adopted. Statistics themselves are not as valuable as an analysis of the cases. About three years ago I helped Dr. Stafford work up some of these cases, and our investigations seem to prove that the expectant treatment was best; but we must not jump at conclusions too quickly. I would suggest that the men in the surgical service be more careful as regards the histories of these cases. If this be done, the Charity Hospital statistics would be of value.

DR. CRAWFORD (in closing): Dr. Patton is right regarding the histories. The most of them give no details. I shall publish all the details I did not read to-night. The inclusion of the moribund cases with non-operative cases does that side of the question an injustice. My second case, however, was of that character.

**POST-OPERATIVE MANAGEMENT OF SURGICAL CASES.**

By E. DENEGRE MARTIN, M. D., New Orleans, La.

The successful management of post-operative complications is dependent upon a knowledge of pre-existing conditions. There are many who can still recall the time when certain symptoms demanded special drugs and many there were who had regular formulas to meet the indications. Nothing has done more to destroy this faith of ignorance than the great advance in surgery. Many pathological lesions which were at one time unsuccessfully combatted with drugs, can to-day be cured by surgical intervention. But much of the good which has accrued to physicians by advanced teaching, especially in diagnosis, and the early recognition of pathological changes, has apparently been lost on a number of men who practice surgery. We still see them prescribing stimulants in post-operative cases.

To better discuss the question before us it is advisable that we view it from the practical side. If we would consider man from the rational view point and look upon him as a piece of complicated machinery and not a conglomerate mass of anatomical and physiological anomalies many of the mooted theories of the day might be better understood. We often send a patient to operation without giving the case the careful study to which it is entitled. We frequently learn our lessons too late and though these oftentimes prove costly it is probably after all human that we should err. Some years ago a gentleman came to me to be operated on for hernia. We were old acquaintances; one year before I had seen him and advised operation. He had at the time been thoroughly examined with a view to having the operation performed. This had to be postponed, so that on his next visit, not realizing what changes could occur in this space of time, I sent him to the hospital and the next morning operated. Two weeks later he died as the result of a pyonephrosis which had not been recognized before operation. It was a costly lesson and I hope others may profit by my negligence.

This only too well illustrates a point I wish to emphasize and that is, that if we know wherein the danger lies, we can guard against it, rather than counter-act it with drugs after the harm is done.

Successes in surgery are not the result of post-operative treat-

ment but of a better and more intimate knowledge of existing pathological conditions. Any carpenter can build a bridge across a still stream, but it requires a master to design the structure, select the material and direct the construction of a viaduct across a raging torrent. A rotten scaffold is not made the stronger by the addition of nails. Put the burden of weight on the sounder portion and it may stand the strain; if it is all bad, put as little strain upon it as possible but distribute it equally as the whole may carry what would be too much for any one part.

For convenience let us divide our patients into two classes. A—the patients who are functionally normal but are suffering from a mechanical condition—such as cancer—tubercular lesions, abscesses, empyema, etc., some of the affections being purely local may still come under Class A and be considered as such. The preparation for operation in Class A is routine. If the patient is of nervous temperament and in the least apprehensive the most important phase of the preparation is to establish confidence and in such cases where the excitement is natural and not induced by a pathological condition, a hypodermic of morphin half an hour before the operation usually has a very beneficial effect. It not only dulls the sensation but is most effective in preventing the shock in operation. The management of the anesthetic is of vital importance; if the operation is conducted with the least possible trauma and without unnecessary delay, we need not fear shock. The shorter the duration of the operation the less nausea will supervene, provided of course, the anesthetic has been properly administered, and if the requisite, but smallest necessary amount of ether be given, the complications from nausea rarely give any annoyance.

For my best results I am indebted to Crile, the man who in my opinion has taught us most about shock. In reading his theory of shock and the effects of anoci one is impressed; but the truth, in my opinion, is not apparent until one sees this wonderful technician in the operating room where the secret is divulged. Anoci, as taught by Crile, would seem to settle the entire question of post-operative shock. Theoretically it is perfect; practically, impossible. In superficial operations it can be carried out fully, but once the abdominal cavity is opened and the viscera attacked, though an effort may be made to block the nerves, it can only be very improperly done. When Crile wrote about anoci, he left out that most important

adjunct in the technic; he left Crile out. His results I firmly believe, would be just as satisfactory with morphin plus Crile, minus local anesthesia, as most of us would get with morphin plus anoci, minus Crile. He is a wonderful technician and handles the human structures with the gentleness few surgeons can hope to acquire. Though my results in abdominal surgery have greatly improved in the past few years, as is the case with most surgeons who have sent their quota to the grave after a futile fight against trauma and infection and a blind faith in drugs, I am positive that my results have been wonderfully better since my visit to Cleveland, not because I have tried anoci, but because I have studied Crile.

The post-operative management of Class A cases is quite simple; if the operation is of short duration and of such a character as not to produce more pain than would follow some simple dissection, there is nothing better than absolute quiet. If allowed to awaken naturally nausea will seldom supervene—the heart will resume its normal rythm, the kidneys will secrete naturally and in time, the bowels will act without purgation. The practice of giving purgatives the third day as routine treatment should be condemned. The active peristalsis produced by this mode of treatment is often a means of retarding convalescence. The thirst which often follows general anesthesia can be quenched, if the patient is not nauseated, with liquids given by mouth; if nauseated, with the Murphy drip. If the character of the operation has been such as to cause pain and discomfort, this should be relieved by morphin, not in small doses but in doses sufficiently large to be immediately effective, and the effect should be as lasting as indications demand. Such cases often suffer with distention from gas, a simple s. s. enema is frequently sufficient to give relief. Change of position will often make the patient comfortable and there are few instances in which the position cannot be shifted without harm.

In such cases there are but two complications which will accelerate the heart's action. The first is pain which is controlled by morphin, the second is hemorrhage. Good judgment is an important requisite in treating hemorrhage. In class A, where the tissues are normal, a hemorrhage generally means oozing or the giving way of a ligature; if the hemorrhage is from a small vessel, it will often stop as soon as the heart's action is weakened, and the vessel may become blocked, provided intravenous injection is not practiced. If we have reason to believe that a small vessel is bleeding it is best

to wait and give fluid by proctoclysis or hypodermoclysis—the absorption will be gradual and the pulse restored in a reasonably short time. If, of course, we suspect hemorrhage from a vessel of any size, which is easily determined by symptoms too well recognized to need description, the vessel must be ligated before infusion is practiced. Heart stimulants in such cases are not only *contraindicated but harmful*. Why more patients were not sent to an untimely grave by our past practices is explained by the fact, no doubt, that the doses in which these drugs were administered, we are now told by our therapists, were too small to be effectual—for this we should be truly grateful.

To meet the indications for post-operative complications, many of which are termed shock, we should understand what shock really means. If one will only glance over the literature of this subject, all of which is thoroughly analyzed in a recent article by F. W. Parham, published in the December number of the *Southern Medical Journal*, he must come to the conclusion that shock is something about which much is said but little understood; for practical purposes it is disturbed function, manifested chiefly through the nervous system. The theory of shock means little so far as the patient is concerned, the condition and its relief is of most consequence.

If the disturbed function is due to pain, it should be relieved at once by morphin.

Another and more common cause of shock is trauma, due to the rough and unnecessary manipulation of the viscera or extensive dissections and prolonged anesthesia, this is always of a more serious nature, but after all is met in the same way. It means that a greater shock has been sustained by the nervous centres, but I verily believe that what time and rest will not do for these patients, no drug will accomplish. The results attributed to such stimulants as camphor, digitalis, and strychnin are in my opinion a myth, they invariably fail us when most needed. Exhaustion needs rest, not stimulation, the momentary rally produced by stimulation is but too often the signal for collapse.

The shock of infection is the greatest complication the surgeon has to face. It should be his one aim to prevent it, by the most careful and rigid asepsis—but once confronted with it, the campaign must be conducted on rational lines and every indication met as soon as discovered. After all, the results depend entirely



upon the virulence of the infection and the ability of the patient to resist. To Murphy we owe a debt of gratitude, for he has given us a means of furnishing fluids to the tissues and I candidly admit that when this fails I lose courage—we have no drugs to combat infection. The Fowler position, proper drainage and the Murphy drip are the best means at our command. In these cases where distention follows as a result of partial or complete obstructions due to temporary adhesions or persistent distention from gas due to toxemia, there is nothing so certain to give relief as a Pezzer catheter dropped in some distended loop of bowel. This not only allows the gas to escape but through this catheter quantities of liquids can be administered. In some of these cases I am inclined to believe I have gotten results from the use pituitrin, but I have used this drug in few cases only and am not prepared to report definitely on its value. Two of the essentials to life are too often overlooked, food and fresh air. There is no contra-indication to feeding so long as the digestive apparatus is not involved and the patient able to assimilate solid food. I make it a rule to put my patients on full diet regardless of high temperature and send them in the open air just as soon as practicable. To no cases does this rule apply better than to puerperal sepsis. A frequent complication is stitch abscesses and abscesses resulting from hemorrhage or pent-up secretions between the skin and fascia, due in many instances to tension and overcrowding of sutures. To attempt to drain these through a small opening is a mistake. If the amount of fluid is sufficient to dissect up the skin the length of the incision, the entire wound should be opened, the abscess cavity thoroughly cleansed and packed until healthy granulations fill the bottom, the skin can then be brought together and frequently these cases are well in a week.

One of the complications occasionally met with, less frequently than of old, is a dilated stomach, a sequel, I am convinced, of trauma and prolonged anesthesia, and should be treated as persistent vomiting, by lavage repeated as often as indications require.

In summing up my conclusions from personal observations I am led to believe that our results depend upon a more intimate knowledge of our patients and the better management of our operations, upon the exercise of judgment, which can be gained by experience, not the mistaken experience of unnecessary drugs, but the experience of non-interference.

One of the characteristic remarks of one of our local surgeons is well worth quoting here. He was asked his opinion of the administration of stimulants in post-operative cases and replied: "When the patient does well, the drugs do good."

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## MOSQUITOES. ROLE OF CERTAIN SPECIES IN PREVENTION OF MALARIA.

By HIRAM BYRD, M.D., Princeton, Florida.

It was back in the 90's that it was first demonstrated that malaria is transmitted by mosquitoes—the Anophelines. Then in 1900 it was likewise shown that yellow fever is similarly transmitted by mosquitoes—the Stegomiæ. But most people, particularly among the older generation—those who had studied and struggled with and suffered from malaria and yellow fever were loath to accept the new doctrine. For awhile it made little difference who accepted it and who didn't, but in 1905 we of Florida were brought face to face with the issue. When yellow fever put in its appearance that year, it was up to the State Board of Health to institute restrictive measures, and what the nature of those measures was to be depended solely upon the attitude of the Board to the mosquito doctrine. If it was to be accepted, then all restrictive measures must be along lines of mosquito control; if not, other measures would have to be instituted.

To make a long story short, the State Health Officer conducted the entire campaign along mosquito lines. But it must be admitted that many people were dubious of his management. Even the Governor did not give his moral support to the health administration. The results of the management of the epidemic were all that could be expected, which, if such were needed, was additional evidence of the validity of the law of mosquito convection of yellow fever.

But even after, and notwithstanding that, there were still many doubting Thomases. When they had to admit that yellow fever is mosquito-borne, they still held out against malaria. Finally when they had to recede from this position, they admitted that malaria might be transmitted by mosquitoes, but stoutly affirmed that that was only one of the ways. One argument triumphantly offered in

support of this position was very stubborn. Briefly it was a challenge to the medical authorities to explain how it is that the East Coast of Florida has more mosquitoes, and at the same time less malaria than the interior parts of the State. This challenge was hurled at the writer with uncomfortable freedom. He parried by answering, it may not be true that the East Coast has more than its share of mosquitoes, or less than its share of malaria; or it may be that the *Anopheles* (malaria carrying mosquitoes) are absent from the East Coast. And then he addressed himself to an inquiry into the merits of these claims.

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During the last ten years I have collected about thirty species of mosquitoes in the State. It must not be inferred from this that thirty species could be collected in any one community. The maximum collected at any one place was about eleven. But there are a few that were found wherever search was made.

Now it is a curious coincidence that the mosquitoes that transmit disease are the ones that are distributed all over the State. The *Culex pungens*, or common rain-barrel mosquito, which transmits the filaria; the *Stegomyia calopus*, which transmits yellow fever, and the *Anopheles* (several species) which transmit malaria, are found all over the State. The remaining species, twenty or more in number, are confined to restricted areas, and none of them are known to transmit any disease.

Among these latter are two species which require special consideration. They breed in salt marshes and are accordingly confined to the coast. They surpass all other species in abundance and ferocity. They appear periodically through the summer season and when they come all work ceases, smudges are built for cattle and horses, and the inhabitants betake themselves into screened houses, from which they don't venture out unless armed with palmetto fans, or some form of flapper with which to defend themselves. At such times it is every person's business to protect himself against these brazen foes. These mosquito inundations last from a few days to three or four weeks, and come usually two or three times in a season, varying with the locality.

Now the Atlantic Coast, from New Jersey to Key West, is infested with these salt marsh breeders (*Culex tæniorhynchus* and *C. sollicitans*), and the East Coast of Florida gets its full share.

It has been pointed out above that the *Anopheles* are distributed

all over the State. This is not merely a generalized statement for I have captured *Anopheles* at St. Augustine, Daytona, New Smyrna, Cocoa, Rockledge, Sebastian, Fort Pierce, Miami, Naranja, and even on down at Jewfish Creek.

Having determined then that the East Coast is supplied with malaria carriers along with the rest of the State, and that it is generally supplied in their season with salt marsh breeders along with the rest of the Atlantic Coast, it seemed that malaria ought to prevail here just as in the interior of the State.

I next made a series of examinations of school children in apparent health to see what per cent of them might be harboring latent malarial parasites for it is a well known fact that the more prevalent malaria in a community, the larger per cent of children will be found infected.

Of 336 children examined on the East Coast, 3.5 per cent. were found infected, while 249 in the interior gave an average infection of 8.4 per cent. I was therefore forced to the conclusion that the East Coast does have less malaria than the interior of the State, and this in spite of the fact that the same mosquitoes prevail here that do in the interior, and the salt marsh breeders besides.

It was not till I came down on the East Coast to live that I found the key to this anomalous situation. The fact is that the very abundance of salt marsh breeders forces the inhabitants to screen their houses and otherwise protect themselves against them, and in this way they are protected against *Anopheles* as well.

This seemingly fantastic explanation, so far as I have been able to examine it, bears close scrutiny. Starting at St. Augustine, for example: *Anopheles* present, salt marsh breeders abundant, houses well screened, malaria scarce. At Palatka the railroad dips in from the coast, beyond the range of the salt marsh breeders, and here malaria is quite prevalent. When Daytona is reached the salt marsh breeders are again found, and malaria not, while at DeLand, twenty or so miles inland, the malarial index among school children was 10 per cent.

Indeed it might be postulated thus: Other things being equal, the prevalence of malaria in a given locality bears an inverse ratio to the abundance of salt marsh mosquitoes.

This proposition has two important corollaries: (a) That in Florida at least, where nearly all cases of typhoid fever are the result of fly convection, this disease is reduced to a marked degree by

the prevalence of salt marsh mosquitoes; for protection against mosquitoes gives partial protection against flies. (b.) Where other species of mosquitoes that do not transmit disease prevail in such numbers, and with such ferocity, as to cause the inhabitants to resort to efficient screening, and other protective measures, the prevalence of malaria, and of typhoid fever are accordingly reduced. A notable example of this is found in Lake County, about Eustis and Tavares, where the *Culex perturbans* is at times a veritable pest. Here there is such freedom from malaria that there is a widespread belief, or at least was four or five years ago, that people will not take malaria where there are pines.

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## A REMEDY FOR BOILS AND SKIN INFECTIONS.

By CARROLL W. ALLEN, M. D., New Orleans.

It is often small afflictions which annoy us most, probably on account of their frequent visitations but certain it is that boils cause suffering out of all proportion to their size. The writer has been afflicted almost constantly for the past six months with boils and ordinary pyogenic skin infections, sometimes taking one form sometimes the other, often having as many as six or eight scattered about on both upper extremities from the fingers to the axillae and often of such size and violence as to incapacitate me.

As is usual with such things the remedies are legion but the real cures few. During my experience I have tested carefully every reasonable remedy and searched the literature for better.

All local remedies ever used for these purposes were well tried and after their demonstrated failure discarded; these measures included purely topical applications, the deep injections of 20 per cent. and 30 per cent. solutions of carbolic acid injected well into the center of the infected area. This treatment, while of some value and doing much apparent good in occasional cases, is not to be recommended as a routine but only for use in selected cases.

Autogenous vaccins were tried on two occasions and abandoned; once the culture showed staphylococcus albus the second time the aureus; mixed stock vaccins (Van Cott) were also used but likewise with apparently no benefit. A long course of sulphur baths

were indulged in and while they appeared to exert a favorable influence at first they seemed to have little effect towards the end.

Cerevisin was used to no effect and abandoned for pure baker's yeast (Fleishman) a remedy much in vogue at the present time and credited with some virtue. I ate a cake a day, in four doses, for several weeks and finally had to discard it as of no value in my case. This last remedy seemed to have afforded some amusement to my friends who facetiously claimed that my eating of yeast was due to my desire to rise in the profession and kindly predicted for me a great future.

Matters had now reached a point where it was either get well or give up work and seek relief by a change of climate, or a sojourn at some watering place when, in talking with Dr. J. N. Roussel, and I mention his name here to give him the credit, suggested that I use a freshly prepared preparation of dilute nitro-muriatic acid, 10 to 15 drops in water after each meal. In a few days I could note some apparent improvement and soon realized that I was getting better; well developed lesions soon disappeared and those in process of development were aborted. I have kept it up long enough to feel sure that it was doing good and that the venomous coccus had at last been routed. During its use I have seen many lesions started in a hair follicle, which in the past would have promised much trouble for me, disappear in a few days. As a result of this experience I can highly recommend the above remedy, I am thoroughly convinced of one other fact, contrary to the usually accepted surgical views, which is that—boils and superficial skin infections do better when not opened. Should they come to a head and point they can easily be evacuated, but their incision accomplishes nothing in shortening their course or lessening their pain; on the contrary, it seemed at times to prolong their duration and to add to the violence of the inflammatory reaction. The success of the dilute nitro-muriatic acid is particularly interesting as, among other remedies which I had tried and abandoned, was dilute sulphuric and phosphoric acids.

## LOCAL HEALTH ADMINISTRATION. PRACTICAL PHASES.

The Conference of Local and State Health Officers, Mayors and Presidents of Police Juries Was Held in the Auditorium of the Association of Commerce, New Orleans, La., Monday, April 20, 1914.

(Concluded from June.)

THE CHAIRMAN: In all communities there are conditions which are generally termed "*Nuisances*" and which every one is anxious to improve.—DR. O'REILLY, Chairman and Health Officer of the City of New Orleans, will discuss this question.

### Nuisances—Dr. W. T. O'Reilly.

"Among the principal and almost universal duties of local boards of health are the inspection and abatement of insanitary conditions, and it must indeed be admitted that a large part of the time and energy of sanitary officers is taken up in the performance of this duty. A nuisance has been variously defined by statute and legal writers, but in general it may be said to be anything which is a violation of the maxim, "*Sic utere tuo et alienum non lædas.*" It is the use of one's own property in such a way as to injure the rights of another and to inflict damage.

The following is a recent statutory definition of a nuisance:

"Whatever is dangerous to human life or health, and whatever renders soil, air, water or food, impure or unwholesome, are described to be nuisances, and every person, either owner, agent or occupant, having aided in creating, or contributing to the same, or who may suffer to continue or retain any of them, shall be deemed guilty of a misdemeanor."

Nuisances, therefore, may be of very many kinds, and it is not with *all* nuisances that boards of health usually have to do. Nuisances which, more or less, directly affect health, and particularly nuisances which consist of foul, offensive or otherwise dangerous odors or gases, or which are in any way due to decaying matter, or to impurities of any kind in the air, are the kind, the control of which is usually under the jurisdiction of the sanitary authority. Long before boards of health were established, however, the control of nuisances was provided for. For centuries back authority was

vested in selectmen of towns and cities, giving them the power to regulate offensive trades. From that time on nuisance legislation was frequently resorted to in towns and States. During the last century, authority to suppress nuisances was vested in the constituted authorities on as broad a plane and with as ample power as they now possess. But, with the development of interest in sanitary affairs, towards the middle of the present period, a more strict and general application of these laws was felt to be needed.

The newly established boards of health were, therefore, generally invested with the control of nuisances which before had been exercised by the legislative departments of cities. It is the generally accepted opinion and belief, that these matters will be better looked after by the health department than by any other, and no one can expect this part of the work of the board of health to become any less in the future. Our civilization must ever demand greater cleanliness and greater freedom from nuisances, both private and public; and this is particularly true in municipalities, and the necessity for greater care on the part of the individual, lest he permit or cause a nuisance increases with the density of population. Hence, the public demands more than ever before that the municipality shall restrain such individual acts as endanger the health and comfort of those affected thereby. Even if it shall in the future be shown that filth is not directly dangerous to health as it has been believed to be, there is little probability that any community will cease to protect its members from the very great discomfort which comes from nuisances due to that cause.

The two methods adopted by the government for dealing with nuisances are: 1st, by abatement; 2nd, by endeavoring to prevent their creation by means of appropriate legislative prohibitions. The abatement of nuisances is not always accomplished through the agency of State sanitary authority, but generally is, as it properly should be, left to the local government. But the authority which the local sanitary power possesses in this field is generally conferred explicitly by statute law. Usually, as in our State, these laws prescribe quite minutely the methods to be employed in thus dealing with nuisances, but sometimes, particularly in special charters, the power to abate nuisances is conferred in concise and general terms.

The first general State law that specifically provided for the manner in which the local government should order the abatement



of nuisances, and secure compliances with its orders, was that enacted in Massachusetts in 1797. That law has remained practically unchanged upon the statute books until the present writing, over one hundred years, and it has served ever since for a model, being copied by numerous States,—our own State among them. Moreover, Louisiana, Mississippi, Nebraska, Ohio and Tennessee provide, that local governments within their limits may make ordinances for the “abatement of nuisances,” but it was only within the past two years that municipal health board ordinances in Louisiana were made effective by legislative enactments, whereby the local boards of health were permitted to add to their ordinances a punitive clause which prior to that time was vested only in the municipal council. As regards large cities in general it will be found that many, perhaps most of them, though under special charters and receiving their sanitary establishment from the charters, nevertheless control nuisances under the provisions of general statutes. Yet, among the principal cities, a considerable number have been given in their charters or other special acts, authority to deal summarily with nuisances. As a rule, the number and complexity of regulation for the prohibition of nuisances increase with size of their municipality and the density of the population. Townships and villages need comparatively few ordinances of this kind. Many things may be freely permitted in a sparsely settled region which would be unendurable in a metropolitan city. The end constantly held in view in all these regulations is to secure pure air, pure water, and a pure soil for all men. By pure is meant free from decaying organic matter or its products, free from “filth” and all offensive odors. Therefore, rules are made in regard to the disposal of excreta and waste material of all kinds. Cesspools, privy vaults, sewers, drainage and plumbing are to be constructed and maintained in a proper manner. Offensive trades are to be regulated, stables kept clean and refuse of all kinds removed without causing a nuisance. Dwellings are to be properly constructed and not overcrowded and must be kept clean.

To enumerate the many specific characters of sanitary offenses, coming under the head of specific nuisances, would require more time than I am allotted. I will, therefore, only briefly refer to a few of the most important.

Of the large number of nuisances we have to deal with, filth, in one form or another, predominates. Rules relative to the accumu-

lation and disposition of filth of various kinds are found in all local sanitary legislation. While filth upon private property *may* be a nuisance; on a street or public place it is *certain* to be so. When a nuisance of this kind exists on private property, ample provision is made in most cities for its abatement, and usually this can be accomplished before much harm can be done. When, however, filth is thrown or left upon a street, thousands of persons may be affected before it can be removed, and as it is usually difficult to find the person who deposited the filth and to compel him to remove it, the cost of removal, therefore, must be borne by the city. Hence, in all cities effort is made to have clean streets, not only by a systematic cleaning by the municipality, but also by attempting to prevent by ordinance the deposit of dirt of any kind in the street.

Overcrowding in dwellings is one of the chief causes of the spread of communicable diseases, and the conditions which are attendant upon and inseparably connected with the huddling together of human beings, are conducive to many other forms of disease. It is only by the most careful attention to every sanitary detail that persons can be closely packed together without suffering great physical deterioration, and the immoral effect of crowding are so marked and the tendency so induced, so degrading, that any efficient control of densely packed tenements is almost impossible. Hence, it is felt that limits must be placed upon the concentration of population to which their poverty is always impelling the poorer classes. One means of checking overcrowding is by vacation of premises, which are found, on this account, to be a menace, not only to the health of the occupants, but to that of the public as well. Vaults and cesspools, even with the greatest care in municipal supervision, are always nuisances. Health authorities are without exception agreed that the only way to get rid of this nuisance is to abolish the vaults and to substitute therefor sewer connection of premises. To be rid of as many privy vaults as possible within his jurisdiction, and substitute sewer connection is an object that every health officer has in mind. The authority to make rules for the destruction of privy vaults, and for providing proper sewer connections, is doubtless included in every general grant of sanitary legislative power. Nearly all cities that are provided with sewer systems that are at all adequate are making strenuous efforts to be rid of their privy vaults and cesspools, and

this is true of the smallest towns as well as of the largest. This work requires in the aggregate a large expenditure of money by the house owner, and in numerous cases it entails some hardship. It must, therefore, be prosecuted with judgment and some moderation in times of depression. Cities that have long pursued the policy of getting rid of vaults are enjoying the advantages of reduction of typhoid cases.

Pump dumps is a form of nuisance which cannot be overlooked or overestimated when specific nuisances are discussed. This is no new cause of offense, for since time immemorial wherever there have been cities there has probably been trouble from those spots which are set aside for, or, are unconsciously selected as the common place of deposit for indiscriminate refuse. Vacant lots or lands wherever they are found in a city are very attractive to the eyes of all scavengers and all others who have any material whatever that is useless and an encumbrance. Even in those cities in which the municipality removes garbage, ashes, and rubbish, such lots, in a surprisingly short time, become covered with all sorts of litter, which private parties surreptitiously find more convenient to dispose of in that way than to retain upon the premises until the stated calls of the official scavenger; oftentimes the municipality is recreant in its duty in collection of garbage and thereby compels the citizens, for self-protection, to violate a sanitary ordinance by ridding his premises of offensive matter and placing it in streets or in prohibited places elsewhere. When much organic matter, in the shape of garbage, decayed vegetables, dead animals and the like, finds its way to a dump, the stench in warm weather becomes unbearable; but, even a small amount of such matter on the ground surface is a serious annoyance to neighbors. Dumps are usually the resort of children and others seeking coal, kindling wood, junk, etc.; hence, dumps are receiving much official notice. The best remedy is an efficient removal service and destruction by incineration.

In concluding this paper, hastily gotten together, I would consider my hurried task incomplete were I not to refer to our greatest common nuisance—the fly—which must necessarily become a problem for each municipality. This is a question which at present is engaging the attention of the medical and scientific world. Much has been written and said which is most interesting and instructive, as the study of insect life in its relation to the human being

must always prove to be. Out of the wealth of literature on the subject, one fact prominently stands out, which must be met and solved by each municipality, that the eradication of the obnoxious insect is a problem which must eventually be met and solved by the municipality. No amount of individual efforts by this or that citizen, no concerted efforts of this or that organized body of citizens alone will be productive of much appreciable good, unless it happens to awaken the interest of the municipality into a solution of the problem. It is hardly necessary to go into any extensive consideration of the question to realize its importance. Flies are born in filth and revel in filth and, by a peculiar construction and stickiness of their claws and feet, mechanically carry and distribute filth-laden germs as they go, leaving in their wake disease and death. Adequate protection against avoidable diseases is essentially a function of the municipality, and this function must be discharged in that manner which science points out as the most practical and effective. To be effective, therefore, measures directed at the insect must be made to include certain basic and essential requisites notably:

(a) The use of a properly constructed manure bin on all premises where an animal is kept;

(b) The general use of self-closing garbage cans, which cannot be left ajar or open by unthinking persons;

(c) The prompt and proper removal of horse-manure, along with other filth wherever found, and its prompt destruction by incineration.

The latter must become an important function and duty of the municipality and represents the lion's share of work in getting rid of this nuisance. The first two demand a small outlay of money and a minimum of ordinary care by the householder. Every commodity has its price and so have some incommodities, and the taxpayer, usually slow to respond to any stimulus applied to his pocket nerve, must realize this fact. Necessarily, the municipality will only give that measure of protection which the community is willing to pay for. Neither should the municipality endeavor to unload upon the householder the duties and functions which it owes to the taxpayer, nor the citizens themselves ask more of a municipality than local conditions will permit it to reasonably undertake. The time must be ripe for such a huge undertaking, as the thorough eradication of flies, the degree of enlightenment of the community

in sanitary matters, and the extent of preparedness of the municipality itself must both be considered. Work of this character can only be successfully undertaken by the municipality with the enabling assistance of such laws as will insure the active co-operation of the householders. Nor must the municipality attempt higher and special duties until the lesser or elementary ones have first been happily met and solved. The eradication of the fly, in fact, must be among the crowning achievements of progressive municipalities, and requires much preliminary germane work, without which it cannot be successfully attempted. Until such time arrives, the masses will continue to lend an ear (appreciative, let us hope) to the learned discourses of advanced educators who are endeavoring to prepare the way: and the more fortunate citizens will endeavor to minimize by the lavish expenditure of individual moneys, the evil effects of an evil condition which can only be successfully combated by the municipality itself, economically, at the proper time."

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THE CHAIRMAN: We inspect food supplies and all places affecting the public health; the dentist's and doctor's office should not be overlooked. DR. B. A. LEDBETTER, member of the State Board of Health, is going to discuss the "*Sanitary Office, Service and Equipment.*"

#### Sanitary Office, Service and Equipment—Dr. B. A. Ledbetter.

Public and personal health are foremost in the public mind to-day. As an organized body, created for the betterment of health conditions in the State of Louisiana, we hold official position as health guardian, and as individual physicians, we occupy quasi-official positions in the community; we belong to the world of mankind; and in our efforts to spread the gospel of health and well-being, to check or prevent the diffusion of disease, to diminish suffering or baffle death, we should know no maxims except those of truth and duty—and this in behalf of the people with whose physical welfare we are entrusted.

That we may better serve the community, our first duty is to ourselves. Are we, as physicians, sufficiently acquainted with our sanitary shortcomings as they concern the health of the public? If the physician is to spread the gospel of health and cleanliness,

he must display a willingness to abide by his own teachings. Therefore, I propose to discuss "The Sanitary Office, Service and Equipment." On account of the immensity and novelty of this question, I shall limit myself with respect to the phase of its particular and pertinent significance to the practice of medicine. The limitations of this paper are, by necessity, sharply defined and will be adhered to with strictness. Indeed, I set these restrictions in advance, for, frankly speaking, the subject in its other and, perhaps equally interesting phases, tempts one to wander far afield.

Try to have a nice, comfortable, cheery reception room. Let the essential features, such as pictures and interior decorations, show that the physician is a man of culture and refinement.

The office should be spacious, light and airy, and should have electrical, gas, compressed air and hot and cold water connections. In rural districts the advantages of gas, electricity, and flowing water will necessarily be denied the physician, but there are many things the country physician can do in the matter of improving his facilities which will prove of benefit to himself and his patients. A special dressing room for female patients, while of distinct advantage, is not absolutely necessary.

The equipment of the office should be thoroughly modern and contain everything essentially necessary for the proper treatment of ordinary ailments and for operations in minor surgery. Exercise special care in the arrangement of your office. An office should look fresh, neat and clean, and be of a bright and cozy medical tone. Let your office represent the workshop of an earnest, zealous, scientific physician, who has a library, takes the journals, and makes full use of the instruments of precision, and the various methods that science has devised for doing different kinds of medical and surgical work. The physician should regard his office as twin to the sick room or hospital ward.

Particular care should be taken to avoid a quackish display of instruments and appliances. But, while the undue exhibition of books, surgical instruments and appliances is not to be encouraged, this does not mean that you should not have ready for actual use such things as microscope, sphygmomanometer, alcohol lamp, test tubes, reagents, and other modern aids to precision in diagnosis, with the various other scientific instruments you make use of in treatment.

As to ornaments and pictures in the office, it is best to limit

such articles as much as possible. Busts, statues and pictures serve no purpose save to collect dust and harbor dirt. Anything not actually necessary should be eliminated from a modern office.

A combination surgical and gynecological table, preferably of white enameled iron to facilitate cleaning, a dustproof surgical cabinet, a dressing table, a book case, a flat top and not a roller desk, for obvious hygienic reasons; a combination height and weight scale; a first-class sterilizer; a special receptacle for cast off dressings and discharges, and a few comfortable chairs should complete the office outfit of the medical man. The absence of a sterilizer from the physician's office stamps him as an individual careless of human life. All surgical dressings and office waste should be burned daily.

Have your desk and patient's chair so arranged that the patient will sit in a good light during examination; all articles of furniture of simple construction, and, if possible, of hospital style, that is, of white enameled iron. Furniture and equipment of this type are easily cleaned.

The walls should be of some pleasant neutral tint, preferably of gray. Where wall paper is used it should be of the washable type. All wood-work should be painted white and finished with one or two coats of enamel.

Shades and curtains should be done away with as they accumulate dirt and often hide filthy windows.

The floor should be tiled or covered with linoleum. Oiled floors are, under certain conditions, also hygienic. Carpets, rugs and mats should be banished. Dry sweeping and dusting should be absolutely prohibited.

Cleanliness should be the watchword of the physician. Be especially careful to avoid, either directly or indirectly, transmitting infection. Wooden tongue depressors and swab sticks should be used as much as possible; they are handy and after use can be burned; and thus infection from patient to patient obviated.

In conclusion, I beg to offer the following don'ts for the physician's guidance:

Don't be adverse to using plenty of hot water, soap and a stiff brush. Wash the hands often! Wash the hands well!

Don't think it is economy to be sparing in the use of towels—it is criminal in the light of our knowledge of transmissible diseases.

Don't allow your office to become decorated with bottles of un-

examined urine or feces. Bacteriological work should be done after office hours.

Don't allow smoking or spitting in your office or waiting room. This rule not only applies to the patient, but the the physician himself.

Don't hesitate to fumigate your office and reception room at regular intervals.

Don't balk at a wholesale cleaning up of the office. This clean up should be as thorough and general as the spring cleaning of the housewife.

Don't fail to report to your health officer all sanitary violations in the building wherein you have your office. This might offend the owner or janitor, but you as a lessee have some rights.

Don't be backward in enlisting the aid of the health officer should you remodel or renovate your office. The health officer will be of invaluable help in a matter of this kind.

Don't think that because you are a physician you should be shown any leniency or extended any special privileges in the matter of health regulations. The Board of Health should demand more of the physician than of those who know nothing of sanitation and hygiene.

Don't fail to welcome inspection of your office by the Board of Health. If your first score is bad, clean up and demand re-inspection until your score is excellent."

THE CHAIRMAN: Dr. Ledbetter has told us of the requirements of a doctor's office, and we are going to ask DR. WALKER to consider the question from the standpoint of the dentist.

### **Sanitary Office, Service and Equipment—Dr. Wm. Ernest Walker.**

As the word "Orthodontist" follows my name both on the preliminary and on the final program I have thought to limit my remarks principally to that field.

First let me tell you of an experience I had a few weeks ago, when, to get out of the rut, I avoided taking the car from the office home, as usual, and, walking down to the river and out on the wharf, took a seat by a Japanese on an idle gang plank, to watch the water craft.

We engaged in conversation to my advantage, concerning Japan,



ancient and modern and the changes in her statesmen, of California and of the Japanese exodus from Mexico and finally of his mission here. Then thinking he had done enough for me he wanted to know where I was from and what I was doing and next what I meant by orthodontia and dento-facial orthopedia. The wide-awakeness and the ready comprehension of the 'Jap' was shown by the statement he made, after I had explained that orthodontia had to do with the prevention of the development of mal-positions of the teeth and also with the correction of such conditions, if the patient is not brought early enough for prevention; and, that dento-facial orthopedia included the prevention and the correction of malformation and mal-positions of the jaws and the prevention and the correction of undesirable facial contours; and, that, when the air passages are not sufficiently wide to permit free breathing, we increase their width by moving outward the upper maxillae and by thus re-adjusting the jaws we carry, laterally, the lower part of the outer side of the nasal cavity; and thus, by developing desirable facial contours and well shaped jaws, properly placed, carrying sound teeth, arranged in proper occlusion and free air passages, we prepare the mouth and the nose for the proper preparation of the air and food which together form the only means of receiving all of that which goes to build up the entire body. The astuteness of the "Jap" was now made manifest by his remarking, "An Orthodontist and Dento-Facial Orthopedist then is a *fundamental* doctor?"

Now you will see from the nature of the practice that it does not include the handling of any but the young, and even then the practice being limited, as specified, all dentistry and surgery is eliminated as well as all medication, the entire treatment consisting in gentle mechanical stimulation, without any cutting. The treatment is as bloodless as Lorenz', and for these reasons there would be no occasion for an office intended for such a practice to be equipped as a surgery for laparotomies; or even as a surgery for minor operations; or as an office for the various surgical specialties, including dentistry; or, even as would be required for an up-to-date physician's office, handling infectious and contagious diseases. Not only would such equipment with white enameled iron furniture be unnecessary but it would be decidedly undesirable, for it would have just the opposite of the desired psychologic effect, because most patients come to us with some fear, born of stories they have heard of pain inflicted by ancient methods in times past, and if the office

was given the appearance of a surgery their fear would be intensified, and as the treatment requires many trips to the office and is entirely without pain one's first duty is to remove the erroneous impression which is greatly facilitated by having the equipment of the consultation room as much unlike either a dental office or a surgery as it is possible to make it, as this aids greatly in establishing ease of mind on the part of the patient and the parents, which is undoubtedly our first duty.

While there should be this difference that I have spoken of, still there is a similarity in the requirements, in that an orthodontists' office should be *perfectly clean*—the floor, the ceiling, the walls and everything that the room contains, including something which was not emphasized in the preceding paper, strange to say, for it is the most important part of the equipment; I have reference to the doctor, himself, and to his assistants. They should all be clean mentally, for then it would follow, as the night the day, that they would then be clean both morally and physically, accomplishing the last, not alone by hand scrubbing with liquid soap and running warm water, but by thorough warm morning baths and clean clothes. It is of great importance, in order that this part of the equipment may give hygienic service, that not only should their bodies be clean outside, but that they should be clean inside, from one end to the other—giving special attention to the cleanliness, healthfulness of their teeth, gums, tongue, throat and nose.

The assistants should be selected with such care as to their mental caliber that there would be no doubt about their ability to develop the septic consciousness, for all apparatus and instruments which enter the mouth must be sterilized by boiling in soda after each patient to avoid the danger of transmitting syphilis, diphtheria, scarlatina, etc. Lastly, no apparatus should be put in the mouth that cannot be kept clean and all apparatus worn by the patient (with the possible exception of neatly fitting individual bands, which must be cemented to the teeth), must be susceptible of removal by the patient for the purpose of cleansing after each meal, for the sake of the health of the respiratory and digestive systems and to avoid decay of the teeth and disease of the gums, for, despite all theories and predisposing causes, it still remains a fact that any part of a tooth which is always kept polished absolutely never decays."

THE CHAIRMAN: The public is becoming more and more awake to the value of "*Medical Inspection of School Children.*" Dr. EDMUND MOSS has had wide experience since the inauguration of this work in the city schools—we shall appreciate hearing of the results accomplished.

### Medical Inspection of Schools—Dr. Edmund Moss.

*History:* This is no new experiment or fad, for we read that early in the Nineteenth Century Peter Frank of Australia set forth in one of his writings the duties of physicians to schools. In 1832 France formulated rules for medical inspection in schools. Following this scientists began to discuss this most important question and it was not long before cities in Sweden, Austria, England, Japan, Holland, Russia, and other foreign countries appointed school physicians. In 1894 Boston introduced medical inspection in the public schools. Soon other cities in the United States followed suit, until now, no school system is considered complete and up-to-date which is not looking to the physical welfare of the pupils.

You will read and shudder with horror at the tales of the so-called dark ages. You wonder how grandmother put up with the conditions in the little old red school house, but let me tell you that we had dark ages in school hygiene not later than thirty years ago and that grandmother's school house in the country was far more healthy than the conditions surrounding the city child prior to 1880.

The period from 1880-90 was one of a great awakening along the lines of preventive medicine. It showed us that measles and scarlatina were not diseases that every child must have; that tuberculosis was not inherited but due to a germ; that diphtheria was not necessarily fatal, and that croup was not sure death. It showed us that all these diseases were preventable, thereby pushing to the front medical inspection of school children, which is after all nothing more than a campaign of preventive medicine.

*The Aims of Medical Inspection:* The pedagogue of yesterday thought only of how much of knowledge he could force into Johnny Jones irrespective of the kind of knowledge or the receptive capacity of Johnny. They were too often trying to make a square peg fit in a round hole. If the peg didn't fit, then it was the peg's fault and if it couldn't be whittled to fit, it was thrown aside and another

peg tried. It never occurred to them to change the shape of the hole. So it was the child with poor sight wore the dunce cap. The deaf child never had any recreation because he was always kept in for being inattentive, disobedient, etc. We have compulsory school laws; it is therefore incumbent upon us to see that we do not force these children to endanger their health. How is this to be prevented? By medical inspection of schools, the aim of which is to point out the prevalence, causes and means of removal of anything that tends to mental or physical deficiency.

In 1908 I introduced medical inspection in the public schools of this city, and believe me, gentlemen, I had my troubles. The School Board thought the money could be better expended; the teachers only saw another diabolical scheme for putting more work upon them; the family physician had visions of our stealing his practice; and last but not least, the parents feared the sancity of their home would be invaded and it was none of our business what was the matter with their children any way. In spite of these, however, the Department of Hygiene has certainly made some steps forward and I hope has done some good to the community. Let me show you some tables setting forth conditions found and showing how necessary our inspection was:

## Girls:

Number examined .....	2,228
Hearing .....	18
Glands .....	944
Vision .....	450
Breathing .....	257
Tonsils .....	193
Adenoids .....	127
Other defects .....	89
Total defects .....	2,274

## Boys:

Number examined .....	2,102
Hearing .....	28
Glands .....	1,044
Vision .....	292
Breathing .....	295
Tonsils .....	158
Adenoids .....	168
Other defects .....	139
Total defects .....	2,334

## DENTAL EXAMINATION.

## Girls:

Number examined .....	2,467
Needing dental attention .....	85%

## Boys:

Number examined .....	1,290
Needing dental attention .....	89%
or take another group in a different way:	
Girls examined .....	4,308
Defects .....	16,109
(Or 3.73 defects per pupil.)	
Boys examined .....	3,945
Defects .....	14,575
(Or 3.69 defects per pupil.)	

Now as to what results we are getting along remedial lines.

In the session of 1911-1912 and 1912-1913 we vaccinated 5,452 pupils. We made 923 school inspections. We excluded 880 pupils for contagious diseases not quarantinable, this including chicken-pox, mumps, Indian fire, scabies, etc. In 1911-1912 we had only 300 cases of quarantinable diseases among nearly 46,000 children. In 1912-1913 we had 1,600, due to an outbreak of measles in the city, among nearly 47,000 children.

We have had the teeth of 654 pupils attended to at the dental clinic in the past two sessions and fully an equal number went to private dentists. One dentist told me the other day that he had over one hundred children come to his office due to the school dental examination. The following for 1911-1912 is a fair sample of our results in getting other defects attended to:

## 1911-1912.

Number having ears treated .....	25
Number having eyes treated .....	108
Number having teeth treated .....	462
Number not having tonsils treated .....	19
Number having nose treated .....	10
Number having adenoids removed .....	115
Number having tonsils removed .....	95
Number having glasses prescribed .....	48
Number having mastoid operations .....	2
Number having consulted physicians .....	480

The above is pitifully small when compared to the large number of defects found and needing attention, but until the School Board sees fit to give my department school nurses our results will continue to be poor and our efficiency reduced by 50 per cent. Experience has shown all over the world that no system of medical inspection of school children is complete without this most necessary adjunct, 'The School Nurse.' You are medical men and it is there-

fore unnecessary for me to dilate upon the untold injuries that will result from the above defects remaining untreated. I therefore urge upon you to put your shoulders to the wheel and let us have medical inspection of school children in every parish in Louisiana.

We know what good and far-reaching results have been obtained in other states and countries. We know the crying need for it here in our own state. We know that we have as fine a lot of medical men as we can find anywhere. Therefore, if we do not perform this most obviously necessary act we will be criminally negligent in our duty to our children and our state."

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THE CHAIRMAN: DR. S. D. PORTER also has had some experience relative to medical inspection in the schools and he will tell us some of his observations out in the state.

#### Medical Inspection of Schools—Dr. S. D. Porter.

A better term would be: "*Health Supervision*," for medical inspection has for its purpose to-day not only the protection of the child from infectious diseases in the school and the recognition of the physical defects, but the general upbuilding of the health of the children in schools and to improve the hygienic conditions of school life, to not only protect the healthy child from disease, but to develop a defective into a normal child, whose efficiency will be increased.

With compulsory education laws should come laws providing for medical inspection, for no state has a right to force a child to attend school unless it is given every protection possible to safeguard its health.

Medical inspection of schools in this country was first introduced in the schools in Boston, Massachusetts, in 1894, and had for its purpose the protection of the school from infectious diseases. The next step was the enactment of a law requiring teachers to examine sight and hearing. During the past twenty years, since its introduction, twenty states and over four hundred cities now have some form of medical inspection.

With the advance in the study of child hygiene and the recognition of physical defects and the study of the influence of these defects on the physical, mental and moral development of the child, and the correction of these abnormalities, with the rapid improvement and development of the defective, forced those who are

charged with the care and education of the child to realize the necessity and importance of broadening the scope of activity of the medical inspector, and to his duties added the examination of all children for physical defects, the sanitary inspection of the school building and premises, and the instruction of the children in school, at home, and of child hygiene.

With the many complex problems of child life and the greater demands on the medical inspector, the school nurse was introduced, whose value as an adjunct to the medical inspector cannot be measured, for we find in cities where nurses are employed that the percentage of corrections and treatment recommended by the inspector are much greater. Statistics show that not more than half of the cases needing treatment are treated, in spite of the adequate facilities for treatment found in most of the large cities, unless some system of follow-up work has been adopted; it is here the nurse renders her most valuable service for it enables her to enter the home and become acquainted with the child's home surroundings which materially influence its school life. The nurse also cares for minor injuries and simple maladies through the school clinic which materially lessens the work of the medical inspector, and the volunteer physicians who treat the poor.

The introduction of domestic science in to the schools was brought about through medical inspection, and the establishment of open-air schools for the treatment of tubercular and anemic children. There are over fifty open air schools with easily 2,000 children in attendance, this marks the progress which has been made in medical inspection. In spite of the wonderful advances, however, it is still in its infancy and there is not a single state that has a complete, modern, medical inspection law; for instance: Pennsylvania and Minnesota, with mandatory laws, except sparsely settled and strictly rural communities. New Jersey seems to have the most adequate laws, for it provides compulsory treatment, and certainly no medical inspection law is adequate that does not compel correction, for what can we gain if we examine every child in the whole world and administer to none? The aim of medical inspection, therefore, should be and is correction.

The greatest progress in medical inspection has been made in cities, due to the fact that opportunity for study and the facilities for correction are better. The compulsory education laws in the large cities force all the children into the schools between certain

ages, and enable the medical inspector to keep them under observation during this period.

The hospitals, free clinics, institutions for special defects, and various societies which co-operate with the school authorities afford ample facilities for correction. While much progress has been made in the cities we find that nothing has been done towards providing medical inspection for the rural schools. As stated before, those states having mandatory inspection laws have excepted the strictly rural districts. Now, should this be so when we consider that 60 per cent. of the population is rural, and that the number of cases of defects and diseases are almost as large, if not as large, as in the cities?

I recognize the physical difficulties which exist in the country, such as distances from a center with hospital facilities, the conditions of the roads, the long distances, oft-times, to a physician, the lack of preparation and equipment, the lack of funds, and the predominance of ignorance in certain rural sections, but cannot these obstacles be overcome, and cannot something be done, and are we doing our full duty with present forces at our command?

Dr. Dowling, as President, and his co-workers of the Louisiana State Board of Health have been conducting a strenuous campaign of education for the past three years, and one of the special features of that campaign has been to create an interest in and a demand for medical inspection of school children. Two hundred and fifty thousand school bulletins are issued monthly to the school children; many of these go into the homes and the lessons taught in school by the teachers are repeated by the pupils to the parents.

In Jefferson Davis Parish, Dr. Walke has just completed an inspection of every school child there; in Vernon, Dr. Azar made 1,557 inspections, in Morehouse 750, and about 150 were made in St. Bernard. Nearly every school child has been examined for hookworm in forty-five parishes; the results of these examinations reveal the fact that over 25 per cent. of the children have some defect of the organs of the special sense, and that 40 per cent. have hookworm disease.

Statistics furnish us with an abundance of data to confirm our findings in Louisiana, but unfortunately, here we have done very little towards corrections of defects, and as elsewhere, statistics are meager giving the number of treatments and the results of treat-



ment. Such statistics at this time would be most helpful in crystallizing a sentiment for medical inspection.

To those who have studied the influence of disease on the physical, mental and moral development of the child can we refrain from saying that something must be done, and to do it now. In this state too much responsibility has been placed on the already overburdened and uninstructed school teacher. Our sanitary code prescribes that the principal of every school in Louisiana, except in cities where a regular medical inspector is employed, shall make a monthly report on the sanitary condition of the school building and surroundings, and also on the physical condition of the children; these reports are to be sent to the Superintendent of Schools and by him forwarded to the State Board of Health. How many of our rural school teachers are capable of making an intelligent report on the physical condition of their pupils? Although Snellins' test cards have been provided I have seen very few in the schools, and though four years ago, in a pamphlet published by the State Board of Health, a clinical thermometer was recommended as part of the teacher's equipment, I have never seen one in any school I have visited, and I am sure there are many teachers, if they had one, who wouldn't know which end to put in the mouth. So many with whom I come in contact are wholly ignorant of the fundamental principles of school hygiene. Dr. Macy of New York, spoke knowingly when she said, 'that in no other profession does the practitioner know so much about the tools for the work, and so little about the material upon which the work is to be performed.' I think the teacher when properly instructed and equipped will be a most valuable adjunct to the medical inspector, and this can only be accomplished by the creation of chairs of hygiene in our universities and normal schools, and the teachers should be required to pass a practical examination in those subjects which are essential to the physical well-being of the child to be placed in their charge.

Under our present laws, with no provision for a medical inspector, the full-time health officer, sufficiently paid to enable competent men specially trained to accept these positions, and an amendment to the law providing for assistants which may be school nurses, with a corps of specially trained school teachers would do much towards solving the most important problem of medical inspection. All laws passed should be mandatory, and active co-operation should exist between the Departments of Health and Education.

THE CHAIRMAN: We are not only trying to inaugurate medical inspection in the schools but we want to extend the work to inspection of teeth as well. DR. A. G. FRIEDRICHS will discuss this phase of the work and give us the benefit of his experience.

### Medical Inspection of School Children's Teeth.

Dr. A. G. Friedrichs.

Frankly I do not know what my friend Dr. Dowling wants me to do. He has put down *Medical Inspection of School Children's Teeth*; that is all right, but I never knew of a medical man who knew much about medical inspection of the teeth. I am a medical man myself, but twenty years ago at the State Medical Society, I called attention to this very subject. In fact, they did finally establish a section on Dental and Oral Hygiene. I don't know how it has happened, but they seem to have forgotten this section; it has never appeared since I got out of office some years ago, but as long as I was in office we had it.

I want to take this subject up first from a health point of view. As you have heard from Dr. Moss about the conditions we find here in the mouths of our own children, you can readily understand that from a purely health point of view it is a physical impossibility to have anything like a normal healthy nutrition without a perfect masticating apparatus. There is volume after volume written on dietetics, and nothing said about mastication, but I want to call your attention to this—I have been perfectly astounded at the way in which this subject has been overlooked so long. It was only in the last few years that any inspection of this kind was allowed in the public schools.

In the investigation of the children's mouths it is found that at the age of twelve (12) the teeth are as much affected as to bar them from proper mastication. About 85 per cent. of the children at twelve years have mouths in such condition as to make it impossible to masticate their food at all. From this you can readily imagine what a horrible condition it can bring on and what a physical wreck such a patient would be under those conditions. That will go on until something is done. Realizing that this inspection alone was not of any particular value unless it was followed by giving some relief, the department of which I am in charge offered to take care of these children. I went through the asylums here and ex-

amined 800 teeth. At the first inspection I found a most terrific condition, such as you find in the schools to-day, and the physical condition of those patients the year after we made those inspections was so marked that the students who made the original inspection were perfectly astonished at the improvement that had been made.

In a Boston orphan asylum, where an investigation was made, the number of patients suffering from infectious diseases was reduced in three years from 60 per cent. to 2 per cent. by a proper inspection and care of the teeth. The dentists of this city made about 15,000 inspections in the mouths of public school children. Up to date the clinic has taken care of about 800 children. I suppose we performed about 7,000 operations. Well, you can see what an amount of good that has done.

Going back to speak of the children in the asylum, there was only one asylum in all the number I examined, an asylum on Washington avenue, where the children had taken advantage of the clinic, and the health of those children was in marked contract to that of the children in the other asylums; their teeth were in fair order. That was before any inspection had been made—these people simply appreciated their advantages and had their teeth and mouths treated at the dental clinic.

Another thing we have not stopped to consider is what a terrific source of infection an infected mouth is. Many of the conditions that we find in the schools result in the infection of entire neighborhoods. You take a child with its mouth full of bacteria; such children meet each other, kiss each other, they might have been drinking out of the same cup, or they spit on the floor and this sputum is spread all around. Children go home with that infection, and the first thing you know a neighborhood is infected and the source from which that infection originated, the school, is never thought of at all. In Chicago an epidemic of typhoid fever was not eliminated—Dr. Evans said so himself—it dragged on for a long time until he had those mouths inspected and the teeth put in order. The same thing is true of Fort Wayne, Indiana. Long after the disease has left, these bacteria remain in these old, decayed teeth and may prove a source of infection to others. In Cleveland some years ago, you, gentlemen, know about this investigation—one hundred children were taken up out of the slums and a board appointed by the National Dental Association kept these children under observation and treatment for one year. They were exam-

ined four or five times during the year and the result was perfectly astounding, not only from a physical point of view but their mental condition was improved to the extent of 99 per cent. The Assistant Superintendent of Education in Cleveland stated that he believed, if the teeth of the school children were properly cared for, that the holdover students would be reduced to the defective children alone.

From an economic standpoint we find by examinations made throughout the country after the inspection of school children, taking all the schools together, that the school year would be increased six months as a result of the diseased condition brought on by defective teeth occasioning pain and suffering which caused tardiness and loss of time. That is to say, these children would have to be sent back and it would take them six months longer to accomplish the same thing as the healthy children. Now, you can readily see what that would cost; it would mean increased appropriations, practically increasing the expense of education one-third more. In other words, say the cost (as I am told it is in New Orleans), for the education is \$33 per capita, one-third of this amount could be saved if the teeth would be cared for and the per capita of the student would be reduced ten dollars per child and it would be the part of economy to pay to have this service rendered. Then the saving in the matter of time would be great and it would represent a magnificent sum to the community. The sanitary conditions, of course, are improved and the sources of infection reduced.

I contend that this system of inspection will not be complete and this matter of sanitation will not have accomplished its full benefit until children will not be allowed to enter any school until their mouths are in sanitary condition. We make a lot of fuss about smallpox, but if we take into consideration the sources of infection that exist all the time, we see the folly of making such a fuss about one particular ill, when we have half a hundred which menace us all the time. Diphtheria, scarlet fever and other diseases are distributed throughout the community and we forget one of the sources from which they originate—the school. I repeat, I don't believe that this matter of sanitation will be complete until the Board of Health shall insist that no children shall enter the public schools until their mouths are in sanitary condition."

THE CHAIRMAN: One parish has appropriated for medical inspection in its schools and the work has recently been completed.

We have asked DR. FRANK H. WALKE of Shreveport, who conducted the work in Jefferson Davis Parish to give us an outline of his work, and how it was accepted.

### **Objections to School Inspection Answered.**

**Dr. Frank H. Walke.**

"It has been said that a nation, state or community can rise no higher than the character of its citizenship. If the inhabitants are deficient morally, mentally or physically, it can be truly said that the country is lacking, and its standard low. A sound mind should exist in a sound body. If the physical being is weak, deficient or undeveloped, it is reasonable to believe that the mind suffers likewise.

Again, it may be said that if the physical defects of a person are not corrected when that person is young, then these cannot and will not develop into manhood and wax strong as is intended by nature. But when and where may the deficiencies of the young be pointed out and remedied? The only logical answer is in the *schools*. I believe that the time has come when such measures ought to be adopted. I am almost persuaded that the medical inspector is as an important a factor as the teachers themselves. Yet certain objections exist which must be answered and a few obstacles overcome before this very necessary officer is created.

The first of these objections is the great magnitude of the work. When one thinks of making a physical examination of an hundred thousand school children as exist in this state, the undertaking appears to be a large one; and it is. Yet by systematic effort and good method, such a task can be accomplished under favorable circumstances, it is possible for one physician to examine an average of one hundred pupils in a day. If one or two medical inspectors were detailed to examine the school children in each parish, the work could be completed in a comparatively short time. As an answer to this objection I should say that each parish appoint a medical inspector for its own school children. Then have the state create an office of State Medical Inspector of Schools, whose duty would be that of general supervision over the parish examiners, just as the State Superintendent of Schools has jurisdiction over the parish school superintendents.

Again, we are confronted with another objection, which is lack

of interest and skepticism on the part of the parents. Most parents will say that there is nothing the matter with *my* child, and if all parents would look after their children as I do mine there would be no need for a medical inspection of schools. This, perhaps, is true, but the average parents do not know whether their children are defective or not. Because it does not complain, there is no reason why a child is not diseased. In my own experience as medical inspector of schools in Jefferson Davis Parish I found a heart lesion of grave type in the daughter of a physician. When I called the attention of this good doctor to his child's condition, he was amazed and astounded, because he said his daughter had never complained of any illness in her whole life. In short, however, he immediately withdrew his child from school and instituted the proper treatment. Now, if children are not examined by a physician, how can parents be assured that their children are without physical faults?

Another question frequently raised is that of taking liberties with other people's children. Some people think if a doctor comes to a school for the purpose of examining their children that this is a personal rebuke and also an infringement upon their rights and liberty. I think that the newspapers and magazines are responsible for this attack. The secular press is constantly publishing articles pertaining to the way doctors experiment on children in the large hospitals. They take utter delight in writing stories about the pain and cruelties inflicted on children for science sake. Yet, on the other hand, by merely explaining to the parent that the inspection is for the personal welfare of the child, and that no one will lose or profit by the examination except the child, then all fair-minded parents will willingly permit and often urge the medical man to proceed.

Now, another objection often complained of is the fact that children fear the examining physician is going to hurt them. This no doubt is a serious and common objection. This can be overcome in many ways, however, by the tactful examiner. Before beginning the inspection the confidence of the child must be had. By simply explaining to the children the good to be derived from such an examination, and appealing to their bravery and higher nature, all fear of physical pain is quickly dispensed with, and each child is eager to be first on the examining list.

Another, and a very grave objection, too, is what is to be done with the defective children? Will their defects be remedied, or

will they go down in oblivion never to be thought of until some future time when the untreated malady has brought them to a sad and painful awakening? After a careful examination has been made, their infirmities pointed out to their parents, will these go untreated, unattended, and unnoticed? The parents with means will probably consult their family physician or a specialist, but the poor unfortunate ones will remain neglected because there are no funds in the treasury. Until some key to the situation is found this will always remain a grave objection.

The last objection to which I will refer is that of raising funds with which to pay for medical inspection of schools. Who will compensate for this valuable work? The people of the community say with a loud voice that this is a new form of graft. The word 'graft' has grown so popular in public favor that no good work can be done without the remark: 'I wonder where the graft comes in this time?' Medical inspection of schools cannot be carried on without money. The raising of this money can come, only, from three sources, the federal government, the state or the parish. The government is taxed to the utmost, carrying on its relations with foreign nations, and maintaining its organizations for the safety and honor of its people. The state is burdened with its own payrolls, yet, it may by some form of legislation and economy be able to appoint and pay one medical inspector of schools who shall act as the state's representative in all public schools throughout its confines. But the burden of expense should logically fall upon the parish whose people so bountifully reap the benefits of the resources obtained from medical inspection of its own school children. When the people of the parishes learn the abundance of wealth derived from the health of its community, there is no doubt but that each individual parish will generously appropriate funds for medical inspection of schools."

THE CHAIRMAN: A question that always requires study is "Malaria." While we haven't as much as we are credited with, still we have enough to justify the study of its prevention. DR. J. H. WHITE, of the Public Health service, is next on the program and he will tell us of his conclusions concerning "*Malaria—Its Remedy.*"

#### **Malaria: Its Remedy—Dr. J. H. White.**

MR. CHAIRMAN AND GENTLEMEN: I shall try to be as concise as it is possible for one in an entirely extemporaneous talk to be.

Preliminary to any statement of remedy for malaria it is necessary to make a brief statement of what malaria is. We know, those of us who are medical men, at least, that there are two phases of malaria, the human cycle and the life cycle in the mosquito. The result of this duality is that we have to deal with the disease both in man and in the insect and the two remedies are entirely different from each other. Let us take first the question of dealing with the insect—the mosquito. We know that this mosquito—the anopheles—is distinctly a wild mosquito and not domestic as is the stegomyia and the various forms of culex, and long before we knew about this mosquito our people knew that if they lived in the vicinity of swamps they got malaria. Instinctly they cleared up the country as far back as they could. For instance, in the sugar country, long before Ross made his discovery, people cleared up their land as far back as possible. It is absolutely necessary now, if we are to fight malaria successfully that we should clear the swamp land as far back as possible, and though we cannot get rid of the mosquito in the swamps we can push his habitat as far away as possible. Clear away all underbrush on the ground in order that he may have no residence night or day. He abominates light and sunshine and he will not stay in the cleared land, and when we have cleared the land and removed his breeding places we have done a fair amount of good. But we never can hope to entirely eradicate the malarial mosquito in such extent of swamp as exists in the State of Louisiana until such time as we have population enough to make a demand for the draining of these swamps, such as exists in Holland and in other densely populated countries, one time swampy. So swampy was Holland, be it remembered, less than one hundred years ago, that Napoleon said if he could only get the fool English to remain long enough in Holland he would not have to fight them, as malaria would settle the question for him. The question has been settled there by the removal of practically everything except cultivated growth, and that in the end will be what we will have in the State of Louisiana; but in the meantime what shall we do? Push back breeding areas as far as we can; keep our open land as dry as we can, so that mosquitoes will not find any nooks or corners under cover where they can breed. Then we must take the anthropological side of the subject and treat man himself, because, after all, man is the guilty party; it is man who infects the mosquito, and not the mosquito that infects the man.

It is a notable thing that two hundred years ago the first Euro-



pean expedition up the Orinoco River went up that river, now full of malaria, and stayed up there for six weeks and did not have one single, solitary case of malaria when they came out. Then the mosquitoes were not infected; but let an expedition of white men tackle the jungles of the Orinoco to-day and see what they will get. Now, what can we do with man? This: Remember that the mosquito becomes dormant in the winter, even in such a warm climate as Louisiana. Man is the infecting agent. *Malaria is kept alive in winter only in the blood of people who have been infected during the summer.* If our physicians with one accord will determine that any primary case of malaria will be treated so effectively and promptly that there will be no gamete formation, it would be a great thing, but even if they delay until there is gamete formation, we still can win the fight. Any case, no matter how persistent it may be—this is a dogmatic statement, if you wish, but I believe it with all my soul—if you take a chronic case of malaria and give it vigorous treatment for five days, then rest two days, and then start the treatment again vigorously, and when I say vigorously I mean vigorously, you will destroy the gametes in the blood of that man and he will cease to be a carrier, and if all the people are handled in this manner there will be no infection of mosquitoes next spring, and if there is no infection carried over in man during the winter there will be no malaria next spring. It is thus that malaria disappeared from England and North Germany and other European countries, but do not believe they have gotten rid of their mosquitoes, because they have not. Any man who has made investigations knows I speak the truth when I say that anopheles are still to be found. I can not agree with Dr. Bass that we can conquer the disease in Louisiana by making the fight purely on the human side. We should make as big a fight as we can against the anopheles mosquito by pushing back the swamps, by draining such pools of water as we can and by oiling those that we can not drain, and on the other side by treating all our cases, and will certainly win in the end. We may not win in one year, and may not in two, but we *will* win, and there will be no malaria in that section except imported cases, and they can be easily handled. To make a success of this, however, we have to educate the people up to the realization of what we are doing. It is not easy to get a man for six long weeks to take every Saturday and Sunday of these six weeks forty or sixty grains of quinin. It is decidedly uncomfortable; it makes

his head buzz and feel like a sawmill, and his ears ring. Then, too, many of them get so accustomed to having malaria that it gives them no discomfort, they become chronic carriers and they poison the whole community. I am ashamed to confess I was once one of those myself, but it is true, nevertheless.

Therefore, in its last analysis, the proper handling of malaria means the education not only of the doctors, but of all the people, up to a realization that man, rather than the mosquito, is the guilty party; that the mosquito is only *particeps criminis*; that we have got to fight the infection both in man and in the mosquito; that the methods are fully known and fully understood by enough men in all communities, and that he who would learn can learn, and I am sure that Louisiana will be rid, along with other Southern States, of this infection, together with the reputation of being unhealthy. The time has come when people should realize that deaths from malaria in this section are very few, and are insignificant in their number as compared with many other sections.

Malaria's potency for harm lies far more in its debilitating effects and in its capacity for blasting the fair name of any community."

**THE CHAIRMAN:** We will now hear from **DR. HERMAN OECHSNER**, member of the State Board of Health, who will further discuss this important question.

### **Malaria: Its Remedy—Dr. Herman Oechsner.**

Prior to the beginning of the present century the words "yellow fever" sent a cold shiver down the backs of those who heard it; the presence of one or two cases in a community of our Southland was an immediate "call to arms" by neighboring communities, and even by those hundreds of miles away. Trunk stores did a rushing business, and railroads the year after announced a terrific reduction in their net earnings. Communities near the infected area became panic-stricken, business demoralized, the inhabitants bore fear on their faces and shotguns in their hands.

And why? Because of the rapid spread of the disease and the fearful mortality its visitation entailed. We were then ignorant of its true mode of transmission and its proper treatment.

But to-day the mention of that long-time dreadful name no longer spreads terror; we now know that its transmission can be easily controlled, even though several cases be imported into a

community. The easy means of its control, provided a proper and early diagnosis be made, have lulled us into a sense of security.

In communities where yellow fever was endemic no such fear and confusion permeated its peoples; its almost continuous presence inspired a degree of apathy towards it, a sort of "well, what are we going to do about it?" feeling. Yellow fever exacted a high mortality and a heavy economic loss.

Now, while we have been paying the tribute to yellow fever with stubborn and desperate resistance, we have, until recently, calmly submitted to the exactions of a malady akin and similar to it, and which has been and still is with us—malaria.

Although the mortality in malaria is low, yet in the numbers of its victims the economic loss is so enormous as to merit the attention and interest it has recently awakened among sanitarians.

Deaderick, in his work on malaria, states that although there are no accurate statistics, there are upward of four million cases annually in the United States, and the economic loss in money expended, through loss of time, diminished efficiency and earning capacity, etc., to the people of the South is fifty million dollars annually; Harris estimates the loss in the United States at one hundred millions. This is certainly appalling; and when we consider, in addition, the suffering of its victims, the physical and mental deterioration of those repeatedly attacked, it behooves us as sanitarians to "sit up and take notice."

The advance of cities along sanitary lines in the matter of better drainage and sewerage has materially lessened its prevalence in those places, and it will soon be regarded as a suburban or rural disease, unless the rural communities institute active anti-malarial campaigns.

The etiology and distribution of malaria I will pass by. Suffice it to say that it is extensively prevalent in the Mississippi Valley south of St. Louis and along the Gulf and South Atlantic coasts.

In 1893 Major Donald Ross suspected the mosquito of playing an important role in the transmission of malaria, and it was after three years of experiment (1895-1898) that he conclusively proved the mosquito theory, and to this day it stands as the accepted one. Malaria is a germ disease, and is transmitted from man to man by the anopheles mosquito.

The anopheles breeds in swamps, marshes, ponds, gutters or in any receptacle containing water, but not fish. While it is partial

to brackish water, salt water is not selected. The anopheles are night prowlers, do not fly very high nor far away from their breeding places.

In consequence of its former supposition of miasmatic origin, and its transmission through inhalation of night air, and drinking contaminated water, dwellers in malarial districts were enjoined to sleep high above the ground and not to go out after nightfall; and with our present-day knowledge, this injunction, modified by the addition of profuse screening, still holds good.

Malaria is not conveyed directly from man to man, but through the bite of an anopheles mosquito who had ten or twelve days previously feasted upon the blood of a malarial patient.

Quinin and arsenic are considered specifics in malaria; they kill the parasites. Now, knowing the cause and mode of transmission, and having at hand the specifics for the cure of the malarial patient, it follows that the remedy is very simple—kill the mosquito or destroy its breeding places, and kill the parasite in man by giving quinin or arsenic, as the case may require.

Is the remedy simple? Yes, but its practical application presents some difficulties. In the first place, money, and considerable of it, is necessary to conduct a successful campaign. (Parenthetically, if the economic loss in the United States by malaria in one year were available in cash, it would go a long way to assist in a successful campaign.)

Secondly, the general public, and a good many physicians, too, are ignorant of the mode of transmission of malaria, and will have to be educated in order to obtain their assistance and cooperation. To successfully carry out a campaign, the measures instituted must be intelligently, conscientiously and persistently carried on and out. Some time in 1877 Ismailia, a town of about 8,000 inhabitants, in the center of the Suez Canal belt, became infected with malaria. Nearly ten years later all of the inhabitants had been more or less severely attacked.

In 1901 the president of the Suez Canal Company invited Major Ross to inspect conditions and give advice. The following year Ross found anopheles in the brackish marshes, in the moist sand and in the waters of the irrigating canals. Proper anti-malarial measures were instituted; marshes and other wet spots were filled with sand, canals were deepened and drained or treated with oil; houses and buildings were screened, and patients given

quinin. Until 1902, the average number of malarial patients was 1,800 per year; in 1905 it was 37.

The achievement of Gorgas at Panama is history.

Thus far, to my knowledge, no brilliant and successful anti-malarial campaign has been achieved or even inaugurated in the United States. It is only within the past few years that any definite and organized steps have been taken to study malaria. Drs. White and Von Ezdorf, of the Public Health Service, are now actively engaged in making malarial surveys or investigations, Dr. White in Louisiana and Dr. Von Ezdorf in Mississippi, Alabama, Arkansas, Tennessee and the Carolinas. The Commission for the Study and Prevention of Malaria and the malaria section of the National Drainage Congress are also actively engaged. But these are only investigations. The securing of the funds to actively carry on a campaign presents the most formidable obstacle. If we could but interest the lay press to give as much publicity to the frightful economic loss by malaria, and the easy means of its prevention, as it does to kidnaping cases and trials, or to the abduction of some Texan by marauding bands of Mexicans, perhaps some Rockefeller or other wealthy philanthropist might arise and furnish the sinews of war. Until such a consummation, however, the funds should come from the communities to be benefited, either through private subscription or legislative appropriations.

It is hardly fair to expect the National Government to appropriate sufficient means to carry on a war of mosquito extermination. But what we may reasonably expect from it is a corps of trained men to co-operate, and to supervise and direct the work. The very fact of their connection with the National Government lends an added dignity, inspires a more profound confidence and respect than would be accorded a local man, no matter how conscientious or competent he may be. The yellow fever epidemic of 1905 in New Orleans furnishes a striking example of such co-operation.

Next in importance to funds is an active campaign of education. Boards of Health are doing this by lectures and the distribution of pamphlets. Special literature bearing on the subject should be sent to teachers, public men, ministers of the gospel and others to enlist their aid in spreading the propaganda of health. The various Boards of Education should co-operate with the Health Boards.

In a recent hearing before the Committee on Public Health and

National Quarantine of the United States Senate in reference to 'a bill appropriating \$500,000 for the use of the Public Health Service in encouraging rural sanitation, with special reference to the prevention and suppression of malaria and typhoid fever,' Dr. Von Ezdorf, in reply to a question by Senator Works, said, among other things: "You would be surprised to know how few people know that malaria is transmitted only through the bite of an infected anopheles, and how few doctors know about that. A great many doctors have to be taught that who are still practicing medicine."

Education is surely sorely needed.

As to the measures to be instituted, the various land reclamation companies, in draining the swamp lands they own, are materially assisting.

But when you consider that there are more than seventy-nine million acres of swamp lands in the United States and ten million in Louisiana alone, one can realize what a stupendous undertaking that means.

Civilization as it progresses assists in a great measure, however, in eradicating the mosquito by the installation of drainage and sewerage and the adoption of hygienic and sanitary measures.

In malarial, swampy regions, drains should be dug narrow and deep, and with sufficient fall to drain thoroughly. Ditches and pools should be filled, drained or oiled, as the case may be. Ponds ought to be stocked with fish, and land cleared, where possible, of excessive grass and vegetation.

In communities, in addition to filling pools and ditches, cisterns, water barrels, houses and closets should be properly screened with, preferably, wire cloth of not less than eighteen-mesh to the square inch; hygienic and sanitary measures should be encouraged and adopted where possible. These measures, in order to be successful, must be conscientiously carried out and continuously and thoroughly persisted in; anything short of this spells failure.

THE CHAIRMAN: Gentlemen, DR. HEROLD'S slow train has arrived, and we shall now hear from the Parish Health Officer of Caddo on "*The Community's Right to Health Protection.*"

## **The Community's Right to Health Protection—Dr. A. A. Herold.**

What I have to say will only take a few minutes. I wish to preface my remarks by saying that my train was five hours late, which accounts for my not being present at the morning session.

The conservation of public health is a matter of such prime importance that the subject stands to-day as a paramount issue. It has often been said that, whereas our National Government has spent millions for the conservation of our minerals, vegetable and lower animal life, it has been woefully deficient in fostering the public health. The Owen bill, which has now been before three of our Congresses, in one form or another, would upon passage prove to be a giant step in this direction. But it looks as though our lawmakers are too busy conserving our (sugar) tariff, our currency (regional banks), etc., to look into this matter, which, apparently, is of so little financial importance. This question, however, is one of much financial bearing, both to the individual and to our government. The cost of preventable diseases in morbidity and mortality could easily be translated into dollars and cents, both for the families and for our country, State and municipality.

Let us turn our attention to local matters for a moment, and take up the situation in Caddo Parish, where I have been having my troubles for the past two years.

We realize that our duty to the public is health protection, but it is quite another matter to make the community realize that its duty lies in co-operation. For instance, take the matter of stock of all kinds being allowed to run at large. In our parish we have a stock law in every ward save one, this being Ward 2, wherein our oil fields are situated. Now, at Oil City and the neighboring towns hogs wallow wherever water stands in the street or road, making a puddle practically as impenetrable as though it were cemented; rain water stands in these places so long that green scum forms on it to such an extent that they become a menace to the health of the community. We learned that it would be impossible to get this ward to vote for a "hog law" as a measure of health protection; so at the last meeting of our Police Jury a measure was introduced for a "no-fence" law for the entire parish, including, of course, Ward 2, and such a howl as has gone up in many quarters! The public needs protection, and it is up to us to teach them what they

should have. Another matter which has given us much concern is the proximity of pens and stables and barns to residences. For the protection of the unappreciative community we passed an ordinance regulating the situation of places of this kind.

The community needs and deserves health protection, but as a rule it does not appreciate it, and it is only by education, such as has been undertaken by the State Board of Health under its present guiding star, that the people will ever learn and understand the needs in this direction. Herein lies our only hope.

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DR. E. L. MCGEHEE offered the following resolution:

That an especial vote of thanks be given the visitors from a long distance, Dr. William C. Woodward, Dr. B. S. Warren, Dr. J. A. Ferrell and Dr. M. L. Graves, with assurances of our appreciation of the valuable information given by them; also,

That the thanks of the Conference be tendered the railroads and hotels for their generous help in giving low rates for the health and medical conferences of the week.

ADOPTED.

At the close of the regular program the CHAIRMAN asked DR. THOMAS A. ROY to take the chair when he presented the following resolutions, which were unanimously adopted:

The Life Extension Institute is to-day the foremost scientific agency for the promotion of life. Its purpose is to discover and assemble the "optimum conditions of life" through investigations of hygienists from all civilized countries.

It is philanthropic, but, like the Model Housing Association, it is placed on a business and paying basis. The President, Dr. Irving Fisher, of Yale University, is recognized as an international authority on economic phases of health work. The divisions of the Institute are thirteen:

Statistical and Actuarial Science, Insurance Welfare Workers, Medical Practice, Medical Schools, Public Hygiene, Bacteriology, Pathology, Physiology, Physical Education and Sports, Economics, Sanitary Inspections, Public Health Movement and Publicity.

The scheme now in preparation for the general education in phases of public and personal hygiene is the most original, scientific and comprehensive of anything yet thought out. This is but one of the many activities which are proposed, and to which the most learned men of Europe and America are now giving their efforts. In view of the scope and spirit of the movement, I move the following resolutions be adopted:

Resolved, That the members of this Conference recognize in the Life Extension Institute the most comprehensive and scientific agency yet organized for human health and progress.

That we commend most heartily and cordially the successful operation of the intelligent plan evolved, which has awakened already a vast number of thinking people in both Continents, to the results of systematic effort for the prevention of disease and the promotion of health.

That we, individually and as an organization, pledge to the Life Ex-



tension Institute our loyal support and best efforts to further its plans and purposes.

DR. CHANDLER then offered the following resolutions:

Whereas: Mortality statistics should show the real health conditions as to race and section, and any method which fails of this purpose is worse than useless.

Whereas: The government methods of including nonresidents in the rates of cities, and in making out the total rate by including the colored deaths has worked a grave injustice on the South and given to world statistics that do not show the real health conditions.

Be it resolved, That Congress be urged to enact a law requiring the rating of whites and colored, respectively, and cities on their resident deaths.

Seconded by Dr. Ledbetter and Dr. Menville.

DR. DOWLING moved to table resolutions.

DR. MENVILLE withdrew his second.

Discussion followed:

**Dr. Chandler:** Ever since 1900 Shreveport has been trying to get into the Government area on a fair basis. Those resolutions are absolutely fair, and not one word can be said against them, and I want to tell you, gentlemen, that since 1900 Shreveport has been fighting for fair play. She started the fight with the Bureau of the Census, and they would not do a thing, so we went to Congress, and these resolutions have been mailed to every Congressman in the United States and to every health officer in the South. I have a stack of letters from Congressmen in favor of it. At first they did not know what we were talking about, but now they see what we are working to correct. The white and colored statistics should be kept separate. A thing that is so important to the Southern people and even to the Northern people should not be left in the hands of one man, if he does do right, because some one else might do wrong. I beg of you to see that these resolutions be passed. \* \* \*

**Dr. Dowling:** A motion to table is not debatable, but we will let that pass. The director of the Census Bureau is a gentleman from Georgia. He has been connected with the Bureau but a short time, and is at work now on these features. He is cognizant of the defects of the system. Louisiana has not produced these statistics—we are working to get them. It is absurd for a State to go on record as striving to dictate terms to the Census Bureau, with only one city in the registration area. It is like a man with no money in the bank trying to dictate its policies. I again urge upon you the necessity of letting these matters rest until we get statistics.

**Dr. Perkins:** The including of the negro statistics with the white and the non-resident with the resident on the statistical tables has nothing to do with getting into the registration area.

**Dr. Chandler:** We are not trying to get into the registration area.

**Dr. Perkins:** I understand you to say you were.

**Dr. Ledbetter:** Mr. Chairman: The point I would like to bring out is that for a number of years, as you all know, we have had a great number of people brought into this State through our hospital, and, as you know, the death rate is high. Mississippi has no hospital and has utilized the Charity Hospital; people from foreign countries come into the Charity Hospital—they are brought here and die; it swells our death rate and gives

us the appearance of having a very high rate, which reflects on our State and our city. For that reason alone it seems to me that the reports should be separated.

**Dr. Dowling:** You are speaking for the City of New Orleans.

**Dr. Ledbetter:** Dr. Dowling stated that we have no statistics yet, but how about the people who come in here and die here?

**Dr. Dowling:** The State Board of Health took up in December the idea of creating a registration area separate and distinct from the cities in which they are located, to be known as the Charity Hospital area, the same thing for Shreveport, the asylums, etc. Those who have had experience with the Legislature of the State or with Congress know that the chances are ninety-nine out of one hundred that lack of local co-operation insures defeat. In this case it is almost certain you will get nothing out of Congress if you don't get the endorsement of the Bureau of the Census. We know the Census Bureau has the changes we desire under consideration. Why not give them time to work out a plan? New Orleans or Shreveport does not go out and hunt up its own residents who die out of the city to add to their statistics.

**Dr. Ledbetter:** We have got only one Charity Hospital in the South, and that Charity Hospital accommodates all the people.

**Dr. Dowling:** It is Louisiana's own fault if she takes them. Do you want to pay for the maintenance of a hospital for the people of Georgia or Alabama and other States?

**Dr. O'Reilly:** Dr. Chandler, in enumerating the various boards, etc., that endorse these resolutions, failed to mention the fact that the Board of Health of the City of New Orleans, Parish of Orleans, is on record as favoring the resolutions in their entirety. I should deplore the fact that a resolution of this character would be defeated before this body. I think that the plea is a fair one—it is simply asking that when the world shall be told what the death rate of the Southern cities is they shall be told so that fair comparison can be made between them and any of the Northern cities. The facts that have been brought out to-day can be proven by their own statistics. The morbidity and mortality rate among the white people will compare favorably with the Northern cities. What we want is, when the Census Bureau shall announce to the world the death rate of our Southern cities, they will place them in a manner so that honest and favorable comparison, to which we are justly entitled, shall be granted. I would much prefer, gentlemen, that before a resolution of this sort be tabled, which would be equal to its defeat, that the resolution be withdrawn from this body. I hope that it is passed, as I think it would be significant and not advisable for it to be defeated before this body. I am going to hope for its passage, not that I think I am going to influence another one, but if I am the only one, I will vote for the adoption of the resolutions, and as I stated this morning, I will stand behind Dr. Chandler, and hope for the adoption of these resolutions.

**Dr. Kelly:** What is the necessity of addressing the resolutions to Congress? Why not address a recommendation to the Census Bureau?

**Dr. Dowling:** I want Dr. Chandler and Dr. O'Reilly to understand that no one is more anxious to have Louisiana make a good showing than I am. New Orleans is the only city in Louisiana that has the statistics to justify its admission into the registration area. Dr. Wilbur, of the Bureau of Census, has assured me that when Dr. Patton visits the different towns of Louisiana and approves the statistics as to whether they are properly kept and properly recorded that they will be admitted into the registration area of the United States.

In the records of the Bureau there is indicated which cities have a

negro population. Where cities are in the registration area, the tables for whites and negroes are separate.

**Dr. O'Reilly:** I am afraid that we are drifting apart and arguing on a different point. That the Bureau of Census uses our statistics, whether we are brought into the registration area or not, is what we are contending. When we are admitted as belonging to the registration area, what difference will it make? We are simply asking that when they report our death rate that they report it in a different manner. We are all endeavoring to get into the registration area as soon as possible. We want matters represented so that they can be understood.

**Dr. Dowling:** They are intelligible as now recorded.

**Dr. Chandler:** Mr. Chairman: I want to give you some figures. This wrong has been in existence fifty years, more or less, and I simply mention Shreveport's efforts because we have been trying to get some relief. We finally decided to take the matter up with Congress, as Congress has the right to regulate the Bureau methods. Let's take the State of North Carolina. Its colored death rate, according to the Bureau's own figures, is 25.3 per 1,000. The Borough of Richmond, City of New York, colored death rate is 25.4, .1 greater than North Carolina. The white death rate of the Borough of Richmond is 16.5, 2 to the thousand more than North Carolina. Now you have a higher colored death rate in the Borough of Richmond and a decidedly lower white death rate in North Carolina, yet for comparative purposes the rates given out by the Bureau give North Carolina 18.3 to the 1,000, and what does it give for the Borough of Richmond, 16.7 per 1,000. Here is a city that has a higher rate for the colored and for the whites, yet they are published to the world as a single rate in its favor as compared with North Carolina. You must remember, gentlemen, that North Carolina is not one of our black States. It is a State where negroes are comparatively few. What would it do to Louisiana? Now, here, let me show you how this is included in Colorado: Colored, 19.04; white death rate, 13.8; single rate, 13.9; increase, .1.

**Dr. Ledbetter:** I agree with Dr. O'Reilly, that I would hate to see this resolution defeated. I think Dr. Chandler's point is well taken, and I will vote for this resolution, but it would be deplorable for anything to come up that would antagonize the authorities at Washington.

**Dr. O'Reilly:** It strikes me that from the last remarks of the chairman that the whip is held over our heads, and we are told that if we don't get those statistics we cannot get what we are asking for.

**Dr. Dowling:** He said the Census Bureau; as I understood, the resolutions were addressed to Congress.

**Dr. O'Reilly:** They are addressed to Congress, because we will not get it from the Census Bureau. We knew this, and took the stand we did.

**Dr. Chandler:** I will withdraw the resolutions.

DR. DOWLING, resuming the chair, announced that the afternoon program was concluded and the Conference would stand adjourned until 8:30 P.M.

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## EVENING SESSION.

DR. DOWLING, Chairman: Having heard DR. B. S. WARREN, Sanitary Adviser, United States Commission on Industrial Relations, this morning, I feel no introduction is necessary. Dr. War-

ren will talk to you on "*The Effects of Industrial Conditions in the Protection of Disease.*"

For thirty-five minutes Dr. Warren entertained the audience with pertinent facts on the practical phases of his subject. He dwelt at length on the elements of sanitary environment and effects of fatigue on industrial workers.

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THE CHAIRMAN: We now have in store for you a talk by one of the best known men in the United States, a man whose work is widely recognized. I take pleasure in presenting DR. WILLIAM C. WOODWARD, Health Commissioner, Washington, D. C.

### **The Function of Legislation in the Conservation of Health—Dr. Wm. C. Woodward.**

The conservation of our natural resources is a matter that has been much before the public during recent years, and the fact that health is one of the most important of those resources is generally recognized. Platforms recognizing the health of the people as a national asset and acknowledging the duty of the government to protect and foster it have been adopted by all the great political parties. But whenever and wherever legislation is proposed to accomplish these ends, whether by the central government or by the government of the States or the city, opposition arises. Sometimes the origin of this opposition is readily traced to self-interest, but not infrequently it comes from sources in which no such taint can be found and where it seems that opposition can be due to but one thing, misunderstanding. Either the proponents of the legislation are mistaken with respect to functions of legislation generally or of the place of that particular legislation in the general legislative scheme, or those who are opposing it are in error. It is impossible, of course, in the time allotted for this address to discuss all of the causes of misunderstandings of this kind, but we may at least get in the course of the evening a clearer idea of the basic function of legislation in the conservation of health.

Health, and even the very ability to live at all, depends upon man's power to adjust himself to his environment, or, what amounts to the same thing, to adjust his environment to his own requirements. This power of adjustment comes primarily from heredity. Later, however, the experience and education acquired serve very materially to augment it, until at last heredity as a factor is not in-

frequently lost sight of. Nevertheless, health always depends upon just two prime factors, no more and no less, heredity and environment; and the state or degree of health of any particular individual depends upon the nearness with which his adjustment approaches perfection.

This formula for the conservation of health is simple enough, but its application to any particular case is surrounded with difficulties. The man who would live and thrive must, as occasion and the nature of the circumstances require, utilize or combat the physical and chemical forces, actual and potential, by which he is surrounded. In doing so he must in similar manner utilize or combat the activities of other men and other creatures about him, engaged like himself in a struggle for existence. So far the word "man" has been used to convey the idea of an individual. But mankind as a whole may be weak or strong, well or diseased, and conceivably may die or pass out of existence. Nations and cities, too, are subject to disease and may perish from the earth. Nor is the health of the larger unit simply the health of the individuals of which it is composed. The welfare of the species dominates in the end the welfare of the individual. The mother must undergo the physical changes and disabilities leading up to motherhood, however much it may hamper her in the struggle for her own existence, and when her offspring has been born she risks her own life at any moment that the offspring may be saved; and adjustments that would otherwise be made to conserve the health of an individual or even of considerable groups, are deliberately sacrificed in order that persons who are weak or temporarily disabled may be preserved. The apparently simple formula upon which health depends, the adjustments of the individual to the environment and of the environment to the individual resolves itself, then, into the study and the control of innumerable actions and reactions, simple, chemical, biologic and sociologic.

The very magnitude and complexity of the problem puts it beyond the power of any man to unravel, and each of us in his daily life relies largely upon the accumulated knowledge that has come to him from those who have preceded and those who surround him. How far that knowledge falls short of his needs, the illness and death that daily surround and threaten him tell only too plainly. Help must be afforded if he is to escape avoidable pitfalls. For the solution of this nation-wide—even worldwide—problem of the

conservation of health the services of an agency or of agencies of as great an extent must be enlisted; and the government, and nothing less, is possessed of the authority, power and resources necessary to assemble and analyze the accumulated experience of mankind, and, when experience is lacking, to go out into the field of experimentation and develop the facts necessary for the solution of the problem.

A nation, and only a nation, can by law and by education, make the results of such work a part of the daily life of the individual. A nation, too, has the substantial interest in the matter of the conservation of health—an interest of almost as great an extent as the interest of the individual himself. In peace, health means increased productivity and contentment. In war, health means increased power for offense and defense. The citizen, too, who stands and must stand ready to serve his country in time of peace and who contributes of his means toward the support of the machinery by which the government is administered, has a right to demand that in return the government shall protect the health of himself and of his family. And if the government is to do its duty with respect to this matter, it is necessary that the government provide the machinery to that end. The organizing and operating of that machinery can be effected only through legislation.

The mass of legislation that has been enacted with respect to the health of the people; the innumerable bills offered for enactment each year, and the many litigated cases based upon such legislation are ample evidence of the universal recognition of the duty of the government with respect to the conservation of health. But when the quality of such legislation is considered and the many imperfections and gaps in the legislative scheme, and when the technic of the development and enforcement of such legislation are studied, it may be seriously questioned whether that duty of the government has been and is being well done. The variety in substance, form and procedure shown in the laws upon the statute books of the Federal Government, of States, and of cities, when no difference can be found in the end sought or in local conditions, affords abundant evidence upon this point.

Legislation must provide methods and schemes whereby the facts of physics, chemistry, biology and sociology that bear upon health will be discovered and made available for the use of the community and of the individual. It must provide the means whereby

the individual may be able to have at his disposal those things that are necessary to enable him to protect and promote his own health and that of those dependent upon him. Legislation must prescribe the rules of conduct necessary to prevent one person from trespassing against the health of another. It is through legislation that great waterworks and sewerage systems are constructed and parks and playgrounds provided. It is through the educational systems that legislation establishes that the individual learns what must be done to protect his health. Legislation is the very channel through which the facts of physics, chemistry, biology and sociology are brought into the daily life of the community and of the individual in an effective way for the protection and preservation of his health.

It is not an easy thing to determine what is needed in the way of legislation, and when and how to bring needed legislation forward. To draft a legislative measure is even more difficult. Whether an evil—admitting that it exists—calls for a remedy through legislative channels or not, can be determined only upon the basis of an accurate knowledge of existing law and wise discrimination with respect to the functions of government. When and how to bring forward a proposal for legislation, if it be decided upon, so as to insure the greatest likelihood of its enactment, requires a more or less intimate acquaintance with the political situation and a knowledge of the philosophy of the individual legislator and of the mass. Similar legislation previously suggested must be studied and a knowledge of its fate and of the reasons for that fate acquired. The legislation must be arranged so that in case of attack it may be possible to save the most important parts of it, even though some of it may be lost. The results of possible failure must be considered with respect to their effect on the existing situation and upon the prospect for future legislation. The nature and source of possible opposition must be studied and objections anticipated and met, as far as possible, in the original draft. All that has been said with respect to legislation that is to be proposed may be applied in principle in equal force to the meeting and defeating of legislation introduced by unfriendly agencies that must be opposed.

After proposed legislation has been enacted, the problems connected with its enforcement are in principle not dissimilar to those involved in procuring its enactment. The extent to which an administrative officer may properly use his discretion in the bring-

ing of prosecutions, under a law on its face mandatory, must be determined, and, if discretion exists, care must be taken to select the best time, place and manner of bringing action. The nature and force of the enemy's arguments must be anticipated and facts marshaled to combat them. The probable effect of failure must be weighed before action is instituted. The educational effect of the case on the community, whether it be successful or unsuccessful, must be appraised. And, in a general way, the same consideration be given to all of the factors involved that were suggested with respect to proposing and promoting legislation in the first instance.

And now, Ladies and Gentlemen, I am asked whether I have found the method that I have defined successful in my own work. Frankly, I have not tried them. No other health officer has ever tried them. But I know that they are the methods that must be followed in order to get out of government authority, power and resources the most that can be gotten out of them; for I have tried other methods and have failed. The very truth of the situation is that no health officer has ever been provided with the means necessary to put such methods into operation. The health officer who performs his other duties has no opportunity for such detailed and technical study of the legislative activities of his office. Moreover, it may be said, without giving fear of offense to any one, no health officer is in his own proper person capable of performing such duties as pertain to the legislative field, which are as highly technical as are the most recondite problems of physics, chemistry, biology or sociology. For the application of physics to the duties of his office, the properly equipped health department has its sanitary engineer. The chemical problems that arise are solved by a chemist employed for that purpose. Physicians, veterinary surgeons and bacteriologists give to the department the benefit of their knowledge and experience in the field of biology. For the solution of problems of sociology the health officer has within call persons trained in that particular field. But when it comes to the study and building of the legislative framework upon which the community and the individual must depend for the proper application of the facts and principles of physics, chemistry, biology and sociology to their daily life for the protection of health, the health officer is left to his own devices. The legislative work of the department, with the possible exception of criminal prosecutions, and in some cases including even them, is apt to be poorly done and is liable to bring



discredit upon the department. No special knowledge is required, it is commonly presumed, for such work, but it is turned over to some young, untried and uninterested assistant in the office of the State's attorney or in the office of the attorney for the city, and the result in the end is just what might be expected from that course. But if legislation is the medium through which all the other activities of the department are made on practical effects, then the duties of the department with respect to all matters pertaining to legislative activities should be as carefully and intelligently performed as are the other duties of the department, and a special attorney for the department is essential to that end.

DR. DOWLING: We are going to show you the film, "Price of a Human Life," and also a new film demonstrating the inspection of meat, showing every process.

Then followed a moving picture exhibit of (1) a demonstration of the evils of patent medicines, and (2) a graphic presentation in detail of the inspection of cattle and of meat in the sanitary way.

THE CHAIRMAN: On behalf of the Board of Health and myself, personally, I wish to thank the health officers and doctors who attended the meeting to-day, and we are especially grateful to the gentlemen who traveled from a distance to give us help from their experience. The altruistic spirit shown by them is most appreciated. I believe the meeting to-day will be of lasting benefit to the citizens of Louisiana. I wish to extend to all present a most cordial invitation to attend the conference on Friday morning, April 24, when we will discuss in this room the "*Betterment of Health Conditions Among the Negroes.*"

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## Communications.

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### HOSPITAL NURSING.

*To the Editors.*

GENTLEMEN: Under the heading "Hospital Nursing," in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for June, 1914, appears a communication from Dr. L. F. Salomon regarding the prohibitive cost to patients in any of the private hospitals in New Orleans, mainly due to the necessity for employing special nurses.

Whilst fully agreeing with your correspondent that the cost to patients is very great under present conditions in the New Orleans Hospitals, I do not agree with him that there is the necessity for the extra expense for special nurses in the great majority of cases, and the writer would welcome a large diminution in the number of special nurses employed for private patients in Touro Infirmary.

Perhaps the most convincing argument that can be brought forward in substantiation of this statement is that about fifty per cent. of the beds in Touro Infirmary are occupied by free patients, and these patients are cared for exclusively by the Training School nurses. The cases treated in the free wards are no less serious than those in the private rooms, and the death rate is no greater. The patients improve just as readily, and fewer complaints are received from them than from private patients. If the free patients are adequately nursed by the members of the Training School, there would appear to be no reason why the private patients should not receive the necessary attention, because the percentage of nurses to patients on the private floors is greater than in the free wards. Similar conditions and results obtain in our part pay wards, where very few graduate nurses are employed.

There are some doctors who make a point of using the hospital nursing service almost exclusively, and the patients of these doctors usually leave the hospital satisfied with the attention given them. Other doctors make arrangements for special nurses before their patients reach the institution, without considering the actual necessity for their services. It seems the fixed rule of these doctors to employ graduate nurses for all of their private room patients. My observations convince me that very often there is no actual need for them. Unquestionably it is of benefit, though not absolutely essential, for patients who have just undergone very serious operations to have private nurses for the first two or three days. After that the duties of the graduate nurse usually become chiefly those of companion, rather than nurse. It is a mistake to retain the services of special nurses after the patient's condition ceases to be serious, because the patient becomes accustomed to having her sitting by her bedside; she enjoys being talked and read to; having her bed linen changed six or eight times a day is very pleasant and cooling, but by no means necessarily beneficial; to have an alcohol rub whenever she feels hot is extremely refreshing, but not essential to her recovery. If patients want all of these and other little atten-

tions throughout the day and night, and can afford to pay for them, there is no reason why they should not have them, but it is palpably unfair to blame the hospital for the additional expense of the luxury.

Is it not a fact also that the different methods of the individual doctors are responsible for the necessity of employing some of the graduate nurses? The orders of some doctors require almost the exclusive time of one nurse to fulfill them; the orders of other doctors for a similar case, under similar conditions, require but a short time to be spent on the patient daily.

There is another important factor to be considered. This institution has a staff of interns to accompany the visiting or staff doctors on their rounds, to take orders for their patients and to see that those orders are carried out in their absence, in addition to their numerous other important duties. The members of the Training School are expected to comply with the written orders. If those orders are not carried out, the doctors will often decide to call in graduate nurses rather than report the dereliction of duty to the responsible authorities, with a view to preventing any further recurrence of the trouble. They feel that they do not want to get the intern or nurse into trouble, or the patient does not want it because she thinks the nurse will display resentment afterwards. That is unfair, both to the institution, which expects the co-operation of the doctors, and to the patient, who probably cannot afford to pay for special nurses.

In conclusion, I desire to maintain that Touro Infirmary, and, I believe, the other private hospitals in this city, are equipped to take care of patients without the assistance of so many graduate nurses, under reasonable conditions, and with the co-operation of the doctors. Let the doctors tell their patients not to expect much more than is necessary for their welfare; let them recommend that the services of graduate nurses who are employed during recovery from the results of operations be dispensed with as quickly as possible; give the hospital nurses a fair opportunity to prove their value, and then it would be found that many thousand dollars a year would be saved to patients, and those patients would return to their homes just as satisfied, if not more so, than if they had had graduate nurses all the time. Very truly yours,

(Signed)

A. B. TIPPING, *Superintendent.*

TOURO INFIRMARY, June 5, 1914.

# N. O. Medical and Surgical Journal

## Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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- A. G. FRIEDRICH, M. D., Dean of School of Dentistry, Tulane Univ. of La.
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- JOSEPH HOLT, M. D., Ex-President Louisiana State Board of Health, New Orleans.
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- ROY M. VAN WART, M. D., Lecturer on Diseases of the Nervous System, Tulane Univ. of La.
- ESPY M. WILLIAMS, M. D., Patterson, La.

### THANKS!

We have received so many tokens of appreciation in the shape of letters of commendation, of renewals of subscriptions from members of the State Society, of words of cheer on postals, etc., that it would have been a gigantic task to acknowledge them all individually. Consequently we take the opportunity of thanking our friends collectively through this medium. There is nothing sweeter than to receive the approbation of those we esteem, who are so placed as to be able to judge our intentions and deeds. We feel both happy and grateful, and assure our friends and subscribers that their kindness will ever be remembered.

In the same line we cannot refrain from reproducing, out of a number, an editorial referring to our anniversary recently celebrated. It is selected because it comes from an esteemed neighbor

than which none has a higher influence in our Southland, the *Southern Medical Journal*, organ of the Southern Medical Association:

“THE SEVENTIETH ANNIVERSARY OF THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

“The *Journal* proffers sincere congratulations to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, whose May number completed the seventieth year of its existence. The present is a retrospective issue and is worthy of the occasion. Its editorial department is preceded by a title page which is a *fac simile* of the one under which the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL made its advent into the world of medical literature on that memorable day in May, 1844.

“Then comes a republication of the “Introductory Address” with which the first of its editors, Dr. E. D. Fenner, began a series of editorials that set a high standard of literary and professional workmanship. For four years he continued his service. Since then a long line of illustrious physicians have succeeded each other at the editorial desk, which, however, was never more worthily occupied than it is now by Dr. Chas. Chassaignac and Dr. Isadore Dyer.

“From the beginning until now the editors have been closely associated with the hospital and medical college interests of New Orleans. Indeed, it would be safe to assume that the pages of their journal have had much to do with building up in that city one of the greatest of all the American schools of medicine.

“Estimated by years alone, the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL has long since reached the stage of maturity, but, judged by the energy and activity it displays in every line of medical endeavor, it is in the very flower of its development. It is truly seventy years young.”

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### THE UNITED STATES' DEATH RATE IN 1913.

The death rate in the United States in 1913 was 14.1 per 1,000, as estimated by the Census Bureau. The estimate was based upon returns from twenty-four registration States, the District of Columbia and forty-one cities in non-registration States, with a popula-

tion of 63,299,164, or 65.1 per cent of the total estimated population of the United States.

The decrease for the ten-year period amounts to about one in eight deaths. The decrease is attributed to a general awakening of the people to public health.

The report embodying the above general deductions issues from the Department of Commerce (May 19), and tabulates the relative status of the death rate in the different areas included, giving proportionate figures for 1913, the two previous years and for a period of five years from 1901 to 1905, inclusive.

Similar figures are presented for the death rate in cities of 100,000 people and over, and it is interesting to observe that the bulletin is careful to present the statistics for both white and colored.

New Orleans' death rate among whites for 1913 is given as 15.6 per thousand (*colored* 31.9); in 1912 it was 16.1 (*colored* 31.4); in 1911 it was 16.6 (*colored* 31.2); from 1901 to 1906 it was 19.2 (*colored* 31.0).

The white death rate has steadily decreased, until in 1913 the decrease in percentage rate was 18.8 of the average, while in the negro death rate there was an increase of 2.9 per cent.

Taking the white rate alone for various cities, New Orleans' showing is altogether favorable, as the following table would show:

#### 1913 DEATH RATE.

	Per 1,000 for Whites.	Total Death Rate.
New Orleans .....	15.6	19.9
Baltimore .....	16.2	18.5
Louisville .....	14.3	16.2
Washington .....	14.4	17.3
Atlanta .....	13.5	17.4
Memphis .....	15.9	20.8
Nashville .....	14.7	17.8
Richmond .....	16.7	20.4
Birmingham .....	12.3	17.4
Los Angeles .....	.....	15.0
New Haven .....	.....	15.9
Chicago .....	.....	15.1
Indianapolis .....	.....	15.0
Boston .....	.....	16.4
Detroit .....	.....	17.3
Minneapolis .....	.....	11.6
St. Louis .....	.....	14.9
New York .....	.....	14.3
Philadelphia .....	.....	15.7
Milwaukee .....	.....	12.7

The gradually increasing interest in vital statistics and their direct bearing on the economical status of communities make all such contributions to knowledge of material service. There are many phases of public health yet open to study, and in the field of industrial hygiene alone the race question must bear large part. The mortality figures for the whites and negroes in the Southern States show conclusively that some factors are at work which destroy a large part of the colored race, and that in some degree this is preventable. We know the part played in the case of tuberculosis and in syphilis, in malaria and in uncinariasis, but these are only signal causes in a wide range of elemental troubles. Of more concern is the reflex effect upon the death rate among the whites. In other words, if the death rate among negroes was not so high, is it not likely that a proportionately lower death rate would obtain among the whites, according as the negro death rate is lowered?

The accumulation of facts for the study of these questions is the first essential, and the Census Bureau is doing all in its power to create the interest leading to the proper recording and filing of facts. The time will probably come when we may know and prevent the main causes of our present excess in mortality, especially in the colored race.

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### INSTRUCTION IN SEX HYGIENE.

The first number of the *Bulletin* of the American Social Hygiene Association has made its appearance. The Association announces its organization, with Charles W. Eliot as President, and with an array of Vice-Presidents, including David Starr Jordan, Jane Addams and Cardinal Gibbons. Dr. William F. Snow, formerly of the California State Board of Health, is the Secretary, with headquarters at No. 105 West Fortieth Street, New York City.

In presenting the *Bulletin*, the objects of the Association are outlined and the address of President Eliot at the organization meeting of January 14 is quoted in some measure. The meat of the motive behind the organization may be expressed in his words:

“The struggle against lust in men must bring into play a variety of defensive agencies.” \* \* \* “It is not likely that any short and easy road can be found to the redemption of society from centuries-old licentiousness in males. All the more reason for entering at once on the best roads to be found that lead in the desired direction. It is obvious that most of the forces to be employed are educational, to be applied as

widely as possible, not only in childhood, but throughout life." \* \* \*  
 "It is, therefore, of the utmost importance that the processes adopted for diffusing sound knowledge should all be carried on plainly but delicately, without exaggeration or morbid suggestion, without interference with parental rights or religious convictions, and, in general, in a pure, high-minded, disinterested way."

The Association will gradually develop its purposes, and among its first objects is the organization of an extensive and widely distributed membership. The study of the economic questions related to general mortality has already begun in the work of investigating prostitution as it exists and in the compilation of laws relating thereto in different States and countries.

The inauguration of direct instruction to social hygiene at some of the universities will develop some concentration of thought on the problems involved and may lead to more practical application later on.

Meantime the Bureau is accumulating a library for general reference, and in the *Bulletin* the activities in the whole subject will be presented regularly.

The general plan makes for a future betterment, and in time will certainly disseminate knowledge with a direct purpose of influencing conduct.

The practical side of instruction in sex hygiene still must remain unsettled, so long as it is a matter of debate as to whether the child should get such at school or at home. Many points of view have been expressed, and the fact persists that any way is better than the usual perverted way thru which the boy or girl obtains sex knowledge thru older boys or girls who have themselves learned what they know from other boys and girls, without the proper moral coloring, essential to the right knowledge.

The trouble with the question seems to be that most of those who discuss it appear to be afraid to really talk about it. The child may understand much more than we allow, and the mystery of irregular knowledge often gives it an unreal savor.

But the Bureau and the *Bulletin* have begun aright—education, every way, first.



## GIFTS FOR MEDICAL EDUCATION.

The interest in medical education seems to grow, and the past year has been notable in the expression, as evidenced in the munificence of the gifts to medical schools. Cornell has received \$3,000,000; Johns Hopkins has had a gift of \$1,500,000; Vanderbilt has finally accepted the \$1,000,000 of the Carnegie Foundation; Washington University has just had \$750,000 added to the \$7,000,000 of original endowment, and within the past month the Yale Medical School has received \$500,000 from the Rockefeller General Educational Board. Smaller sums have been given to various other schools, including California, Western Reserve and others.

The larger gifts have carried certain conditions attaching to the methods of disposing of the income of the funds, but in all there is the ultimate spirit of recognition of the labor of medical teachers, hitherto working on small margins for large results. No successful school of medicine has ever become rich on the returns from students, and the expense in medical education properly conducted grows greater each year as the methods advance.

The ideal schools have large endowment and restricted classes for instruction, and as time goes on there will be fewer schools, fewer students, and better, tho fewer, doctors. This seems inevitable with the modern tendency of standards, which make for higher requirements of the intending medical student, as well as for the student in course.

The interest in the more modern problems of medical progress is also before the philanthropists, as the public press announces that the General Education Board is investigating the methods and needs of instruction for public health officials, with a view to establishing such schools in this country as will satisfy a growing demand for properly trained men.

Altogether, the past four or five years have seen marked changes in the attitude of the public to medical education. It is to be hoped that this spirit of giving may grow so as to embrace some more of the schools which need aid to keep up with the advances and with the demands in medical education.

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## THE PAN-AMERICAN SURGICAL AND MEDICAL JOURNAL.

The new medical journal announced at the meeting of the Louisiana State Medical Society in April has made its initial appear-

ance in pleasing cover, double-column type, and bearing many marks of newness and originality. In presenting the felicitations of the JOURNAL to the *Pan-American Surgical and Medical Journal* we desire to indicate a sincere hope for the continued success of the new venture and that all of the aspirations expressed in the opening editorials may become virtuous facts.

In remarking the initial appearance of the new journal we would gladly have left all issues regarding the State Society relations with the House of Delegates, in the hope that a belated sense of justice may have overtaken some of them, so as to have permitted at least an investigation of the charges made by the President of the Society against the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, now, *for the first time*, published, *two months after the meeting*, in the new official journal. In other words, the first notice of any fault found with this JOURNAL appears two months after the Society has acted, in a new journal accepted by the Society before it was born.

We have no other word on the subject except that all State Society matter was formerly printed *promptly after it was received*; that most years no papers *reached* the JOURNAL for publication *before* the month of *September* following the April meeting, and that often the papers read in April of one year were delivered for publication in April of the following year. That capital could and might be made of such dereliction in the offices of the Society is no doubt true, and it is regrettable that the retiring President should have gone so far in his arraignment, without having first ascertained the facts bearing upon the arguments on which his charges were based. That the new journal should make capital of the President's charges might be condoned, all things being considered, and the manner of argument employed at the time of the new journal's bid being particularly remembered.

That there should be some objection to our presentation of our own viewpoint, and that some things we may have said should rankle, we admit; but with the "*respectueusement*" of the retort courteous, we also submit that politeness covers many offenses, even tho we may breathe the spirit of that Virgilian aphorism,

*"Timeo Danaos et dona ferentes."*

In serious conclusion, let us add, that the road of any new publication is hard, and we shall look with especial interest on the venture of our juniors in a labor so largely of fraternal interest

and with a return so often empty of material reward, and wish for them a fair share of success for their deserving efforts.

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### A REMINDER FOR THE FOURTH.

It may not be amiss to remind our readers to be prepared for fireworks accidents on the Glorious Fourth. Be sure to have some antitetanic serum or tetanus antitoxin where it can be available, and then use it promptly, where indicated, after careful antiseptic cleansing of wound.

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## Abstracts, Extracts and Miscellany.

### Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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UTERINE HEMORRHAGE.—It appears desirable to Whitehouse that careful investigation should be made of the discharge in every case of obscure uterine bleeding. The points in the investigation to which special attention should be directed are: 1. The presence or absence of thrombi within the vagina. 2. The formation of thrombi within the discharge after the fluid has been allowed to stand. 3. The thrombolytic power of the secretion. 4. The calcium content of the same. 5. The microscopic characters of the deposit obtained after centrifugalization of the fluid collected directly from the uterine cavity in order to obtain an index of the degree of tissue destruction. Six hundred and eight cases were analyzed by Whitehouse.

It was evident that the displacements of the uterus do not directly produce excessive uterine hemorrhage. Thus, out of a total eighty-eight cases of retrodisplacements only thirty-eight gave evidence of menorrhagia, and of the latter only fifteen had intermenstrual losses. In those cases in which hemorrhage was present a careful review of the case histories did not show that the displacement was more acute than in patients in whom no bleeding was present. On the other hand, the proportion of irregular bleeding was considerably greater in the complicated cases than in those

that are simple. With prolapsus uteri it was found that out of a total of eighty-nine cases only thirteen showed evidence of excessive bleeding. Fibrosis and chronic metritis were in a very large proportion cases associated with uterine bleeding. Thus, in a total of twenty-seven cases, twenty-three suffered from menorrhagia. Hemorrhage in cases of fibrosis uteri is probably due to two factors: (1) Changes in the endometrium, and (b) loss of contractility of the metrium owing to its replacement by fibrous tissue. Out of a total of seventy-three cases of endometritis fifty-six were associated with menorrhagia and twenty-nine with metrorrhagia. A thorough investigation of the cases classed clinically as "endometritis" showed that sixty-one of the patients were married, and of these forty-three directly attributed the irregular hemorrhages to the last labor or abortion at intervals varying from three months to one year. The irregularity, in fact, dated from the resumption of function. Examination of the curettings revealed the following facts: (a) Twenty-five cases showed what in the past was designated "glandular endometritis"; (b) nine cases showed all the characteristics of the so-called "interstitial endometritis" of Ruge's classification; (c) atrophic "endometritis" was present in two (d) plasma cells and marked leukocytic infiltration appeared in seven. In other words, thirty-four exhibited only evidence of those changes known to be but physiologic and therefore could not be classed as "endometritis." Endometritis of septic origin does not appear to produce uterine hemorrhage. Thus, in a series of fifteen cases where curettage was performed for discharge and pain, the endometrium was infiltrated with plasma cells and leukocytes. Hemorrhage was absent. Hypertrophy of the endometrium, in its diffuse form, occurs under the name of "glandular hypertrophy;" its localized variety is the common "adenomatous polypus." Hemorrhage is usually profuse and appears to be due to excessive thrombolysis of the uterine clot. Cystomata of the ovary rarely cause interference with the menstrual function. Displacements of this organ as a general rule do not produce excessive uterine hemorrhage. Hypertrophy of the ovary affects the stroma rather than the Graafian follicles, and the close association of the condition with hypertrophy of the endometrium appears to afford clinical evidence that it is from the ovarian stroma that the specific hormone is derived. Pelvic inflammation is not infrequently associated with excessive hemorrhage from the uterus. Thus, in 176

cases, 67, or 38 per cent., were accompanied by menorrhagia. Whitehouse is inclined to think that the hemorrhage is the result of interference with venous return rather than to any specific effect either on endometrium or ovary, since it occurs not only in connection with inflammatory lesions related to the sexual organs, but also in secondary cases to extragenital inflammation, such as appendicitis. The value of curettage in the therapeutics of uterine hemorrhage, Whitehouse says, is principally for diagnostic purposes. If the examination of the curetted endometrium is taken in conjunction with an analysis of the menstrual discharge, and care taken to correlate the appearances of the endometrium with the period of the sexual cycle, much valuable information may be gained as to the cause of a specific hemorrhage. Curettage at the two extremes of sexual life is, in his opinion, a useless procedure except for diagnostic purposes. It is not possible to alter the character of the endometrium by any amount of curetting. This is proved by examination of repeated curettings from the same uterus, and it accounts for the fact that in glandular hyperplasia of the endometrium curettage is only of temporary benefit. Treatment, to be successful, must be based on a physiologic and pathologic basis. Thus, where hemorrhage is due to the absence of thrombokinase, attempts may be made to replace the same. Fibrin ferment directly applied to the endometrium is also of service in directly checking hemorrhages of this nature. If bleeding is due to excessive thrombolysis, the result of the hyperplasia of the endometrium, temporary relief may be obtained by curetting. If bleeding recurs, Whitehouse suggests that partial oophorectomy be performed. Where hemorrhage appears to be the result of venous stasis, appropriate means must be taken to relieve the same, either by purgation in the case of portal congestion, or operation where the cause is severe and chronic inflammation. In those cases in which the uterus has lost its power of regulating the supply of blood to the endometrium, such as in fibrosis or arteriosclerosis, hysterectomy appears to be the safest and best method of treatment.

("Physiology and Pathology of Uterine Hemorrhage." H. B. Whitehouse. *Jour. A. M. A.*, May 2, 1914.) MILLER.

## Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

MYCOSIS FUNGOIDES SUCCESSFULLY TREATED BY HYPODERMIC INJECTIONS OF ARSENIC.—Wolff (*Archiv. f. Dermatologie u. Syphilis*, Band cxv, Heft 9), at a meeting of the Strassburg Dermatological Society, December 15, 1912, exhibited a case of mycosis fungoides which had been successfully treated by injections of atoxyl and arseniate of soda. The patient was a man, aged 33 years, who, in 1907, had an eruption scattered over the whole body, consisting of irregularly shaped, elevated, partly scaly, partly papilomatous areas, with polycyclic borders, accompanied by moderate itching. After seventy injections of atoxyl (dose not mentioned) complete healing took place, and the patient remained well until 1910, when two lesions appeared upon the chin like those above described, together with a fungoid tumor with broken-down center upon the sole. Injections of arseniate of soda in ascending doses up to 0.03 per day with X-Ray treatment of the foot produced complete healing in six weeks. The exhibitor also presented photographs of two other cases of mycosis fungoides successfully treated in the same manner. J. A. S.

CIRCULATORY DISORDERS AND ALOPECIA AREATA.—Thirty-six cases were examined by Walsh. Of these, 23 were in males and 13 in females; 14 were under 20 years of age and 6 were 50 or over. Of the 36 patients, no less than 24 had valvular murmurs and other evidence of cardiac disease, while 3 others showed general arteriosclerosis (one advanced atheroma). Of the remaining 7, 1 had exophthalmic goiter, one chorea and irregular heart action, 1 irregular action from tea and another from tobacco poisoning; 1 had a feeble circulation, while in 3 only could no marked abnormal circulatory condition be detected. Of the 24 valvular conditions, 18 showed mitral regurgitation and 2 of them aortic mischief as well, 5 were direct aortic, 2 of them direct and regurgitant, and 1 showed multiple murmurs in a terminal stage of cardiac disease. Walsh says that it may be objected that in cases of alopecia following mental shock the cause is evidently neurotrophic, and that cardiovascular disturbance does not enter into the

question. The answer is that shock does not produce alopecia areata in all individuals, but only in those who have a certain predisposition, which may be either cardiovascular or due to a temperament in which the heart is peculiarly liable to be disturbed. Some years ago Walsh described a type of individuals characterized by a congenital high forehead and abnormal thyroid gland, in whom shock was apt to be followed by a curious symptom-complex in which were to be found tremors, nervousness, depression, tachycardia, palpitation, headaches, exophthalmos, diffuse and patchy baldness, and so on. There was a special tendency to exophthalmic goiter and myxedema, the two being sometimes associated. This temperament, with its consequences, was often met with among poorly-fed children in an out-patient department. So far as myxedema is concerned, Walsh cannot recall a single case in which the patient had not a congenital high forehead. Where shock is followed by alopecia areata the same condition, in his experience, is almost always present. The associated instability of the heart condition in such cases is shown by the quick and variable pulse, the palpitation, and sometimes by the physical signs of a dilated heart. Walsh's main conclusions are as follows: The abnormal loss of hair, whether acute or chronic, diffuse or patchy, is in the majority of cases associated with some serious cardiovascular defect, which constitutes an essential predisposing cause. Given this predisposing cause, the exciting cause may be one of various agencies, acting either directly or indirectly.

Alopecia areata is simply a localized form of diffuse baldness, and both are probably due in most cases to exciting traumatism and predisposing cardiovascular effect. The predisposing cardiovascular condition may be (a) cardiac valvular, myocardial, or functional; (b) vascular, as arteriosclerosis; (c) neurovascular, as exophthalmic goiter or Raynaud's disease. In some cases the skin sign, in the form of alopecia or eruption, may register a failure of compensation. For instance, when an attack of influenza breaks down the compensation of a pre-existing valvular lesion, an acute shedding of hair follows. From a pathologic point of view the predisposing part played in these cardiovascular cases depends on a disturbed balance of the surface circulation and acts in a two-fold manner: (1) By diminishing the natural local defenses of the skin circulation against the invasion of bacteria from without; (2) by predisposing to the formation of clots, with subsequent

damage to nutrition and shrinkage of capillaries (fibrosis); (3) by inducing lymph stasis.—*British Medical Journal*, London.

J. A. S.

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## Department of Ear, Nose and Throat.

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In Charge of DRs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

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MINERAL WATER AND CLIMATIC CURES IN OTO-RHINO LARYNGOLOGY.—The author (G. de Paul) divides his cases into two general classes, those conditions due to, or produced by, congestive changes, either spasmodic, neuropathic, etc., or those of a chronic catarrhal nature, either atonic or torpid. He recommends for the first type those springs and waters having a sedative and depleting action, sulphatic, calcic, arsenical—especially bi-carbonated, carbogaseous springs.

For the second type the patient must be sent to sulphurous sodic waters, sulphurous sodic arsenical, sulphurous calcic, bromo ioduretted, or chlorinated sodic waters.

One must necessarily select the location of the water cure with some view to the general condition of the patient, and must choose hot or cold springs, in warm or cool climates, with due regard to altitude, comfort, etc.

For instance, the author would recommend for congestive conditions with marked tendency to inflammation and spasmodic reflex neuroses, Mont Dore (1,050 m. elevation), the waters having free carbonic acid in solution, alkaline and ferruginous bicarbonates, basis arsenic, bromin, iodin, lithia. For the various neuroses, pharyngeal and laryngeal, springs in moderate altitude that are hot and rich in arsenic; for chronic catarrhal affections of the upper respiratory passages of an atonic or torpid type, traceo-bronchitis, etc., sulphuretted sodic or calcic waters in regions usually of but moderate altitude; for adenoid hypertrophies and chronic tonsil inflammation, chlorinated soda, bromo-ioduretted waters, etc. A comprehensive table is appended, with many recommendations for the various conditions of the ear, nose and throat, that yield to this type of treatment.

As local treatment auxiliary to the general methods of drinks, baths, douches and foot baths, nasal douches are to be used with



caution. They are of remarkable benefit in atrophic conditions, especially when practised at the seashore; on the other hand, such douching is contra-indicated in all hypertrophic states.

Sojourns for periods more or less prolonged in medicated atmospheres, where the water gives up its nascent gases easily, and where evaporation is markedly continuous, will prove of marked benefit to the tracheo-bronchial congestive conditions, and will improve the voice disturbances of singers, etc.

Vaporizations of the eustachian tube from the sulphuretted sodic springs will improve the chronic tubo-tympanic catarrhs.

The author is of the opinion that as a general rule the sea air is an enemy to nasal, laryngeal and tubal mucous membranes. To those interested this has many suggestions that we feel sure would help many to clear up conditions for which we find so little relief.—  
*Journal of Laryngology.* LYNCH.

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## Medical News Items.

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ATTAKAPAS SOCIETY MEETING.—The annual meeting of the Attakapas Clinical Society was held at New Iberia, June 10. President P. A. Boykin presided. The following program was carried out: Lecture, "Causes and Effects of Uterine Displacements," Dr. E. D. Martin, of New Orleans; "Treatment of Gastro-Intestinal Infections of Children," Dr. J. T. Abshire, of Leroy, La.; illustrated skiagraph lecture on abdominal sections, Dr. E. C. Samuels, of New Orleans; "Ruptured Appendix," Dr. E. M. Ellis, of Crowley. Previous to the scientific program, a clinic was held in the offices of Dr. H. A. King, secretary-treasurer. Dr. L. O. Clark, of Crowley, in his annual report, showed the Society steadily growing in membership and its finances in good condition. The officers and members in attendance were: P. A. Boykin, Jeanerette, president; J. W. Shaw, New Iberia, vice-president; L. O. Clark, Crowley, secretary-treasurer. Delegates: Lafayette, L. O. Clark, M. E. Saucier, R. D. Voorhies, M. M. Mouton, J. O. Duhon, John Tolson, Tom Tolson, O. P. Daly, Jr.; Gueydan, H. B. White; St. Martinville, J. L. Beyt; Jeanerette, P. A. Boykin, M. B. Tarlton; Crowley, E. M. Ellis; Rayne, R. C. Webb, Jr.; Carencro, W. W. Lessley, J. P. Frances, E. E. Guilbeaux; Scott, L. A. Prejean, J. L.

Chausson, Broussard, George D. E. Laureau; Delcambre, A. Landry; Erath, I. T. Young; Morgan City, C. C. Gravelle, J. H. O'Neil; New Iberia, J. Wafford Sanders, George J. Sabatier, Walter F. Carstens, J. W. K. Shaw, H. A. King, E. S. Fulton, I. D. and E. N. Landry, W. R. Boudreaux; Loreauville, Guy Shaw. The annual election of officers resulted in the selection of Dr. I. T. Rand, of New Iberia, president; Dr. W. W. Lessley, of Carencro, vice-president; secretary-treasurer, Dr. L. O. Clark, of Lafayette. Due to the energy of the arrangement committee chairman, Dr. Walter F. Carstens, the program was carried out and the convention completed its labors at 7 p. m. It will meet next year in Crowley. A banquet was tendered the delegates following adjournment at the Hotel Fredericks.

AMERICAN SOCIETY OF TROPICAL MEDICINE.—At the eleventh annual meeting of this Society, held at the Harvard Medical School May 29 and 30, the following officers were elected: President, Dr. Charles F. Craig, Major, Medical Corps, U. S. A.; first vice-president, Dr. Milton J. Rosenau, of Boston; second vice-president, Dr. Bailey K. Ashford, of San Juan, Porto Rico; secretary, Dr. John M. Swan, of Rochester, N. Y.; assistant secretary, Dr. Allen J. Smith, of Philadelphia; councillors, Dr. S. T. Darling, of Ancon; Dr. Henry J. Nichols, of Washington, D. C., and Dr. Victor G. Heiser, of Manila, P. I., with Drs. C. C. Bass and J. H. White, of New Orleans, holding over.

MISSOURI MEDICAL ASSOCIATION.—The annual meeting of this Association was held in Joplin on May 12, 13 and 14. The officers elected were: President, Dr. H. C. Shuttee, of West Plains; vice-presidents, Dr. J. A. McComb, of Lebanon; Dr. G. O. Cuppidge, of Moberly; Dr. W. G. Estill, of Lawson; Dr. T. A. Coffee, of Springfield; Dr. W. A. Clark, of Jefferson City; treasurer, Dr. J. S. Welch, of Salsbury; secretary, Dr. E. J. Goodwin, of St. Louis. St. Joseph will be the meeting place next year.

FLORIDA MEDICAL ASSOCIATION.—At the annual meeting of this Association at Orlando, May 13, 14 and 15, the officers elected were: President, Dr. F. Clinton Moore, of Tallahassee; first vice-president, Dr. C. D. Christ, of Orlando; second vice-president, Dr. Thomas Truelson, of Tampa; third vice-president, Dr. J. A. Simmons, of Arcadia; secretary-treasurer, Dr. Graham E. Henson, of Jacksonville; librarian, Dr. James B. Pasco, of Jacksonville. Dr.

John MacDiarmid, of LeLand, was elected delegate to the House of Delegates to the American Medical Association. The Association has decided to publish a monthly journal, with Dr. Henson, the secretary, as editor. DeLand will be the next meeting place.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE plans to establish a permanent laboratory in Sierra Leone for the purpose of carrying on research work.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The annual meeting of this Association was held in Chicago on May 14, 15 and 16. The following officers were elected: President, Dr. Sigmund Politzer, of New York; vice-president, Dr. Martin F. Engman, of St. Louis; secretary, Dr. Oliver S. Ormsby, of Chicago. The 1915 meeting will be held in New York.

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.—This Congress will hold its fifth annual session July 27-31, in London, England. There promises to be a notable gathering of surgeons and surgical specialists in London to witness the British surgeons exhibit their surgical skill. Great interest has been engendered in these congresses in Chicago, Philadelphia and New York on the part of American surgeons. The headquarters of the Congress will be the Hotels Cecil and Savoy. The Congress will be attended by visitors from America, Canada, the Continent and the Provinces.

ASSISTANT EPIDEMIOLOGIST.—The United States Civil Service Commission announces an open competitive examination, July 6, 1914, for assistant epidemiologist, for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Public Health Service, at salaries ranging from \$2,000 to \$2,500 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. The duties of this position will be to conduct laboratory studies of disease, to make epidemiological surveys to determine the prevalence and causation of epidemics, and to recommend measures to prevent and control outbreaks of disease. It is desired to secure persons thoroughly competent in the various branches of sanitary bacteriology, and especially in isolating the typhoid bacillus from infected persons and materials. Competitors will not be assembled for examination,

but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. General education and medical training.....	25
2. Laboratory experience .....	30
3. Experience in epidemiological work.....	35
4. Publications or thesis .....	10
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Total.....	100

An educational training equivalent to that required for graduation from a medical school or college of recognized standing, and at least three years' experience in epidemiological work under Federal, State or local authorities, and experience in laboratory technic, especially in regard to typhoid fever, are prerequisites for consideration for this position. If a thesis is submitted under Subject 4 it must present the results of original research work in some sanitary subject. Statements as to education and experience are accepted subject to verification. Applicants must have reached their twenty-third, but not their fortieth, birthday on the date of the examination. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the secretary of the United States Civil Service Board, postoffice, Boston, Mass.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Cal.; Custom House, New York, N. Y.; New Orleans, La.; Honolulu, Hawaii; Old Custom House, St. Louis, Mo., or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on July 6, 1914. The exact title of the examination as given at the head of this announcement should be stated in the application form.

**BACTERIOLOGIST.**—The United States Civil Service Commission announces an open competitive examination for bacteriologist, for

men only, on July 8, 1914. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position at salaries ranging from \$1,200 to \$2,000 a year, in the Bureau of Chemistry, Department of Agriculture, for duty both in Washington, D. C., and in the field, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. The duties of this position will be to examine bacteriologically food products which are subject to the food and drugs act in order to determine their sanitary condition. Competitors will be examined in the following subjects, which have the relative weights indicated:

Subjects.	Weights.
1. Practical questions in bacteriology. . . . .	30
2. Practical questions in chemistry. . . . .	15
3. Thesis (to be delivered to the examiner on the date of the examination) . . . . .	20
4. Education and experience . . . . .	35
<hr style="width: 10%; margin-left: auto; margin-right: 0;"/>	
Total. . . . .	100

An educational training equivalent to that required for a bachelor's degree or an M. D. degree from a college or university of recognized standing, including at least two years' training in bacteriology, is a prerequisite for consideration for this position. The thesis called for in Subject 3 may be either typewritten or in the handwriting of the competitor, and must be accompanied by a sworn statement in the following language: "I, the undersigned, do solemnly swear (or affirm) that in the preparation of the accompanying thesis the composition is entirely my own, and that I have given full credit by quotation marks or references to authorities for any quoted matter." The oath must be taken before a notary public or other officer authorized to administer oaths for general purposes, and the officer's signature must be authenticated by official (impression) seal. If the oath is taken before a justice of the peace or other officer who has no official (impression) seal, his official character must be certified to by the clerk of the court, Secretary of State, or other proper officer under official (impression) seal. Statements as to education and experience are accepted subject to verification. Applicants must have reached their twenty-

first, but not their fortieth, birthday on the date of the examination. Applicants for this position may be examined at any place at which it is held, regardless of their place of residence, but under an Act of Congress only those who are examined in the State or Territory in which they reside and who have been actually domiciled in such State or Territory for at least one year previous to the date of the examination will be eligible for appointment to a position in the apportioned service in Washington, D. C. No sample questions of this examination will be furnished. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for application Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission in Washington in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.

**LONG ISLAND COLLEGE HOSPITAL REORGANIZES.**—The Long Island College Hospital, of Brooklyn, which is one of the oldest medical colleges in the East, announces complete reorganization. A five-year course will take effect in September next, and every department has been increased. The following faculty members will occupy the new positions: Professors Archibald Murray, pathology; William Lintz, bacteriology; John C. Cardwell, physiology and pharmacology; Matthew Steel, chemistry; William Francis Campbell, surgery; William B. Brinsmade, clinical surgery; Joshua M. Van Cott, clinical medicine; E. H. Bartley, pediatrics.

**MEDICAL EXAMINING BOARD GRANTS LICENSES.**—The following candidates for licenses were passed by the Louisiana State Board of Medical Examiners (regular) at the examination held on June 4, 5 and 6: Clarence Stephen Murphy, Henry C. Lochte, Alvin Mann McMahan, Oliver Bridges Barron, Labasse J. Robin, Joseph Maxime Perret, Harold Dean Van Schaick, Robert Blackburn Harper, Morton Paul Lane, Marcy Joseph Lyons, Broox Cleveland Garrett, Cad Walder Arrendell, Thomas Tilghman Tolson, Bascom Headen Palmer, Jr., Aaron Jones White, James Hervey Galloway,

Robert Adwood Corbin, John Newton Pharr, Claude Dean, Thomas Jefferson McHugh, William Orin Williams, Oliver Birdell Kiel, Montefiore Meyer, Bowman Joel Wise, Carl Travis Dufner, Robert James Platt, William Eugene Goodson, John Gano McLaurin, Guy Gabriel Aycock, Dominick Andrew Palmisano, George Augustus Cronan, Lionel Paget Player, Newton Washington Sentell, Alaric Claudius Whittington, Lewis Ball Leitch, George Washington Taylor, Leo Nehemiah Elson, Luther William Holloway, Ray Roswell Niblack, Mildred Lusk Oliver, Henry Watkins Allen Lee, John David Martin, Carlie Wyley Davidson, William Otis Calloway, Joseph Eugene Heard, Percy Leonard Querens, Alberto Gonzales Garcia, Robert Henry Coleman, James Ambler Speight, Rossner Enders Graham, William Edmond Moreland, William Henri DeClark, George Washington Kiehnhoff, Frank Anderson Overbay, Foster Jarrell, Hubert Compton Dorsey, Henry Silas Browne, Otto Jacob Burger, Sidney Francis Braud. The certificates of five other applicants who received the required average are being withheld pending adjustment of certain deficiencies in their examination. At the same meeting three physicians were granted certificates by reciprocity, namely: Joseph H. Robinson, J. Raymond Hume and David Thomas Heyser.

At the midwifery examination, held June 5, the following midwives received certificates after a successful examination: Mrs. Herminie Picone, Marceline Liuzza, Laura Anderson, Edna Nillen, Elise Ber, Virginia Elizabeth Deblieux, Margaret Schaefer, Mrs. Ignatius Palmisano, Olivia Bagneris, Jessie Sarpy, Katie Cox, Lucy Lestelle, A. B. Trower, Anna Romano, Miss Anna Acosta. The next meeting of the Board will take place on October 29, 30 and 31.

THE TULANE UNIVERSITY OF LOUISIANA held its annual commencement exercises at the French Opera House on June 3. President Sharp conferred the degrees in the different departments. There were seventy-two who received degrees in the College of Medicine. The alumni address was delivered by Francis Levy Kohlman, A. B., of New York.

DR. LYDSTON HONORED.—The Hamilton College of Law, of Chicago, at its annual convocation, June 3, conferred upon Dr. G. Frank Lydston, of Chicago, the degree of Doctor of Civil Law.

DR. DE ROALDES HONORED.—Dr. A. W. De Roaldes, of New Orleans, has once more been honored by the French Government,

which has awarded him the much-coveted "Medaille du Souvenir." The distinction is one conferred upon those having performed deeds of bravery during the conflict in the Franco-Prussian War. Dr. De Roaldes rendered services in the ambulance corps at the Battle of Beaumont-Nouzant, near Sedan, August 30, 1870.

**HOTEL DIEU ENLARGED.**—The opening and dedication of the new wing of Hotel Dieu took place on June 6. Appropriate exercises marked the occasion, and there were several hundred persons in attendance. The new wing is to be opened to all classes and creeds of men. The entire building is heated by the latest improved methods and is of fireproof construction.

**DENTISTRY SCHOOL FOR LOYOLA UNIVERSITY.**—A school of dentistry will be added to Loyola University, the new department to be ready for the opening of the next school term in October. The faculty of the new school follows: Dr. C. Victor Vignes, dean and professor of prosthetic dentistry; Dr. Jules J. Sarrazin, professor of mouth hygiene and oral prophylaxis, with instruction in special pathology and Riggs' disease treatment; Dr. Samuel H. M'Affee, professor of operative dentistry and crown and bridge work; Dr. Charles S. Tuller, professor of dental pathology, materia medica and therapeutics; Dr. J. A. Gorman, professor of orthodontia; Dr. Samuel Grosjean, professor of dental anatomy and histology; Dr. Homer Dupuy, professor of oral surgery; Dr. O. L. Pothier, professor of general histology, pathology and bacteriology; Dr. Joseph A. Danna, professor of general principles of surgery; Dr. L. M. Provosty, professor of physiology; Dr. J. J. Ryan, professor of anatomy; Dr. W. T. Burren, professor of clinical dentistry and superintendent of clinics; Dr. J. P. Wahl, professor of treatment of fracture of maxilla; Dr. W. C. Richardson, associate professor of dental anatomy and histology.

The special instructors will be Dr. J. O. Weilbacher, materia medica and pharmacology; Dr. F. De Poorter, oral surgery; Dr. C. A. Weiss, oral surgery; Dr. A. J. Foret, exodontia; Dr. J. H. Landry, prosthetic dentistry.

The demonstrators will be Dr. E. A. Gamard, Dr. C. W. Swords and Dr. Frank Oser. The clinics will be downtown, in the Canal Street neighborhood.

**THE ANNUAL STATE BOARD STATISTICS.**—The Journal A. M. A., May 23, publishes the state board statistics for 1913. This is the



eleventh annual presentation by the Council on Medical Education of the results of State Board examinations. The educational statistics presented show that there were 99 American medical colleges granting degrees in 1913. These colleges graduated 3,981 students last year. Of these, 87 per cent. took examination for license during the year. Three hundred and fifty-three, or 10.2 per cent., failed. A study of totals and percentages, as compared with previous years, is of interest. The total examined and the percentage of failures, as shown in the tables, are the lowest since the compilation of these statistics was begun in 1904. The total examined in 1913 showed a decrease of 1,600 below 1906, when 8,035 candidates were examined. By all methods—examinations, reciprocity, under exemption, etc.—6,501 physicians were licensed during 1913, or 222 less than 1912, and 1,364 less than in 1906, when 7,865 physicians were licensed. Altogether 6,435 were examined last year, as compared with 6,879 in 1912 and 6,960 in 1911. Of those examined in 1913, 2,746, or about 56.4 per cent., took their license examinations in the States where the colleges from which they graduated were located. Of this number, 11.9 per cent. failed on the average, whereas, of the 1,420 candidates examined in other States 18.6 per cent. failed. This would indicate that, as a rule, the student's chances of passing the license examinations are better if he stays in the college's home State. One table gives the results for groups of colleges located in each State. It shows what States are furnishing the largest number of physicians, and the failure percentages indicate what kind of training these colleges are furnishing so far as may be judged from the failures of their graduates before the State boards. These statistics show that the States harboring low-grade colleges are themselves the recipients of the great majority of the poorly trained output of those schools. Other tables permit a comparative study of medical colleges of much value in connection with investigations concerning them. For the group of colleges located in each State the total number of graduates examined in all States is shown, together with percentages of failures, and the rank of each group according (1) to the number examined and (2) to the success of the graduates at the examination. Another table furnishes an interesting study of the larger colleges and allows a comparison between colleges of equal size. A classification of medical colleges, based on the failures of their graduates at State Board examinations, is also made. In making comparisons, based

on the statistics given in these tables, several factors should be carefully considered. For instance, in regard to medical colleges, occasionally those poorly equipped may have less than 10 per cent. of failures, while well equipped and fairly good colleges may occasionally have between 10 and 20 per cent. of failures. It is seldom, however, that a good college will, year after year, show failure percentages over 10 per cent., which is true regarding most of the colleges in the third class (having above 20 per cent. of failures). The statistics furnished with this report are accurate and reliable, and are worthy of careful attention. Many important deductions other than those mentioned above may be drawn from them.

A SAFE BICHLORID TABLET SUGGESTED.—The *N. Y. Medical Journal* editorially notes the proposal of Dr. Wm. Edward Fitch, in the June number of *Pediatrics* to compel all manufacturers of bichlorid tablets to add an antidotal amount of tartrate of antimony and potassium so as to cause the evacuation of the stomach before the bichlorid can become active. The formula suggested is of

Mercury bichlorid .....	7.3 grains.
Ammonium chlorid .....	7.7 grains.
Tartar emetic .....	1.25 grains.

This combination does not effect the bactericidal action of the bichlorid and probably aids in this particular, according to Dr. Fitch.

PURE MILK SOCIETY TO ENLARGE FIELD.—The New Orleans Pure Milk Society held its annual meeting on June 5 in the rooms of the Orleans Parish Medical Society. The reports show that the number of dairies inspected by the Milk Commission—the executive part of the New Orleans Pure Milk Society—is four, in the city, and the supply about 200 gallons a day. The cows in these dairies are guaranteed free from tuberculosis by frequent inspections. An expert bacteriologist and chemist makes the requisite tests to insure the purity of the product. Many private families secure this milk for their children and the Child Welfare Association uses milk from these dairies to distribute at its station in St. Mark's Hall and elsewhere. The Commission expects to soon increase the number of inspected sources of supply, so as to have two out-of-town dairies, and to bring the amount of milk up to 300 gallons a day. A central delivery station will be installed, which

will facilitate service. The present officers of the Society are: Dr. L. R. DeBuys, president; Dr. Solon G. Wilson, vice-president; Dr. J. T. Halsey, secretary and treasurer. The Milk Commission consists of Drs. W. W. Butterworth, I. I. Lemann, Robert Pollock, M. T. Lanaux, King Logan and Mr. Joe Devereux.

**PRESBYTERIAN HOSPITAL ISSUES REPORT.**—A record of a busy month's work is submitted in the report of the Presbyterian Hospital for April, and the report shows that the activities in this institution are on a steady increase. There were 233 patients admitted during the month. Patients discharged during the month, 186. There were only six deaths during the month. Visiting doctors numbered 69, operations 142, charity cases in hospital during the month 20, clinic patients 701, clinic operations 20, obstetrical cases 4.

**THE PROBLEM OF GOOD WATER.**—The City of Philadelphia has suffered an abnormally high death rate from typhoid fever because of bad water supply. Between 1906 and 1910 there were 42.1 typhoid deaths per 1,000 of mortality. In 1912 the filtration plant was established and the typhoid mortality decreased at once, more than two-thirds, to 12.7 per 1,000 for 1912, showing the cause of that disease. It ran up again to 15.7 in 1913, and this advance arousing suspicion an examination was made of the waterworks. The investigation brought out the fact that the raw water had become mixed with that intended for drinking purposes by connections in some of its manufacturing plants, and the unfiltered water was thus pumped into the drinking reservoirs and pipes, with an immediate increase in the typhoid rate.

**NEW ANESTHETIC TRIED AT HOSPITAL.**—Experiments upon animals with a new anesthetic are being made at the Charity Hospital. The substance, which is called urethane, is a combination of urea and alcohol. It is administered hypodermically and drowsiness soon becomes a very deep unconsciousness, and insensibility to pain is complete. The advantages of the new anesthetic are that heart failure never occurs when it is properly used, the choking sensation experienced with ether and chloroform is not present, there is no nausea, thus avoiding the danger of stitches giving way from vomiting, and there is said to be perfect security when it is used in any

operation. A disadvantage is that the experimenters have not yet been able to reduce the period of insensibility below six hours.

**YALE'S ONE HUNDREDTH ANNIVERSARY.**—The one hundredth anniversary of the founding of the Yale Medical School was held in New Haven, Conn., on June 15.

**THE ROBERT W. LONG HOSPITAL OF INDIANAPOLIS** was formally opened on June 15, the dedication services taking place in the Chamber of the House of Representatives, State House. The hospital was presented to the State of Indiana by Dr. and Mrs. Robert W. Long, of Indianapolis.

**PERSONALS.**—Among the physicians of New Orleans who will attend the meeting of the American Medical Association at Atlantic City are: Drs. L. B. DeBuys, J. B. Guthrie, Isadore Dyer and C. Jeff. Miller, R. Matas, M. Feingold, J. T. Halsey, U. Maes, A. C. Eustis, W. W. Butterworth, H. D. King.

Dr. Charles Chassignac and family will leave for New York on July 15 on the way to Europe for a two months' sojourn.

**REMOVALS.**—Dr. Lee Whitsitt, from 315 Kentucky Avenue, to 1829 Hurley Avenue, Fort Worth, Texas.

Dr. H. G. F. Edwards, from Abbeville, La., to Kaplan, La.

Dr. J. S. Gardner, from Robeline, La., to Woodward, La.

Dr. G. A. Westfall, from Jackson, Miss., to 1110 West 16th Street, Oklahoma City, Okla.

Dr. S. S. Robinson, from Mexia, Texas, to Port O'Connor, Tex.

**MARRIED.**—On June 3, 1914, Dr. Joseph Denegre Martin to Miss Leonie Gladys Cook, both of this city.

On June 17, 1914, Dr. Christian Grenes Cole to Miss Hallette Mary Barrow, both of this city.

On June 25, 1914, Dr. John Gould Gardner to Miss Edna Lampton, both of Columbia, Mississippi.

**DIED.**—On June 3, 1914, Dr. Samuel C. Benedict, of Athens, Ga., aged 58 years. Dr. Benedict was president of the Georgia Board of Health and Dean of the School of Pharmacy of the University of Georgia.

On May 24, 1914, Dr. Christopher Hamilton Tebault, of New Orleans, one of the city's best known and oldest practitioners, aged 74 years.

## Book Reviews and Notices.

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

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**A Manual of Clinical Diagnosis By Means of Laboratory methods.** By Charles E. Simon, B. A., M. D. Lea & Febiger, Philadelphia, 1914.

We have reviewed several previous editions of this work, and each time have noticed improvement. In short, Dr. Simon keeps his book abreast of the progress in clinical diagnosis. The present eighth edition has been enlarged and thoroughly revised, and contains one hundred and eighty-five engravings and twenty-five plates.

The student of "organ diagnosis" will find an account of the diagnostic methods based upon the appearance of the protective ferments of Abderhalden in the blood, the information being brought up to our present knowledge.

The technic relating to the Wassermann reaction has been rewritten, and emphasis laid upon the importance of strict uniformity in the use of the various reagents, notably of the antigen.

The writer calls attention to the importance of a more general employment of the approved, thoroughly practical, modern methods of investigating the existence and extent of renal disease.

The author says "The division of the book into two sections, which was inaugurated in the last edition—the first being devoted to technical questions and the second to the application of laboratory findings to diagnosis—has met with a very encouraging reception on the part of the medical public, and hence has been retained in the present volume." We think well of this.

The writer emphasizes the advantages of a system of teaching clinical pathology, which he inaugurated at the College of Physicians and Surgeons of Baltimore. In accordance with this plan, the student's course is started in the third year with technical problems, while, in the fourth year, he is taught the application of laboratory findings to concrete cases taken from the wards.

This system of teaching has advantages, for, as the author says, "he has been struck by the frequency, nay, almost the consistency, with which students apply their attention to problems of technic and leave the question of the interpretation of results to future study. This should not be the case."

Sane laboratory methods are being more frequently employed by practitioners, and Dr. Simon has done his share to help bring this about.

The book deserves its success and we hope to see many more editions.

STORCK.

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**Lectures on Dietetics.** By Max Einhorn. Paul B. Hoeber, New York.

This little book comprises the stenographic notes of Prof. Einhorn's lectures delivered at the Post-graduate Medical School, New York. In so few lectures it is impossible to cover the subject of dietetics, and the book is merely an outline of the principles of dietetics.

Some assertions in the text are startling, as, for instance, when it is stated (p. 44) that it is wrong to prescribe plenty of nourishment for

a pneumonia patient, with the idea that the loss of appetite in this disease is due to the fact that the energy requirements are low. The author, all through his lectures, overlooks the effects of toxins in disturbing the appetite and metabolism, and he takes very little note of the large amount of energy lost by the dissipation of heat from pyrexia. The chapter on Duodenal Feeding, supplemented with illustrations, reflects the enormous experience of the author in this method of alimentation. The directions for inserting the tube and for feeding are clearly expressed.

ALLAN EUSTIS.

**Anatomy and Physiology: A Text-Book for Nurses.** By John Forsyth Little, M. D. Lea & Febiger, Philadelphia and New York.

This is an excellent book for women who desire to take up trained nursing. The numerous illustrations are largely from Gray (reduced). The text is everywhere clear and concise; no doubtful or controversial matter is permitted to perplex the student.

The section on physiology is, like the other, ample for its purpose, and always clear. A useful glossary is appended to the work. Altogether, Lr. Little's book places an adequate presentation of the subject within reach for trained nurses.

McSHANE.

**Diagnostic Symptoms in Nervous Diseases.** By Edward L. Hunt, M. D. W. B. Saunders Company, Philadelphia and London, 1914.

This book cannot be regarded as more than a compendium, but as such it is an excellent expose of the diagnostic signs of organic nervous diseases. Practically nothing is said about the so-called functional nervous disorders. The chapters are all well selected and grouped, and the text is especially clear with numbers of good photographs. One feature of the book is somewhat novel and rather to be praised; namely, the delineation and comparison of the groups of symptoms pertaining to upper neurone and lower neurone paralyses, respectively. The author's descriptions of tremors, gaits, and the types of paralyses are valuable, as also the chapter devoted to the ocular and speech disturbances in their relation to nervous diseases. Although numbers of works on this subject have already been issued, this one well justifies its publication.

E. M. HUMMEL.

**Diseases and Deformities of the Foot.** By John Joseph Nutt, M. D. E. B. Treat & Co., New York, 1913.

This little book is by the surgeon-in-chief of the New York State Hospital For the Care of Crippled and Deformed Children.

It is replete with fine illustrations and appeals to the many of us who neglect the apparently trivial, but none the less, at times, excruciatingly painful conditions of the pedal extremities, for which a remedy is found in this most practical, handy volume.

LARUE.

**Surgery of the Upper Abdomen.** By John B. Deaver, M. D. P. Blakiston's Son & Co., Philadelphia, 1914.

This volume (II) completes the work of Deaver and his co-author, Ashley Ashhurst, on the Surgery of the Upper Abdomen.

The first volume, which appeared four years ago, comprised the surgery of the stomach and duodenum, and the present one embraces the

surgery of the gall-bladder, liver, pancreas and spleen.

It is almost superfluous to mention the worth of this work, as Deaver is a recognized authority in this special branch of surgery.

The authors have indeed, we think, furnished, as stated in their preface, their professional brethren with what they hope may be regarded as authoritative sources of information and opinions which may be said to represent the crystallization of the views at present held in these important departments of surgery.

We note the credit given to Claudius H. Mastin, of Mobile, and to W. E. B. Davis, of Birmingham, for being among the first in this country to do experimental work in connection with cholecystenterostomy. The exposé of serum sickness is lucidly given and deserves careful reading.

The value of the book is enhanced by a number of splendid illustrations.

LARUE.

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**The Clinics.** By John B. Murphy, M. D.

This is the first number of Volume III of the inestimable series of Murphy's clinics.

We commend the careful perusal of this issue, which contains a fund of practical suggestions. We may particularly cite an instructive subject: Fracture of Internal and External Malleoli; arthroplasty for an apparently complete bony ankylosis of the hip; Tuberculosis of the testicle, orchidectomy with implantation of paraffin substitute for testis; Luxation of the patella and fracture of the internal semilunar cartilage with description of the author's operation for luxated patella; Dr. Murphy's radical operation and special technic for carcinoma of the breast.

We will also mention the reminiscent talk of Sir Rickman J. Godlee, President of the Royal College of Surgeons (England), on Lord Lister and Antiseptic Surgery; also the few pithy remarks of Mr. Herbert Paterson, of London, on gastric ulcer and gastric carcinoma, to which Dr. Murphy replied in such appreciative terms. We cannot omit Crile's few words on Nitrous Oxide Anesthesia.

LARUE.

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**Surgical Treatment.** By Cheyne and Burghard. Lea & Febiger, New York, 1913.

This is the fifth and final volume of this standard British manual of surgical treatment. The surgical affections of the pancreas, liver and spleen, the neck, the breast and thorax and the genito-urinary organs are full dealt with.

After a thorough examination of this practical book, we can but repeat what we said concerning the previous volumes we received: it is worth having.

LARUE.

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## **Publications Received.**

**W. B. SAUNDERS COMPANY**, Philadelphia and London, 1914.

**Infant Feeding**, by Clifford G. Grulee, M. D. Second edition, thoroughly revised.

**Bedside Haematology**, by Gordon R. Ward, M. D.

**Psychnalysis: Its Theory and Practical Prevention**, by A. A. Brill, Ph. B., M. D. Second edition, thoroughly revised.

**Modern Surgery**, by John Chalmers Dacosta, M. D., LL. D. Seventh edition, revised, enlarged and reset.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. April, 1914.

**LEA & FEBIGER**, Philadelphia and New York, 1914.

**Diseases of the Heart**, by John Cowan, D. Sc., M. D., F. R. F. P. S., with chapters on **The Electro-Cardiograph**, by W. T. Ritchie, M. D., F. R. C. P., and **The Ocular Manifestations in Arterio-Sclerosis**, by Arthur J. Ballantyne, M. D., F. R. F. P. S.

**Diseases of the Skin**, by Geo. Thomas Jackson, M. D. Seventh edition, thoroughly revised.

**Progressive Medicine**, edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. June, 1914.

**Radium and Radiotherapy**, by William S. Newcomet, M. D.

**Blood-Pressure in Medicine and Surgery**, by Edward H. Goodman, M. D.

**C. V. MOSBY**, St. Louis, 1914.

**The Clinical History in Outline**, by Paul G. Wooley, S. B., M. D.

**Practical Therapeutics**, by Daniel M. Hoyt, M. D. Second edition, revised and rewritten.

**PAUL B. HOEBER**, New York, 1914.

**The Road to a Health Old Age**, by Thomas Bodley Scott.

#### **MISCELLANEOUS.**

**Some American Medical Botanists**, by Howard A. Kelly, M. D., LL. D. (The Southworth Company, Publishers, Troy, N. Y.)

**Public Health Reports**. Volume 29, Nos. 20-21. (Washington Government Printing Office, 1914.)

**The Institution Quarterly**. Springfield, Mass., March 31, 1914.

**Report of the Board of Administrators of the Louisiana Hospital for the Insane of the State of Louisiana**. March 31, 1914.

**Report of the Board of Administrators of the Shreveport Charity Hospital to the General Assembly of the State of Louisiana**. (From April 1, 1912, to April 1, 1914.)

**Ship Rats and Plague**. (Washington Government Printing Office, 1914.)

**The United States Public Health Service as a Career**, by W. C. Rucker. (Washington Government Printing Office, 1914.)

**Car Sanitation**, by A. D. Foster. (Washington Government Printing Office, 1914.)

**Report of the Sanitary Survey, St. Joseph, Mo.**, by J. H. White, Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Quarantine Procedure**, by L. E. Cofer, Asst. Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Recent Studies of Tuberculosis**. (St. Louis Interstate Medical Journal Co., 1914.)

**Luxor as a Health Resort**, by W. E. Nicholls Dunn and Geo. Vigers Worthington.

**Theorie und Praxis der Blutenziehung**, von Prof. Dr. Heinrich Stern.

**Public Health Reports**, Volume XXIX, Nos. 16, 17, 18, 19. (Washington Government Printing Office, 1914.)



**Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of February, 1914.** (Washington Government Printing Office, 1914.)

**Public Health Administration in Maryland,** by Carroll Fox, Surg., U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Malarial Fevers; What the Farmer Can do to Prevent Malaria,** by R. H. von Ezdorf.

**Public Health Administration,** by W. C. Rucker. (Washington Government Printing Office, 1914.)

**The Institution Quarterly.** December 31, 1913. (Springfield, Ill.)

**Transactions of the American Pediatrics Society.** Twenty-fifth Session. (A. M. A. Press, Chicago.)

**A Mind Remedy.** by John G. Ryerson, M. D. (The Quinn & Boden Co. Press, Rahway, N. J.)

**The Rockefeller Sanitary Commission for the Eradication of Hookworm.** Fourth Annual Report. (Office of the Commission, Washington, D. C.)

**Bulletin of the United States Department of Agriculture.** (Washington Government Printing Office, 1914.)

**The Cause of Death from Subdural Injections of Serum,** by Worth Hale.

**Some New Cholera Selective Media,** by Jos. Goldberger.

## Reprints.

**Model Laboratory for the General Practitioner,** by Henry Albert, M. D., and Mildred E. Scheetz, M. D.

**Precocious Menstruation,** by F. P. Gengenbach, M. D.

**Endemic Goiter,** by Taliaferro Clark and Claude C. Pierce, Surgeons, U. S. P. H. S.

**Treatment of Syphilis,** by W. G. Stimpson, A. S. G., U. S. P. H. S.

**Malarial Fevers in the United States,** by R. H. von Ezdorf, Surgeon, U. S. P. H. S.

**The Pollution of Tidal Waters,** by Hugh S. Cumming, Surgeon, U. S. P. H. S.

**Rocky Mountain Spotted Fever,** by L. D. Fricks, Surgeon, U. S. P. H. S.

**Screening as an Antimalarial Measure,** by H. R. Carter, Surg., U. S. P. H. S.

**The Infectious Diseases,** by John F. Anderson, U. S. P. H. S.

**The Tuberculosis Problem,** by W. G. Dwinell, M. D.

**A New Method for Estimating the Functional Capacity of the Kidneys by Forced Elimination of Urea; Insanity Occurring in Latent Bright's Disease; A Case of Amebic Dysentery of Thirteen Years' Duration Cured by Emetin Hydrochlorid,** by G. W. McCaskey, A. M., M. D.

**Quinin Prophylaxis for Malaria,** by H. R. Carter, Surg., U. S. P. H. S.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for May, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	2	2	4
Intermittent Fever (Malarial Cachexia).....	1		1
Smallpox.....			
Measles.....	1		1
Scarlet Fever.....	1		1
Whooping Cough.....	3	1	4
Diphtheria and Croup.....	3	2	5
Influenza.....	2	4	6
Cholera Nostras.....	1	1	2
Pyemia and Septicemia.....		1	1
Tuberculosis.....	41	42	83
Syphilis.....	5	6	11
Cancer.....	22	14	36
Rheumatism and Gout.....		1	1
Diabetes.....	3		3
Alcoholism.....			
Encephalitis and Meningitis.....	3	2	5
Locomotor Ataxia.....	2		2
Congestion, Hemorrhage and Softening of Brain.....	23	10	33
Paralysis.....	1	3	4
Convulsions of Infancy.....			
Other Diseases of Infancy.....	5	13	18
Tetanus.....	1		1
Other Nervous Diseases.....	8		8
Heart Diseases.....	63	22	85
Bronchitis.....	4	4	8
Pneumonia and Broncho Pneumonia.....	12	28	40
Other Respiratory Diseases.....	2	1	3
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach.....	3	3	6
Diarrhea, Dysentery and Enteritis.....	28	13	41
Hernia, Intestinal Obstruction.....	3	3	6
Cirrhosis of Liver.....	6	4	10
Other Diseases of the Liver.....	3	1	4
Simple Peritonitis.....	1	2	3
Appendicitis.....	5	2	7
Bright's Disease.....	21	23	44
Other Genito-Urinary Diseases.....	5	11	16
Puerperal Diseases.....	2	4	6
Senile Debility.....	7		7
Suicide.....	3		3
Injuries.....	23	12	35
All Other Causes.....	30	9	39
<b>TOTAL</b> .....	<b>350</b>	<b>244</b>	<b>594</b>

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

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 per Annum for Month—White, 15.44; colored, 28.99. Total, 19.11.

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

Mean atmospheric pressure.....	30.09
Mean temperature.....	76.
Total precipitation.....	0.19 inches
Prevailing direction of wind, northeast.....	

# *New Orleans Medical and Surgical Journal.*

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No. 2

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## Original Articles.

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

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### A STUDY OF THE EARLY CASES OF BUBONIC PLAGUE IN NEW ORLEANS.

By H. WINDSOR WADE, M. D., Assistant Pathologist, Charity Hospital, and  
HOUSTON L. STARING, M. D., Resident Medical Officer, Charity  
Hospital, New Orleans.

#### Introduction.

Bubonic plague infection of man appeared for the first time in New Orleans during the month of June, 1914. Though no suspicion of the human infection had been entertained prior to the discovery of the first case at the post-mortem table at the Charity Hospital, it was known that the specific organism had been previously found in the rodent family of this community.\* We mention this because it is our belief that for possibly two years the infection has existed in a latent form in the rats. Realizing that, with few exceptions, the medical profession here have not had the opportunity to observe cases of the disease, we believe a detailed descrip-

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[\*In 1912, one infected rat was found.—EDS.]

tion of the actual cases seen and studied by us, emphasizing particularly the peculiarities of its appearance in the present outbreak, will be of value to those who may be called upon to diagnose bubonic plague infection.

On the afternoon of the seventeenth of June, request was made upon the pathological department to perform an autopsy on the body of one T. B., the cause of whose death had been designated by one of us as acute toxemia, cause unknown, probably typhoid fever. The history of the case was as follows:

CASE 1. T. B., a white male, aged 18, a bookkeeper for a wholesale grocer, was brought to the hospital on June 14, 1914, at 8:30 P. M. He was said to have been taken suddenly ill on the previous day, while at work. The prominent symptoms were vomitings, slight chill, violent headaches and high temperature, which remained high until admission.

Upon examination, patient was seen to be a well-developed and nourished youth, apparently acutely ill. The face was flushed, the eyes injected and the expression anxious, the whole being somewhat suggestive of pneumonia. While the patient's mentality seemed fairly clear, answers to questions were given hesitatingly. The pulse was full, bounding, 108 per minute; temperature was 103.5 degrees F.; respiration was rapid. On exposing abdomen, one rose-spot was seen at the left costal margin. Palpation of abdomen elicited general tenderness, but no rigidity. The spleen was not palpable. Lymph nodes not palpated. A tentative diagnosis of a typical typhoid fever or malaria was made and the patient admitted to the service of Dr. J. M. Elliott.

Repeated examinations on the next two days revealed no change in his condition, with the exception of a slight muttering delirium which developed on the evening of the 15th, becoming progressively worse until death. At one time during this period, the patient complained of a slight pain in the right inguinal region. On the 16th, examination of the blood showed: Widal-positive. Total white count, 15,000. Differential (200 cells): Neutrophiles 81 per cent., lymphocytes 17 per cent., large mononuclears 2 per cent. During this day, the temperature fell until, at 11 P. M., it was found to be 101 degrees F.

At 8 A. M., on June 17, the nurse in charge reported the patient very restless and delirious. At this time first note was made of an eruption on the chest, back and arms, consisting of discrete salmon-colored papules varying in size from a pinhead to a split pea. The pulse was 108 degrees, the temperature still down to 102.5 degrees, and the general condition fairly good. At 9:30 the extremities became somewhat cyanosed, and at 10 o'clock the eruption seemed to become hemorrhagic. Thirst was marked, pulse rapid and thready, respirations rapid and shallow. A frequent cough was noted, with expectoration of frothy mucoid material. At 11:15 the patient had become worse, temperature having risen to 104 degrees, pulse 146 and respiration 68. An hour later the surface was cold and clammy, cyanosis markedly increased, eruption deep blue in color, temperature up to 105 degrees, pulse almost imperceptible, respiration shallow. At 1:15 p. m. the patient died, with symptoms of profound toxemia.

Permission for an autopsy having been obtained, this was begun at 3:15 p. m., June 17, two hours post-mortem. The gross findings are as follows:

The *body* is that of a well-developed and nourished white male. Moderate lividity is present over the head and neck and posteriorly on body. The body is still warm and post-mortem rigidity just beginning. A considerable amount of yellowish froth is seen at the mouth. On the upper part of the body are numerous small, faint, faded red patches. No abrasion is seen upon the extremities. The femoral region presents a large diffuse, rather doughy mass in which the individual nodes cannot be made out. The left nodes are barely palpable.

The *peritoneal cavity* contains a small amount of clear red fluid. The mesenteric lymph nodes are generally enlarged, although none is of great size. All are bright red in color. Both *pleural cavities* contain a small amount of red fluid.

The *heart* shows upon its anterior surface five or six small petechial hemorrhages. Both *lungs* are heavy and voluminous and are a dark, somewhat mottled red color. Crepitation is slight. A few small bright red superficial hemorrhages are seen under the pleura. On section both lungs are found to contain a large amount of fluid in the air spaces. Nowhere is there evidence of consolidation.

The *spleen* is acutely enlarged and weighs 450 grams. It is dark, bluish-red in color and quite firm, the capsule being smooth and tense. On section the pulp everywhere bulges beyond the level of the connective tissue elements. In general, it is rather a pale red, studded by enlarged grayish Malpighian bodies, many of which show minute hemorrhages, almost black in color.

The *liver* is of about normal size and weighs 1500 grams. On section it is of a uniform red color. A considerable amount of fluid blood exudes from the cut surface.

The *stomach* contains a quantity of dark, coffee-ground appearing material, the mucosa showing areas of marked congestion. A few Peyer's patches are seen which, although somewhat hyperplastic, are pale in color and intact as to mucous membrane.

The *left kidney* weighs 190 grams. Marked congestion is evident throughout the organ, the natural markings being somewhat obscured. The parenchyma bulges slightly. The ureter is found to have a number of minute hemorrhages within its wall, apparently more toward the adventitia than toward the lumen. The *right kidney* is similar to the left. One interesting point is the presence of a perirenal hemorrhage, the blood from which would about half fill a teacup. Immediately outside and about the wall of the kidney pelvis, really within the kidney proper, there is found a thin layer of hemorrhagic blood. This is continuous, with a sheath of blood clot which surrounds the ureter through its entire course to the bladder. The *bladder* contains a moderate amount of turbid urine, but no blood that can be detected macroscopically. About the bladder on this side there is considerable quantity of hemorrhagic blood, infiltrating all of the tissues. One vessel of considerable size is found to be completely filled with a firm, dry, rather pale clot, apparently of several hours' standing. In the mass hereabout are found three or four enlarged, hemorrhagic lymph nodes.

The *femoral lymph nodes* on the right side are found to be very much enlarged, soft, irregularly hemorrhagic and surrounded by infiltrating hemorrhage. Outside of the zone of hemorrhage, the muscles are edematous. This mass fills Scarpa's Triangle. The condition, however, passes beneath Poupart's ligament and up along the psoas muscle in a chain of large, hemorrhage-surrounded, closely-set lymph nodes which extend as far as the bifurcation of the aorta. A feature is the marked retro-peritoneal edema, outside of the zones of hemorrhage.

The organs not mentioned above were apparently negative. The head was not opened.

**ANATOMICAL DIAGNOSIS:** Septicemia, femoral and pelvic lymph adenitis, pelvic thrombo-phlebitis, hemorrhages, perirenal, pelvic and femoral, congestion and edema of lungs, acute splenitis, acute hepatitis, acute nephritis.

On the following day, June 18, examination of the cultures made at autopsy showed a pure growth of an organism which, in all probability, was *B. pestis*. Sub-cultures were made into various media. On the 19th, these showed conclusively that the organism did not belong to the so-called colon-typhoid group. That day, with all precautions against accidental infection of the workers, one guinea pig and two rats were inoculated. Three days later, on Monday, June 22, one rat died, and the other animals were very sick. These were killed and autopsies performed. In all of these animals, lesions were found corresponding to those caused by *B. pestis*, and from them an organism was obtained, in smears and cultures, typical of this germ, thus establishing positively the diagnosis of *Bubonic Plague*.

At 11 p. m., on June 26, nine days after the death of T. B., the following case was seen:

**CASE II.** C. L., a white male, 49 years of age, was brought in by the hospital ambulance. Examination by Dr. L. A. Fortier, resident medical officer. Patient was well-developed and nourished. On account of delirium no history could be obtained from him other than that he had been sick for two days. His temperature was 103 degrees, his pulse 120. Respiration was rapid. The face was flushed, and the eyes injected. There was tenderness in the left femoral and inguinal regions, causing the patient to object to palpation. The lymph nodes here were discrete, firm and only moderately enlarged. No edema present. Patient was admitted to a general ward, with a diagnosis of toxemia, cause unknown. An immediate blood culture was requested since the condition of the patient suggested some form of septicemia. The history obtained on the following evening from friends of the patient was to the effect that he had been in New Orleans for the past eight weeks. Sixteen hours prior to admission he had complained of malaise, remaining in his room until evening, when he was found to be delirious.

At 9 A. M. on the day following admission, the primary nodes were still tender, discrete and but moderately enlarged. At 11 A. M., however, a considerable increase in the size of the left femoral glands was noted. The individual nodes were palpable, but not distinctly separated. A doughy infiltration extended about one inch below the gland mass, the entire mass being exquisitely tender. The abdomen was slightly distended, but not tender. A few moist rales were found posteriorly in both lungs. No eruption could be found at this time. The pulse was full, bounding, and 112 per minute; temperature 105 degrees, respiration 38. Patient still semi-delirious. Blood examination gave a total white cell count of 18,750. Differential (200 cell count): Neutrophiles, 92 per cent., lymphocytes 4 per cent., large mononuclears 4 per cent. Widal negative. Blood culture: no growth in 15 hours. The gland mass was aspirated at 2 P. M. and stained smear preparations reported positive for *B. pestis* at 2:30. Patient immediately isolated.

At 9 P. M. the temperature had fallen to 102 degrees, with a pulse of 110. During the night the temperature continued to fall until, at 4 P. M., it registered 99.5 degrees, with a pulse of 100. This continued until about 9 A. M. of the 28th. During this period, the mental condition was clear, but speech was hesitating and the facial expression dull and depressed. Two small blue-black spots were observed, one on the inner aspect of the left thigh, the other on the chest. At 1 P. M. the temperature had risen to 103 degrees and the pulse increased to 130. From this point on the course and termination of the disease was practically identical with that of Case I.

#### Clinical Diagnosis: *Bubonic Plague.*

An autopsy was immediately held by Dr. C. W. Duval, director of the pathological department of the hospital. While the findings in this case differed from those of the first case in many details, the condition as a whole was strikingly similar. An especially interesting specimen was found in the right axilla, where a number of enlarged nodes were found. These showed congestion and hemorrhage practically confined to the cortical portion.

Anatomical Diagnosis: *Bubonic Plague, septicemia (B. pestis), acute septic splenitis, etc.*

About twenty-four hours after the admission of Case II., the hospital was notified that another probable plague case was being



sent from the house in which Case II., was found. The history follows:

CASE III. R. W., a white male, 55 years of age, was brought to the hospital at 12:30 a. m., June 28, 1914. He was promptly isolated and examination made to establish the diagnosis. Physically, he was a well developed, but spare individual, who talked freely and did not convey the impression of being very sick. The temperature was 103° and the pulse 90. A small ulceration, surrounded by a zone of induration, was found on the external aspect of the left leg in the middle third. This was said to have been present for several weeks, causing no inconvenience. The femoral and inguinal glands on that side were found to be somewhat enlarged, quite tender, hard and discrete. A swelling had been noticed here by the patient two or three days previously, at about the time of onset of the disease. The case being very suggestive of plague, the glands were immediately punctured and smears and cultures made. The tentative report at 2 a. m. was "Suspicious of Plague," awaiting incubation of cultures.

At 9 a. m. of that day the femoral glands were found very much increased in size and exquisitely tender. Although the individual nodes could be made out, they appeared to be embedded in a diffusely infiltrated doughy tissue. A few blue-black petechial spots, which disappeared forty-eight hours later, were found on the back at this time. A second gland puncture was made and smears reported positive for *B. pestis*. The cultures made at the time of the first puncture also showed a beginning growth of this organism.

During the next day the temperature was continuous at about 103° F. On the 30th, however, a remission occurred, the minimal temperature being 100 degrees. This was followed by a rise to 103.5° for twenty-four hours, after which the temperature dropped by lysis to normal. At no time during these temperature variations did the pulse exceed 100.

This case, now convalescing rapidly and uneventfully, is of particular interest in that it is an example of the less common, non-fatal type of the disease. At the time of admission the organisms were difficult to find in the aspirated gland fluid and at no time were they present in the enormous numbers found in the earlier cases.

The temperature curves of these cases of bubonic plague have

coincided quite remarkably with the course usually described as typical. The late remission and terminal rise have been very clear cut.

The pulse, said by most authors to be rapid, has been found in these cases to be slow relative to the temperature. It is doubtful if there is any special quality of pulse peculiar to the disease. The sudden increase from a slow, full pulse to a very rapid, thready variety in the last few hours of life has been a striking feature.

The primary bubo is quite out of proportion in size, early in the disease, to the severity of the symptoms. For the first twenty-four to forty-eight hours, although the patient is apparently overwhelmed by toxins, the gland is but moderately enlarged, firm and discrete. On pressure, however, it is very tender. It is not until after forty-eight hours that marked enlargement takes place. The nodes then become softer and, on account of the fluid infiltration of the surrounding tissue, less sharply outlined. This edematous condition of the periglandular tissue, as well as the femoral location of the bubo, is a strong differential point between this and an enlarged node secondary to some venereal condition.

In the third case, on palpation of the lower abdomen, just above Poupart's ligament, marked tenderness was elicited and a mass detected. This corresponded in position to the chain of affected glands found along the psoas muscle in the cases autopsied. It was on the fourth day of the disease that this was noted. Three days later this tenderness had disappeared and the mass was no longer palpable.

The so-called "plague spots," which are small cutaneous hemorrhages, are said to be a prominent feature in the symptomatology of certain epidemics. In the cases studied by us, however, they have been of little significance. In but one case were more than two or three solitary areas found, and in this case they had faded almost completely one hour post-mortem.

Cultures of *B. pestis* have been isolated from the buboes of the above three cases, in Cases I and II at autopsy and in Cases II and III by ante-mortem aspiration. On the other hand, blood cultures taken on both of the latter cases were negative, indicating that at the time of blood-taking, at least, there was no septicemia. In the two autopsies, however, the organisms were cultivated from both the spleen and liver.

The blood pictures in these cases have not been those ordinarily associated with severe bacterial infection. The total white-cell count has not been extremely high, ranging from 12,000 to 18,000. The differential count has also shown a comparatively moderate disturbance, the neutrophiles being about 85 per cent. As would be expected, the red cells are diminished in numbers a few days after the onset of the symptoms.

For purposes of comparison we present the following case:

CASE IV. J. R., a colored male, aged 25, was admitted by Dr. W. B. Chamberlin, resident medical officer, to a general ward at 5 p.m. on July 1, 1914, with a tentative diagnosis of general contusions. A 6:30 p.m. examination revealed glands in both inguinal regions that were enlarged, hard and tender. The femoral glands were palpable, but not tender. One enlarged node was also found in the right axillary fold, in the path of drainage of a number of small furuncles on the anterior chest wall. The temperature was 101°, the pulse 88, respirations rapid and shallow. The patient being semi-delirious, the history obtained was entirely unreliable. Having no definite knowledge of the cause of the patient's condition, examinations were made to exclude the possibility of bubonic plague. Smears from glands punctured were examined and reported as "suspicious," because of the presence of a very few bacilli of suggestive morphology. The patient was isolated at once.

At 7 a.m. on the following morning the temperature had become normal and the mental condition clear. Gland punctures were repeated and smears found negative. Cultures made at the time of previous puncture showed no growth. The patient was kept under observation until evening, at which time, the temperature having remained normal, the glands not increasing in size and cultures still being negative, the patient was sent to a general ward.

This case illustrates the difficulties met with in establishing the early diagnosis of plague. It is unfortunate but true that at this time the bubo may contain comparatively few organisms. It is when the clinical symptoms are most unmistakable that the bacilli are present in the vast numbers characteristic of this infection. A clinically suspicious case should be observed for forty-eight hours before being reported negative. Incubation of cultures must be awaited, and, in cases, the entire examination repeated. If at the end of this time the organisms have not been found, the case is almost certainly not one of bubonic plague.

*Concerning the aspiration of lymph nodes:* Although the nodes in a really suspicious case are very sensitive, one should not hesitate to cause the patient discomfort in order to obtain material for examination. It is necessary actually to tease out a bit of the gland tissue by manipulation of the point of the needle within the node. The needle itself should be of large enough calibre to permit the withdrawal of small particles of cellular material; an eighteen-gauge is the size found most useful in our work. With these points borne in mind, it is not difficult to obtain at least two or three drops of fluid.

Cultures may be made on blood serum slants. On this medium the non-motile Gram's negative, somewhat pleomorphic organisms grow fairly readily, and within twelve to twenty-four hours a probable diagnosis can usually be made. Inoculation of guinea pigs is the final test of a suspicious organism. Death usually occurs in these animals in three to five days. In the meantime, cultural tests will have made the diagnosis so probable that the death of the animal is but confirmatory.

*Concerning the use of vaccines as a prophylactic measure,* the majority of writers speak encouragingly. While they are cautious in promising any great degree of immunity, it is generally admitted that a much lower percentage of cases develop in those vaccinated than in those not so treated, and such cases are less severe. It is asserted by some that it is not dangerous to inject in the incubation period of plague, but that the injection of such may be of benefit in reducing the severity of the attack if it be developing at the time of vaccination. A number of different preparations have been advocated for this use, but apparently none has shown any marked superiority. For this and other reasons the killed, washed agar-culture bacteria is used in the prophylactic vaccination as it is being carried on at the Charity Hospital. There is evidence accumulating to the effect that these inoculations are producing a fair degree of immunity. This will be made the basis of a later communication.

*A word of warning as to the obscure forms of plague.* Occasionally there have been reported cases in which the primary buboes were cervical and even tonsillar. The nature of such cases, particularly those with the tonsillar bubos, might be easily overlooked. Much more serious, however, is the question of the septicemic form

of plague. Whether on account of the portal of entry by which the organism invades the body, or because of the extreme virulence of an infection which overwhelms the individual before any buboes can form, there are cases in which the organism is, apparently primarily, in the blood stream. Such cases are diagnosed with great difficulty and may escape the clinician, and even the pathologist, unless blood cultures are made.

In conclusion, we wish to thank Drs. C. W. Duval and M. Couret for their kind assistance in the study of these cases, and Dr. T. D. Hurley for his assistance in the collecting and examining of specimens. To Dr. J. M. Elliott we are indebted for permission to use the clinical material in the first case.

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## THE VALUE OF THE GIBSON CHART IN THE DIAGNOSIS AND PROGNOSIS OF ACUTE INTRA-ABDOMINAL AFFECTIONS.\*

By FRASER B. GURD, B. A., M. D., Montreal.

By way of introducing the subject of this paper, I may state that the chart devised by Gibson<sup>1</sup> is one whereby the results of leucocyte examinations may be made to show, in a more or less graphic manner, the indications in the individual case under consideration. No new or original observations are described in the following contribution; since however, I believe that by means of the employment of Gibson's or some similar method of estimating the value of white blood cell changes in the diagnosis and prognosis of acute and subacute intra-abdominal conditions, the result of leucocyte counting becomes of greater practical value to all clinicians, I have deemed this subject worthy of presentation.

The employment of blood counts as a clinical aid in various medical and surgical diseases has been in more or less general use for a number of years, during which times numerous observations have been placed upon record and the authors of many articles have lauded and discounted respectively the usefulness of the pro-

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(1) Gibson. *Annals of Surgery*, 1906, p. 485.

\* Read before the Montreal Medico-Chirurgical Society, May 2, 1913.

cedures. There have been, however, but few positive or direct statements relative to the value of hemo-cellular changes in surgical affections. For this reason, among others, I believe, that the complete examination of the blood in acute abdominal conditions is undertaken less regularly than it deserves to be, nor does the clinician derive as great help in making his diagnosis and prognosis as is possible in view of the comparative accuracy of the evidence derived from such examinations.

In order that the results of blood examination in acute and sub-acute intra-abdominal conditions may be properly interpreted it is necessary that the clinician have a proper conception of the significance of the blood changes, and also that he should consider the data obtained from the blood examination *in conjunction with* information derived from physical examination, anamnesis, etc.

Before proceeding to a detailed description of Gibson's Chart, permit me briefly to refer to the principles which underlie the characteristic white blood cell changes.

In order to protect itself against the invasion of micro-organisms and to bring about the elimination of those which have already gained a foothold in the tissues, the animal body has at its disposal two methods of protection and offence. These consist, first, in the elaboration on the part of the tissue cells, of soluble substances—anti-bodies—which are capable of neutralizing or digesting various injurious agents. These substances are discharged into the body fluids and hence are available on account of the omnipresence of the blood plasma throughout the body for use at any given point. Secondly, and at least equally important, certain cells possess a phagocytic and lytic activity. Certain of the cells, notably the leucocytic, which possess this phagocytic property, are found to accumulate in the neighborhood of special irritants—bacteria, toxic proteins, etc.

Of the first group of protective bodies, namely the soluble anti-bodies, we will have nothing to say in this paper, further than to remind you that the activity of the phagocytes depends in no small measure upon the presence of certain of these soluble substances, e. g., the so-called opsonins, allergins, etc.

The value of leucocyte counts in pathologic processes depends upon the fact that when there occurs a focal alteration in the degree of stimulation of leucocytic activity and accumulation, there

is induced also a corresponding increase in the number of cells discharged from the myelogenous tissue into the blood. Depending also upon the nature of the stimulus, the increase or decrease of cells is found to be confined to one or more special types of cell.

Bacterial invasion by such micro-organisms as the staphylococcus aureus, bacillus coli, bacillus pyocyaneus, pneumococcus and streptococcus, which are usually met by local accumulations in larger or smaller numbers of polymorphonuclear leucocytes, is likewise accompanied by an increase in the number of polymorphonuclear leucocytes in the blood. Similarly, certain infections, such as pertussis and frequently also tuberculosis, call forth an increase in the number of lymphocytes with little or no change in the number of other cells. Again, the presence in the gastro-intestinal canal of parasites stimulates a more active proliferation and liberation of the eosinophiles than normal. A like eosinophilia accompanies numerous skin affections.

It is thus seen that in a broad way the nature of an infection is indicated by the study of the type of cell which has been stimulated to appear in the blood stream in increased numbers. Similarly the severity of the infection or the virulence of the infecting micro-organism is suggested by the absolute increase in the number of circulating white blood cells particularly if this increase be confined chiefly to certain types.

Information commonly desired by the surgeon and which can almost invariably be obtained by means of an estimation of the hemo-cellular reaction includes the following:

1. The adequacy of the reactive forces at the command of the body—thus indicating the reserve force.
2. The severity of the infection or the virulence of the infecting micro-organism.
3. The localization or the diffusion of the inflammatory process.

In order that evidence indicating the status of an infection with reference to the above points may be obtained from the examination of the blood, it is necessary not only that the total number of leucocytes per cubic millimeter be counted, but that the various types of cells—polymorphonuclear leucocytes, lymphocytes, mononuclears, and eosinophiles—be differentiated, and the so-called differential count be made.

The total count indicates the individual's power of reaction,

either in response to natural physiological demands, or against infecting organisms. "The relative polymorphonuclear leucocyte count is an index of the degree of or severity of the infection." (Hewitt, *Annals of Surgery*, 1911, liv., p. 721.) Quoting again from Hewitt (*loc. cit.*): "If we have a relative polymorphonuclear count ranging between 75 and 80 per cent., infection is probable; if between 80 and 85 per cent., infection is usually found; if above 85 per cent. infection is almost invariably encountered, and this regardless of the total number of leucocytes."

Of the two sources of information, namely, the total count and the differential, the latter is probably of more importance, but neither alone is of comparable value to the usefulness of both together. It is in the comparison of the two counts whereby any disproportion between the two is shown, that the method of Gibson demonstrates its usefulness. Gibson's Chart is based upon the assumption that 10,000 white blood cells per cubic millimeter is the maximum normal count, and that seventy-five is the highest percentage of polymorphonuclears which can be considered normal. Both these figures are slightly higher than average counts upon normal individuals, but practically but little or no weight can be given to counts below this number, since numerous physiologic states such as fatigue, digestion, lactation, etc., cause an increase in the number of leucocytes to a moderate degree.

Gibson further postulates that "in inflammatory lesions which are well borne, the polymorphonuclear cells are increased one per cent. or less above seventy-five for every one thousand total leucocytes above ten thousand." This assumption is the essential feature of Gibson's hypothesis, and in the author's experience, as well as that of others, is sufficiently accurate to be of great practical significance.

#### TYPICAL GIBSON CHART.

<i>Total Count.</i>	<i>Poly. Per Cent.</i>
35,000.....	100
30,000.....	95
25,000.....	90
20,000.....	85
15,000.....	80
10,000.....	75

INTERPRETATION OF CHART: If an infection is being well resisted, i. e., the reactive reserve force is adequate to control, for the



time being at least, the spread of the invading bacteria, the chart shows a horizontal line, or one in which the decline will be towards the right. If the line be level and placed high, it indicates a severe infection, but accompanied by a correspondingly marked or adequate reaction, a relatively good prognosis can therefore be based upon this finding, provided that adequate operative interference be undertaken at once.

In those cases in which clinical symptoms and signs indicate an important affection, the presence of a line ascending toward the right suggests a particularly bad prognosis. This is the finding commonly obtained by blood counting in cases of diffuse or general peritonitis and demands, as a rule, immediate operative interference and the employment of other measures indicated in such cases.

As stated above, a high horizontal line indicates a severe infection but with immediate and proper treatment a good prognosis. This fact is of importance very frequently in pelvic operations upon purulent foci, since it has been shown by Joseph Smith<sup>2</sup> and others that high leucocytic counts suggest the advisability of considering the infection to be capable of grave extension if the proper precautions as regards isolation of the field of operation, by means of gauze and drainage, be not undertaken.

The value of this method of interpreting the leucocyte count is never so great as in determining the grade of severity of infection in cases of acute appendicitis, and since it is impossible to consider in the time at our disposal, the various intra-abdominal affections, cases of this nature will be employed in demonstrating the usefulness of the chart.

Hewitt's analysis of 43 cases in private practice shows the following results:

Average for acute catarrhal infections....	17,907-83
Circumscribed abscess.....	19,089-85.87
Uncircumscribed abscess.....	18,175-86.4
Gangrenous and perforative appendicitis...	19,516-89.1
*General peritonitis .....	20,564-89.5

The following cases from the author's private practice are characteristic of the evidence obtained by means of white cell estimation:

(2) Jos. Smith, *Surgery, Gynecology and Obstetrics*, 1913, Vol. xvi, No. 4.

\* Five cases, one of long-standing infection, showing counts of 19,500, and 79 per cent., this altering very considerably the relationship in the total number of cases.

Miss H. Age 18. Mild simple appendicitis; recovery complete in three days without operation.

15000 .....	80
14000 .....	76
10000 .....	75

Miss W. Subacute appendicitis, three weeks' duration; free fluid in right iliac fossa—operation, recovery.

15000 .....	80
14000 .....	75
10000 .....	72

Mr. O. Acute simple appendicitis, thirty-six hours' duration. Markedly edematous and hyperemic appendix covered with fibrin flakes—operation, recovery.

20000 .....	85
19000 .....	84
15000 .....	80
10000 .....	75

Mr. G. Acute gangrenous appendicitis; no free pus; six hours' duration—operation, recovery.

25000 .....	90
20000 .....	82
20000 .....	85
15000 .....	80
10000 .....	75

Mr. C. Acute gangrenous appendicitis; free sero-pus; thirty hours' duration—operation, recovery.

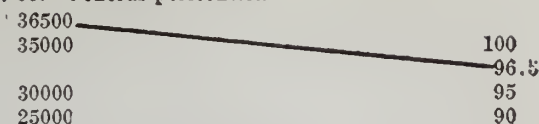
25000 .....	90
24000 .....	89
20000 .....	85
15000 .....	80
10000 .....	75

Mr. G. Acute gangrenous cholecystitis with perforation; spreading peritonitis upper right quadrant; time since perforation, probably one and one-half hours—operation, recovery.

25000 .....	90
20000 .....	86
19000 .....	85
15000 .....	80
10000 .....	75

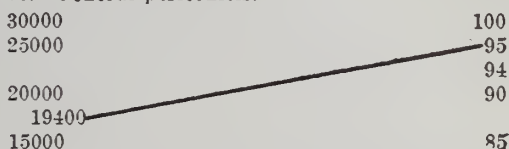
The following examples of the leucocyte findings in cases of severe general peritonitis are given from Hewitt's article (*loc. cit.*) In one it is seen that although there is a descending line towards the right, both the total leucocyte count and the differential percentage of polymorphonuclear leucocytes is very high.

## Case No. 55. General peritonitis.



## Rapidly fatal case. Streptococcus predominant bacterium.

## Case No. 70. General peritonitis.



In certain cases of diffuse infection of long standing by microorganisms of low virulence the reactionary properties of the body may be so used up that the blood may not give an adequate idea of the importance of the disease process. This possibility, as well as the possibility of the absence of any reaction in certain fulminant infections, such as those due to the bacillus aerogenes capsulatus, must needs be borne in mind; rarely, however, if clinical observations as well as laboratory findings are given proper weight in arriving at a diagnosis, will the observer be led into an error of judgment.

In the majority, perhaps, of acute abdominal affections, there is but little doubt as to the advisability or otherwise of operation, there is often, however, a question in the surgeon's mind as to just what he must expect and what route of approach will best serve the interests of the patients. In arriving at correct conclusions in such cases, no information which we can command is of such value as the leucocyte count interpreted according to Gibson's Chart. When delay in operation is considered to be expedient, the course of the infection can be closely followed by means of the employment of repeated counts. "The importance of the disproportionate increase of polymorphonuclear cells, particularly if progressive, cannot be overestimated." (Gibson).

It has been the author's endeavor in this paper not to discuss seriatim and in detail the various acute abdominal conditions in whose diagnosis the leucocyte count may be of value, but rather to indicate the possibilities for usefulness of such a procedure. Inasmuch, however, as not infrequently a differential diagnosis and not merely one of degree of severity is of great importance, the accompanying table derived from various sources, and for the most part corroborated by personal experience, has been included:

**TABLE SHOWING DISEASES CHARACTERIZED BY WHITE CELL CHANGES IN THE BLOOD.**

DISEASES.	LEUCOCYTOSIS. 1000 Cells per c. m. m.	POLY. Per Cent.	REMARKS.
Staphylococcus infection, abscesses, etc.	Marked 12-24	75-88	As compared with clinical severity of lesion, leucocytosis is very marked.
Streptococcus infection, erysipelas, puerperal fever, etc.	Moderate to marked 11-47	75-96	Low counts in mild cases and in the most severe; the latter show high poly. percentage, one fatal case (Emerson), total 96.6 per cent. polys.
Bacillus coli infections, acute.	Moderate 11-30	75-98	C. f. cholecystitis, appendicitis, etc.
Bacillus coli infections, chronic.	Slight		Eosinophilia—occasionally.
Pneumococcus infection, puerperal fever, etc. Pneumonia.	Marked 20-30 + +	80-96	Fall in leucocytes immediately with crises. Severe infection with marked toxemia. Low leucocytes always fatal.
Acute cerebrospinal meningitis.	Marked 25-45	80-92	
Gonococcus infection, generalized.	Moderate to marked	78+	
Gonococcus infection, chronic, localized scarlet fever.	Slight 10-40	85-98	Sometimes eosinophilia. Leucocytosis begins before rash. High poly. percentage fatal.
Measles and German measles.		Negative	Slight leucocytosis two or three days before eruption.
Smallpox.	Negative		Increase in lymphocytes.
Influenza.		Negative	
Typhoid.	Leucopenia	50-60	In cases of suspected perforation, if there be a rising blood count—especially if relative increase in polys.—operate at once.
Tuberculosis.	Leucopenia		In occasional cases, and especially with involvement of meninges and peritoneum, there is leucocytosis.
Tuberculosis, chronic.	Negative		Marked leucocytosis usually means secondary infection.
Leprosy.	Negative		During attacks of leprous fever we find leucocytosis.
Syphilis, secondary.	12-16		Increase due to increase in lymphocytes. Frequent eosinophilia.
Intestinal obstruction.	16-20	80-90	Diminution of white cells with onset of symptoms of toxemia. Increase in cases of early perforation.

CONCLUSION: It is the author's belief that in the diagnosis of acute inflammatory reactions in which the process cannot be visually demonstrated, there is no single source of evidence so useful as that derived from the examination of the blood. In order, however, that correct inference as to the nature of the infectious process may be made in all cases, it is necessary that adequate clinical data, such as the age of the individual, duration of the disease, record of pulse and temperature, and results of careful physical examination, should be studied in relationship to the blood findings.

If at any time clinical signs indicate operation while the white blood count does not appear to do so, always follow the course suggested by the clinical signs. By so doing the observer will never be led into error by what sometimes appear to be paradoxical immunity reactions.

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## A DEATH DURING TONSILLECTOMY FROM REFLEX INHIBITION.\*

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

Nothing is so discouraging, nothing so chastening, and so tragic, as a death on the operating table. In the presence of such a disaster we feel the utter helplessness of our science in coping with those overpowering forces which bring about a rapid and unavoidable dissolution.

We can best serve the cause of science by recording, instead of concealing such catastrophes. Actuated by this belief, I report the following death:

Miss S., aged 25, presented submerged tonsils, discharging foul-smelling secretions, which caused her constant throat trouble. After the usual pre-operative preparations and examination, a tonsillectomy, under heated, vaporized ether, with the Caine apparatus, was performed at the Hotel Dieu. Dr. T. H. Patton gave the anesthetic and Dr. L. De Poorter assisted. During the removal of the tonsil on the left side, which was the first to be enucleated, the unmanageable tongue of the patient occluded the larynx and she became cyanosed. She was thrown into the Rose position and traction was made on the tongue. With the return of satisfactory respiration and controlling the bleeding, which was not unusual in character, I proceeded to extirpate the right tonsil. The mere pressure of the tongue depressor interfered with the breathing in such wise that I was compelled to operate a greater part of the time with the tongue held out of the mouth by forcible traction. While I

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\* Read before the Orleans Parish Medical Society, May 11, 1914. [Received for publication June 12, 1914.—Eds.]

usually operate with the patient in the upright posture, at an angle of about 45 degrees, in this instance the patient was most of the time in the Rose position. A brisk hemorrhage followed the removal of the right tonsil. This was, however, controlled by the application of the Jackson artery forceps. With an unusually deep tonsillar fossa, surrounded by friable tissue and with an unmanageable tongue, the application of a suture ligature around the bleeding area on the outer wall of the fossa presented mechanical and technical difficulties, which greatly prolonged this stage of the operation. The bleeding being controlled, I was passing the Dupuy-Weiss tonsil ligature needle, when the patient stopped breathing and the heart apparently stopped beating, while the pupils dilated ad maximum. Drs. Danna and Salatich, who happened by, offered assistance. Dr. Danna skillfully opened the trachea in less than one minute. Dr. Salatich performed artificial respiration, traction was made on the tongue, oxygen was administered through the trachea, which was further dilated with a Trousseau tracheal dilator; all these measures followed in quick succession, but to no avail.

REMARKS: From the first inhalation of ether to the final collapse covered over two hours. No ether had been administered for about twenty minutes before death occurred. The pulse gave no sign of approaching trouble. The chief signals of distress were referable to respiration. But as we had successfully tided over such emergencies, it seemed best, even at the risk of prolonging the operation, to apply the ligature so as to guard against post-operative bleeding in a patient who had already had her full share of troubles during the operation itself. It might be offered in criticism that this tonsillectomy could have been performed under local anesthesia.

A death from cocain anesthesia (which has not been reported), in throat work, in the practice of a confrere, has long since shaken my confidence as to the perfect security of local anesthesia.

While the ether played a part in this regrettable occurrence, it evidently was not the sole cause of death.

With the control of the hemorrhage through the artery forceps, it seemed improbable that a sufficient quantity of blood could enter the larynx to cause occlusion. This was corroborated after opening the trachea. Long forceps were passed upwards towards the larynx and downward beyond the bifurcation of the trachea without bringing up any blood clots.

Both in theory and in practice I am for "getting in and getting out" as fast as possible in surgery of the throat. There were many obstacles to rapid work in this particular instance, and thus the element of time must have also furnished occasion for surgical shock.

Thus the concomitant factors of ether, shock and other unknown

and, perhaps, unknowable, elements united to bring about what might be termed a death from reflex inhibition.

Such an occurrence emphasizes that even a tonsillectomy is not devoid of dangers. It is a hospital operation where, under the best environments, we can at least surround our patient with all the safeguards known to modern surgical science.

#### DISCUSSION ON DR. DUPUY'S PAPER.

DR. H. D. KING: A better title for this paper would be "Truth vs. Concealment." This is the first case of death under anesthesia that has been reported before this Society, as far as I am aware, though there have been several such cases in this city. Dr. Dupuy has opened a new path. The profession should report all cases, favorable or unfavorable. We should hear from our anesthetic specialists on this subject. I am glad to say that we have men in New Orleans now who are making a specialty of anesthesia. Dr. Louis Levy read a paper before this Society several years ago on the subject of anesthesia, but reported no deaths.

DR. HALSEY: Question—Was the patient in an extremely nervous condition before the operation? The possible significance of this has been emphasized by Crile in his studies of "Shock."

DR. W. T. RICHARDS: Question—Had any scopolamin or morphin been administered to the patient before the operation?

DR. W. T. PATTON: I would like to ask if ethyl chlorid was used as a preliminary to ether in this case. Some of the symptoms detailed in the paper are suggestive of trouble from this source. I have seen many cases of respiratory trouble after ethyl chlorid. In some cases we get a falling back of the epiglottis, causing obstruction. The New York anesthetists practically all condemn ethyl chlorid.

DR. WEIL: I think the Society is to be congratulated on this frank report. I am glad that Dr. Dupuy still believes in ether, in spite of this fatality, in preference to local anesthesia. The number of fatalities is very small, and I still think the operation can be done much more safely and successfully under ether. I am not aware of any safer method than the one we at present use.

DR. ERWIN: I am in favor of the use of local anesthesia in cases over 16 years of age. We can use 20 per cent. novocain in these cases, to deaden reflexes, and one-half per cent. novocain to inject into the tissues. In many clinics tonsillectomy in children is done without anesthesia whatever. We fortunately have very few deaths,

but it may happen to any of us. In many of these cases of death from minor operations one finds on post-mortem a universal status lymphaticus.

DR. M. J. MAGRUDER: We can all sympathize with Dr. Dupuy in this case. We have all had our troubles along these lines, but, on the other hand, we find many cases of idiosyncrasy to cocain. I understand that this patient had had a general anesthetic once before and had taken it badly.

DR. LOUIS LEVY: When I was doing anesthetic work I anesthetized over 200 cases for Dr. Dupuy with ether, none over one-half hour long, and we had no trouble at all. This case shows many unfortunate circumstances combined in one patient, and I am glad it has been reported. Since the paper I read before the Society several years ago, I gave anesthetics to about 500 more cases, a total of about 2,000 cases, with no death. I still think ether is the safest in throat work. I agree with Dr. Lynch that the use of adrenalin may add to the danger of the general anesthetic. Regarding the subject of reflex inhibition, I would say that I saw a dog recently with both vagi cut, and he did not die.

DR. T. H. PATTON: I wish to state the case from the anethetist's standpoint. I have given about 1,000 or 1,200 anesthetics, and this is about the most difficult that I have had. Previous heart examination of patient showed no murmur. She had had rheumatism, but I found no signs of endocarditis. I began with ethyl chlorid, as I have done in several hundred cases. Patient did well until the first tonsil was removed and the hemorrhage controlled, which was about an hour and ten minutes after we started. Of the many hundred tonsillectomies that I have seen, this was the most difficult. There was considerable hemorrhage after the removal of the second tonsil, but not enough to cause a collapse. During the second hour of the operation the respiration stopped completely four times. The patient was in the semi-upright position, and each time I lowered her head and gave artificial respiration. Respiration stopped the fifth time at least fifteen minutes after the anesthetic had been discontinued, and her pulse was fairly good. The patient had attempted to vomit, and hence was not very deeply under, though she required a large amount of ether to keep her even lightly under. She could not breathe from the start without full traction of the tongue being maintained. I would not say she died solely from the ether, but the shock and hemorrhage alone



were not sufficient to cause death, which, I think, was caused by a combination of these several factors.

DR. A. M. CAINE: I am glad to hear the whole history of this case. I do not think this is an ether death. The fact that the patient was coming out sufficiently to retch showed that she was not deeply under. The fact that manipulation on the left side caused respiratory failure and that death occurred at the time of attempted application of the ligature, show, I think, that it was a death from reflex inhibition, and not from ether alone. It was not a death from hemorrhage, but this may have helped to reduce her resistance. In ether death respiration stops first, and we can work for a good while with the heart still beating. Regarding the use of adrenalin and Dr. Lynch's objections to it, I would say that I have often given adrenalin in infusion during an anesthetic, with good results.

DR. J. P. O'KELLEY: I do not think that enough stress has been laid on the position of the patient and the change of position. The operation was started with the patient in the inclined position; she did badly and the head had to be lowered. Again the inclined position was taken and the head had to be lowered again. This was repeated five times, when the patient succumbed. If lowering the patient's head caused her to rally and do better, it seems to me it would have been far better to have continued the operation in the recumbent position. This patient was given an anesthetic six months ago for reduction of a fracture, and I understand that she took it very well, except for the fact that it was given shortly after a hearty meal, and she, of course, vomited. She was under the anesthetic about an hour in a recumbent position, and, after emptying her stomach, gave no further trouble. The contrast seems marked. I am told she also had an anesthetic for appendectomy several years ago, but cannot say how she stood this anesthesia.

DR. E. L. KING: I wish to correct Dr. H. D. King in his statement regarding this being the first death on the table which has been reported to the Society. In a paper which I read last year I reported a case of intestinal obstruction which died on the table from what Andrews has called "fecal drowning." The operation was proceeding nicely, with the patient's head and shoulders somewhat elevated, due to dyspnea. The anesthetic was gas and oxygen, and when the constriction was relieved there was a sudden gush of two or three quarts of fecal fluid from the patient's mouth and she died almost instantly, restorative treatment of no avail.

In the case in question to-night there are several factors: First, I think the position (semi-upright) requires more anesthetic than the recumbent posture; second, I believe that morphin and atropin should be administered to adults before being anesthetized for a tonsillectomy. This anesthesia is the deepest and most dangerous of all our work. The patient has to be more deeply under than for any other operation, as laparotomy, gall-bladder, rectal, etc. Deep anesthesia is absolutely necessary for tonsillectomy as done here. Another point is that, according to Prof. Henderson, of Yale, allowing a patient to come partly out from under the anesthetic and then to put them under again, is rather dangerous. He has had dogs killed in his laboratory in this way, both accidentally and experimentally. This might have had something to do with the results in this case.

The more I give general anesthetics and the more I see and learn of this work, the more firmly am I convinced that every operation that can be done under local anesthesia should be so performed. I think we should give a general anesthetic only when conditions are such that local anesthesia cannot be used. In this case, I believe, death was due chiefly to reflex inhibition, but the other factors mentioned above very probably contributed.

I agree with Dr. W. T. Patton in regard to the use of ethyl chlorid as a preliminary. I have used it in several hundred cases, and have become so dissatisfied with it that I discontinued it. I have seen considerable respiratory disturbance, at times alarming, following its use.

DR. R. C. LYNCH: I have seen several deaths from various causes during the course of anesthesia. At the Eye, Ear, Nose and Throat Hospital we had one death from ethyl bromid in about 50,000 cases. This patient was one of nine of a family of degenerates. The child was given about a drachm of ethyl bromid in the sitting posture, and died before anything was done. I saw another case at the Charity Hospital operated upon for cervical adenitis, in which the phrenic nerve was pinched with artery forceps and the patient died at once. Another case in which I was giving the anesthetic myself, the patient had had no ether for about ten minutes, the surgeon touched the solar plexus and the patient died. I think deaths from anesthesia, pure and simple, are rare; most of them are reflex deaths. Another anesthetic death which I witnessed was in a case of submucous resection of the septum, in which I

first used cocain and adrenalin, and then chloroform. I learned later that the anesthetist was not in proper form, and I think he gave too much, but I believe the adrenalin helped to bring about the death. I think adrenalin is contra-indicated with the general anesthetic. Some deaths may be due to nasal reflex. I have never seen a case of this kind revived or when death does occur later, after the patient has been revived, it is generally a reflex.

DR. HALSEY: I wish to protest against the suggestion, as mentioned by Dr. Lynch, that anesthesia, either local or general, is more dangerous when adrenalin is used. Hearts poisoned by chloroform can be and have been revived by the intravenous injection of small doses of adrenalin. The amounts which should be used in local anesthesia cannot, in my opinion, act synergistically in a dangerous sense with either chloroform or ether. The rapid absorption of cocain or of any of its substitutes, and it is here that the danger in local anesthesia lies, will be prevented by the simultaneous injection of adrenalin, and, in my opinion, the failure to observe this precaution, as is apparently a growing custom, is going to be the cause of some very unfortunate happenings.

DR. LYNCH: In answer to this, I can say that in ear, nose and throat literature about twenty cases of death have been reported where chloroform or ether has been used after the use of adrenalin; no cocain was used in these cases.

DR. S. C. JAMISON: I wish to corroborate the statement of Dr. Halsey. I have been demonstrating pharmacology for several years, and have had similar experience. I do not think that adrenalin can increase the danger in these cases.

DR. J. A. DANNA: I did not see the operation in this case, but came in just as they were working on her. I could not feel the patient's pulse, but gave the patient the benefit of the doubt and did a rapid tracheotomy. This was done because I had had a similar experience at the Charity Hospital in a case of resection of the lower jaw for cancer. I noticed the patient was not getting any air into his lungs, but the pulse was still beating. I did a tracheotomy, squeezed the chest, and out popped a blood cast from the trachea, which had prevented the ingress of air. In regard to death at the Charity Hospital from anesthesia, we all know that these were common in chloroform days; practically every intern had at least one during his two years' service, though I was lucky enough to escape. Dr. Dupuy should be commended for his courage in publishing this case.

DR. SCHEPPEGRELL: An important feature in this discussion that we must not overlook is the attention to danger signals as influenced by the nature of the operation. If we are operating on a patient whose prognosis is fatal unless the operation is carried to its termination, we are justified in continuing in spite of unfavorable symptoms. When, however, the operation is intended for a condition less serious, or in which a later operation is admissible, or in which, perhaps, a local anesthesia could be used, we should not continue the operation in the face of alarming symptoms.

As illustrating this, I operated on a case of mastoiditis which another aurist had refused on account of the diseased condition of the patient's heart and kidneys. While the patient bore the anesthesia badly, I completed it, as it was his only chance of recovery.

Sometime afterwards, however, I operated under ether on a patient for polypi of the middle ear, this being an operation which I always do under local anesthesia, but in this case the patient insisted on ether. When the operation was about half completed the patient became cyanosed, and was restored with some difficulty. I immediately abandoned the operation, which did not justify such a responsibility, preferring later to give the patient the choice of local anesthesia or leaving the remainder of the polypi.

The case reported illustrates that no operation is devoid of danger, and it is our duty to explain this to patients when questioned on this point.

DR. DUPUY (in closing): The cause of death in this instance has been discussed with all the frankness and thoroughness which such a subject deserves. There is no evidence that scopolamin or morphin had been administered to the patient before the operation; if administered or taken, it was not with my instructions. The patient came to the operating room apparently in a cheerful frame of mind. She did say, however, that she had given some trouble during anesthesia on a previous occasion. During the discussion it was to be expected that the safety between cocain and ether would be compared. Personally, I think there is greater danger of post-operative bleeding following the use of local anesthesia. Furthermore, it is more feasible to apply hemostatic measures by ligation during a general anesthesia. I re-emphasize that after the removal of the first tonsil the almost continuous misbehavior of the patient greatly prolonged the operation and made it very difficult to apply a ligature. The artery forceps absolutely controlled a

brisk but not severe bleeding from one point in the tonsillar fossa. I operate preferably in the semi-upright position, at an angle of about 45 degrees. In over 1,000 cases I have seen no untoward results which I could attribute to the position itself. In the present instance the patient was most of the time either in the Rose or in the supine position. Reflex inhibition, with the elements of time, ether narcosis and other unknown causes, would seem to explain this accident. I am grateful for this very frank discussion. It has been sympathetic and illuminating in character.

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### A CASE OF TRICHONOCARDIASIS RUBRA.\*

By FOSTER M. JOHNS, M. D.,

Tulane University of Louisiana, College of Medicine, New Orleans.

The trichonocardiasis, as brought out by Castellani in 1911<sup>1</sup> and confirmed by Chalmers and O'Farrell in 1913<sup>2</sup>, present an infection of the axillary or pubic hair shafts by a mould, *Mocardia tennis*.

The cases so far described were limited to the tropical countries of Ceylon, the Gold Coast of Africa and the Anglo-Egyptian Sudan.

The organism, becoming implanted beneath the projecting edge of the cuticular scales, grow outwards as well as downward, and laterally through the cuticular fibers, which become elevated, torn, and the hair shaft finally breaks. The disease *per se*, trichonocardia flava, shows a heavy nodose or ensheathing mass attached to the hair, having a bright yellow color. The varieties are caused by associated cocci, which in the case of trichonocardiasis rubra, is *Micrococcus castellani*, and trichonocardiasis nigra, *Micrococcus ingrescens*.

The disease shows as a heavy nodose or ensheathing mass attached to the hair shaft, and having a bright yellow, red or black color. The excretions from the growth are slightly irritating to the skin and causes a slight inflammation, with itching over the infected areas. The underclothing are stained yellow, red or black, as the case may be.

A medical student of Tulane University consulted me on account of a troublesome red, sweaty discoloration of the undercloth-

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ing covering the axillæ that accumulated to such an extent every day that he became alarmed. Microscopic examination, as well as cultural tests, developed a typical case of trichonocardiasis rubra. The presence in the infected regions of the hair shafts of the mono-branched hyphæ of *Mocardia tennisi*, with the typical chrome yellow colonies of *Micrococcus castellani* on a modified blood-agar medium that later developed the yellowish-red pigment characteristic of this coccus as described in detail by Chalmers and O'Farrell. The student had never noticed the condition before the onset of warm weather in April of this year, and very probably acquired the infection in the wards of Charity Hospital, where, in the course of the physical examinations on patients required of the students, the axillary and pubic regions of many patients are palpated or percussed, thus giving chance for finger-nail contamination.

The presence of this disease so far removed from the hitherto described habitat would indicate at least a world-wide distribution in tropical and sub-tropical climates.

#### DISCUSSION ON DR. JOHN'S PAPER.

DR. LYONS: I saw this case in the hospital one day, and he told me he was perspiring red. Later I saw him at my office and he showed me a red discoloration on the armpits of his undershirt. I examined some of the axillary hair microscopically and saw there were some sort of fungus attached to the hair, giving off a red pigment. He also had excess of sweating of the armpits. I referred the case to Dr. Johns, who made a study of it.

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## THE X-RAY EXAMINATION OF THE DIGESTIVE TRACT.\*

By ADOLPH HENRIQUES, M. D., New Orleans.

A few years ago one seldom heard of the diagnostic application of the X-ray to diseases of the digestive tract. Today, on the contrary, one rarely picks up a journal having any bearing on these diseases without seeing more or less of the use of the X-ray in connection with them. This is due to the restlessly advancing technic initiated by Cannon of this country in his experiments on the cat, and later by Rieder of Germany in his examination of the human

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stomach. Ordinarily, the alimentary canal is not distinguishable by means of the X-ray, but, by employing something to increase the contrast between it and adjacent structures, outlines indicating its position and form can be seen without difficulty. The salts of the heavier metals, bismuth subcarbonate and oxychlorid, zirconium oxid, and barium sulphate have thus come into use for this purpose. It has been objected that these substances, being heavier than the food usually eaten, give false conclusions as to the position of the various portions of the tract. This can be dismissed with the statement that 350 grams of gruel and 50 grams of bismuth mixed do not weigh more than 400 grams of gruel. It has been proved that bismuth-meal gives rise to no more marked peristalsis than does water.

The apparatus required consists of a generator (of whatever type) to produce the current needed, a tube, and a device which permits the examination of the patient in the erect and in the recumbent posture. Among the foremost X-ray workers the upright position is the position of choice for studying the stomach. The use of the fluoroscope usually begins the examination, and in many cases is quite sufficient. An acquaintance with normal appearances and variations of the normal is necessary before one can draw conclusions as to pathological changes. Furthermore, one must always remember the danger of X-ray burns from prolonged exposure of the patient in unskilled hands.

Leaders in X-ray development are of the opinion and insist, that the X-ray examinations should be considered always in connection with the history and clinical examination. It is not an exclusive method, as some would have it, even if at times the informations secured by it permits a diagnosis by a short cut. Although much has been learned by Röntgen procedures, there are still many unsolved problems to be worked out.

In a paper of this extent only the salient points can be discussed. If even these two points can be emphasized the writer will be content. The first is, that a preliminary examination of the thorax should precede the stomach examination. The second is, that, in all obscure digestive disturbances referred to the Röntgenologist, the entire digestive tract should be examined with the X-ray, as a routine method.

With regard to the examination of the thorax as a preliminary to that of the stomach, the occasional association of certain thoracic

diseases with symptoms referred to the abdomen should not be overlooked. The writer has by this procedure revealed the presence of unsuspected pulmonary tuberculosis, adhesions between the pericardium and diaphragm, marked aortic dilation and enlargement of the left ventricle, and in one case of gastric hemorrhage with previously negative X-ray findings the presence of cardiac enlargement. Other possibilities are diaphragmatic hernia, pleurisies, and old unresolved pneumonias.

The second point to be emphasized is the necessity for examining the entire digestive tract with the X-ray in obscure digestive disorders referred to the Röntgenologist. This becomes self-evident as one sees, for instance, a case with all the symptoms of duodenal ulcer yield to appendectomy; or a case of supposed duodenal ulcer, presenting marked pylorospasm on the operating table under deep anesthesia, yield to the same operation; or some of the obscure case of hyperacidity yield to the mechanically supportive treatment of a visceroptosis; or a case of hyperacidity due to colonic stasis relieved by the surgical separation of a Jackson membrane. With the present development of the Röntgen method it is often possible to disclose the existence of specific abdominal conditions as the cause of reflex gastric disturbances.

The *esophagus* is examined by Röntgenologists in cases referred for pain of difficulty in swallowing, or regurgitation of food. The object of search here is stricture, organic or spasmodic in character tumor, atony, diverticulum, pressure from without due to such structures as tumors and aneurysms. The usual method here is to have the patient (in the erect posture) swallow a bismuth-water mixture and quickly follow with the eye its passage down the esophagus. An atonic condition of the esophagus is shown by the slow, and retarded descent of the opaque shadow, diverticulum is recognized by a shadow with rounded lower margin, cardiospasm is shown by the sudden arrest of the shadow at the cardia, followed by its abrupt release. Stricture or tumor may require the later administration of bismuth paste, followed by capsules of varying size containing bismuth. These conditions depend upon the presence of constrictions of the esophageal wall, and are detected by the shape of the esophageal outlines, the degree of a constriction being determined by the size of the capsule that will pass it. The method recently suggested, by Bassler, of introducing (by swallowing) a dilatable rubber bag which is then filled with opaque sub-



stance, should lead to the recognition, at an earlier date, of stenoses of the esophagus of milder degrees. Aneurysm, at times, causes difficulty in swallowing, but its recognition is not so difficult if one employs the fluoroscope in the various positions recommended for its diagnosis. One should not forget the normal physiologic delay in the passage of the food past the aortic arch.

Proceeding now to the consideration of the examination of the *stomach*: With the patient in the upright position, one directs the swallowing of the opaque meal, noting its entrance into the stomach and whether it is slow in appearing. Delay suggests esophageal retardation from whatever cause. At the same time one notes the filling process, or peristolic function of the stomach. A bit later, the form and position of the stomach are disclosed. The peristaltic waves are closely observed with regard to their presence as well as their frequency and depth. Early and vigorous peristalsis without passage of food through the pylorus indicates either pylorospasm or gastric stenosis, or both. Early and marked peristalsis with rapid emptying of the stomach, may mean duodenal ulcer, periduodenitis, cholecystitis, ulcer or tumor of the pylorus with rigid pyloric orifice, achylia gastrica, or appendicitis. All of these must be borne in mind, and differentiation established by other factors, some or all of which may be disclosed by the examination with the ray.

In *scirrhus carcinoma* there is a diminished or absent peristalsis with rapid emptying of the stomach, this organ assuming the hypertonic position with narrowed lumen. One can readily see why the fluoroscope is necessary for the study of peristaltic action.

The form of the stomach indicates the degree of tonicity of its musculature modified by the intra-abdominal tension. Irregularity in outline suggests, as the case may be, hour-glass constriction, or the filling defects so characteristic of tumor involvement, or the presence of diverticulum along the lesser curvature so frequently associated with callous ulcer of this region, or adhesions, or pressure from without.

The mobility of the stomach can be observed normally upon respiration, or by the voluntary projection and retraction of the abdominal wall, or by forced expiration followed by lifting up of the diaphragm by the patient, or by palpation on the part of the examiner. The method of forced expiration (Chilaiditi's method) is often of value, as by it the stomach can be raised several inches unless bound down by adhesions.

Palpatory fluoroscopy—that is, palpation at time of fluoroscopy—may be employed. The relations of palpable tumors as well as of localized pain areas to the stomach, duodenum and colon can usually be determined in this manner. The ray in some cases can demonstrate the existence and location of tumors in regions inaccessible to palpation.

The motility of the stomach is demonstrable with the X-ray and varies even under normal conditions, depending upon the type of stomach under observation. There are four types of stomach. Every human stomach approaches one of these types. They are easily demonstrated by the X-ray. They are distinguished by the location of the curvatures with reference to the umbilicus and by the relation of the curvatures to one another as well as by their tonicity and motility. These types of stomach are:

1. The hypertonic stomach has the greater curvature above the umbilicus, and is found in about one per cent. of adults, and not in woman unless pathologic, it resembles the text-book stomach more than do the others. It empties in two to three hours.

2. The orthotonic stomach extends to the umbilicus, its walls are parallel, and it empties in three to four hours.

3. The hypotonic stomach reaches below the umbilicus with a tendency of its walls to approach each other. It empties in four to six hours.

4. The atonic stomach is several inches below the umbilicus, its walls, that is, the greater and lesser curvatures, are nearly in contact after meals, it takes six to eight hours, or more, to empty.

Now suppose one finds a hypertonic stomach (which should be empty in three hours) which contains food at the end of six hours. Or, suppose an atonic stomach (which usually empties in six hours or more) is found empty in three hours. In both cases there is disturbance of motility; in the case of the hypertonic stomach there is delayed motility, and in the case of the atonic type an increased motility. Increasing knowledge of the motility of the stomach serves to emphasize the fact that one is not justified in expressing an opinion as to disturbances of the motility of the stomach without ascertaining the type of stomach under consideration. This applies with special force to the milder degrees of disturbance, less so to the more severe ones.

The X-ray has revealed much regarding pathological conditions of the *duodenum*, but has not yet reached a stage of development

which makes exact diagnosis possible in every case. As an illustration, the writer quotes one of his own observations. A case with clinical diagnosis of duodenal ulcer was referred, and the X-ray findings led to a similar conclusion. Operation revealed only adhesions about the duodenum. The principal conditions to be considered in the X-ray examination of the duodenum are ulcer, adhesions, spasm, stenosis, tumor and displacements. Rapid emptying of a stomach of hypertonic or orthotonic type, with increased peristalsis of the same; a point of pain persistently located over the duodenum (visible under the fluoroscope), change in contour of the duodenum, associated at times with stenosis (spasmodic or permanent), at times with diverticulum—these are all signs of value in a case with history of ulcer, especially if the X-ray examination of the stomach is negative.

Cole's method of serial radiography consists of twenty-four to thirty-six skiagraphs of this region taken within a comparatively short time after the bismuth-meal. As a means of diagnosing duodenal ulcer by the persistence of deformity of the duodenal shadow, it is not a conclusive method, and besides is expensive. Holzkecht's method of fluoroscopy of the duodenum, the filling of the intestine being accomplished by pressure over the duodeno-jejunal flexure by means of his "distinctor," supplies much more information.

The meal passes rapidly through the *small intestine*, so that it is usually empty at the end of eight hours after the ingestion of food. Stenosis of the small intestine can be determined by the delayed passage of the food into the cecum—the part in front of the stenosis being recognized by dilatation of the intestine and by accumulation of gas and opaque meal in front of the constriction.

Fixation, with stricture of the terminal ileum (Lane kink), is recognized by persistence of the opaque shadow in one spot beyond the normal time of emptying (ileal stasis). The fixation is indicated by inability to alter the position and contour of the shadow by palpation. The skiagraph helps to a certain extent, but the fluoroscope is more conclusive.

The study of the *ileo-cecal region* with the X-ray demands special attention. When the opaque meal first came into use the appendix shadow was seen if the appendix happened to be patulous and not in the same plane as the terminal ileum or cecum. With advancing technic it is possible to demonstrate the shadow of the appendix with much greater frequency.

The method of examination adopted by the writer is the following: Six to twenty-four hours after administration of the meal, the patient is examined in the recumbent posture with the X-ray tube below the table, and the fluoroscope above. By means of an adjustable diaphragm the fluorescence is limited to the area under examination, thus securing a better view. It often happens that the appendix, though patulous, is hidden by the terminal coils of the ileum or by the cecum. The two latter, distinguishable under the fluoroscope, are pushed aside, and the appendix shadow is thus demonstrated much more frequently than formerly. When so exhibited, by arranging the patient's fingers to hold the other parts aside, the appendix may be skiagraphed. Deep palpation will determine the presence or absence of tenderness over the filled appendix. It is certainly a satisfaction to be able to visualize such an organ and to realize that what one sees is the appendix shadow. Some appendices are seen without evidences of tenderness, but, from her contours, may be termed potential appendices. Instances of such are the appendix acutely flexed upon itself, or the appendix with distal lumen wider than the proximal portion. The potential appendix should be regarded with suspicion, especially if, in addition to such conditions as those mentioned, there are evidences of ileal stasis or of adhesions about the terminal ileum or cecum. There are many appendices, naturally, which may not be demonstrated, either by reason of obliteration of the lumen or of obstruction at the cecal opening from one of several possible causes. However, if the tenderness felt on palpation corresponds to the course of the appendix independently of the visualized cecum or ileum, one should be safe in assuming appendiceal involvement. Lastly, there are appendices invisible and not sensitive to touch.

Classifying the appendices from the X-ray viewpoint, there will be:

1. The visible, patulous appendix, sensitive to touch.
2. The visible, patulous, potential appendix.
3. The visible, patulous appendix.
4. The invisible appendix, sensitive to touch.
5. The invisible appendix, non-sensitive to touch.

Ileo-cecal incompetency, with reflux of food into the ileum from the cecum, can be demonstrated by contrast enema.

The X-ray may be applied to the diagnosis of certain conditions of the *colon*, such as ptosis and other malpositions, dilatations and

stenosis, angulations, adhesions, tumors, ulcerations (at times), and the various forms of constipation—tonic, spastic and rectal.

Two methods are used in the examination of the colon, each one supplementing the other—the contrast-meal by mouth and the contrast-enema. The method *per os* gives more information as to position and motility. The rectal method yields more data as to morphology. Both the erect and the recumbent postures are used. The enema reaches the cecum several minutes after injection. Palpation is necessary in order to minimize error, this applying especially to palpable tumors in order to determine their relation to the colon. This is equally true of angulations, which may be due to the weight of the colonic contents, or to a Jackson membrane, the latter being negated by the separation of the adjacent portions of the colon under the fluoroscope.

In conclusion it may be said: The X-ray examination of the digestive tract has made possible a larger percentage of definite diagnoses of obscure digestive disturbances, and, as a result, timely surgical interventions.

#### DISCUSSION ON DR. HENRIQUES' PAPER.

DR. GRANGER: The following case will serve to illustrate the importance of always making an examination of the entire gastrointestinal tract, as recommended by Dr. Henriques: A young woman treated for gastric ulcer, later treated for gastric neurosis, in whom an X-ray examination of the stomach was negative, except for spasmodic hour-glass contractions observed during the fluoroscope examination, showed, on skiagraphs of the iliac fossa, a kinked and adherent appendix and an adherent cecum. These findings were confirmed at operation. Spasmodic hour-glass contractions of the stomach have been observed in cases of gall-stones, in renal calculi, in diseases and adhesions of the appendix, cecum and terminal ileum, besides being frequently present in cases of gastric ulcer.

DR. CHAVIGNY: I wish to report a case operated upon by me four times in four years, without much relief. I referred her to Dr. Henriques for X-ray examination. He made a diagnosis of ptosis of the ascending colon. I sutured the colon to the posterolateral abdominal wall and the patient is entirely relieved.

## THE TREATMENT OF EARLY TUBAL PREGNANCY, WITH REPORT OF CASES.\*

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

If the impregnated ovum becomes implanted before it reaches the uterus it comes to a development of an extrauterine pregnancy. Most frequently the ovum develops in the tubes, preferably in the isthmic ampullar portion, and only seldom in that part of the tube which is situated in the uterine wall—interstitial variety, or in the ovary itself.

From the clinical point of view, it is of no importance where the ovum has developed. In most cases the extrauterine pregnancy terminates in the first six or eight weeks. In tubal pregnancy the ovum may be expelled partially or as a whole into the abdominal cavity, an occurrence called tubal abortion, or the tubal wall may rupture. In ovarian pregnancy rupture is the only termination. In some instances the extra-uterine pregnancy may develop to full term but the treatment of this complication will not be considered in this paper.

The treatment of early tubal pregnancy has to be considered from the following two points:

First, Undisturbed tubal pregnancy—prior to rupture or tubal abortion; second, Disturbed tubal pregnancy—*id est*, at time of rupture or abortion.

The diagnosis of an unruptured tubal pregnancy in the first few weeks is, if not impossible, at least a very difficult, and in most instances, only a probable one. As soon as such a diagnosis can be made there is only one method of treatment and that is the removal of the pregnant tube by operation. I do not think that the operation has to be done immediately, but may be postponed for a short time, if conditions should necessitate it, but in such cases it would be required that the patient be kept under close observation—preferably in an institution in order that operative means might be instituted promptly if rupture should occur.

Werth, in 1905, established the dictum that every extrauterine pregnancy with living fetus should be treated as a malignant tumor. The danger of rupture followed by internal hemorrhage is present all the time; but even after the death of the fetus as long as the

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tube is not emptied hemorrhage may occur into the tube causing rupture of the tube.

The operation is more easily and better done by the abdominal than by the vaginal route. The danger of this operation is very slight, and especially when considered in comparison with the danger of exposure to rupture or abortion.

In case of a doubtful diagnosis, the expectant treatment may be followed until diagnosis can be made, but the very closest observation is necessary. The transfer of a patient to a hospital is to be advised under such conditions in order that proper proceedings can be instituted without delay in case of need. I do not consider rest in bed necessary for such patients while under observation.

The tubal pregnancy can terminate in two ways: First, Tubal rupture; second, Tubal abortion.

In the first variety the woman is suffering from internal hemorrhage and shock, the extent of the shock is greatly dependent upon the former. A small tear can be followed by such an extensive bleeding that the whole abdominal cavity can be filled in a short time and the patient may die in a few hours.

In tubal abortion the hemorrhage may cease if the abortion is complete and the patient may recover—an occurrence no doubt met with in many cases. But if the tubal abortion is not complete (the incomplete is a great deal more frequent than the complete one—about ten to one), the hemorrhage will continue or, if stopped, be repeated until the patient is *in extremis*.

As in such cases of rupture or incomplete tubal abortion a fatal hemorrhage is not only possible but, in many cases, probable, there is without doubt only one kind of treatment indicated and that is the stoppage of the hemorrhage by operation as soon as the patient can be gotten ready, irrespective of shock or collapse.

The question of deferred operation in place of the immediate one in case of shock has been frequently discussed in the past years. But even if many cases will recuperate, if not operated at once, there is certainly the fact to be considered that the patient is not safe until after the operation. Marvel, Ladinsky and others advise immediate operation, while others, as Cragin, will wait with patient under close observation until she improves, and will operate only in case patient is losing ground.

The immediate operation is attended by no greater risk than any other abdominal operation. Ladinsky draws especial attention to the

fact that these cases usually make a rapid, smooth convalescence and are noticeably free from post-operative complications; an observation which has come to my notice also, and especially in such of my cases as have been operated after rupture and during shock and collapse.

Since January, 1912, I have operated upon twenty cases of ruptured tubal pregnancy, with one death. This patient died twelve days after operation, *exitus* being due to a slow *sepsis* and independent from the fact that operation was done for ruptured extra-uterine pregnancy. The diagnosis was doubtful and she was not operated immediately, but after having been under observation a few days.

Nine cases have been operated immediately after the rupture. These cases were in such a serious condition that I was afraid to wait for shock to subside and I believe that only immediate operation saved these patients.

I will give a few of the histories very briefly to show the seriousness of these conditions.

Mrs. S. Age, 39 years. Admitted February 14, 1912. Discharged March 9, 1912. Was taken sick during the night with acute pain in the abdomen and was transferred to hospital. Had not menstruated for three and a half months. Examination showed mass in abdomen the size of a four-months pregnancy. The uterus could not be differentiated. Pulse, 96.

At examination at 8 a. m. same condition was found. Possibility of an interstitial tubal pregnancy. One hour after examination patient complained of weakness, and when seen two hours after examination she showed the symptoms of extensive internal hemorrhage. Pulse extremely small—160 to 180. Immediate operation. Recovery.

Mrs. F. Age 19 years. Admitted July 22, 1912. Discharged August 11, 1912. This patient had missed menses for two weeks. In the last week she had had four fainting spells, which lasted only a short time.

On the afternoon of her attack she was out visiting, and I was called at 2:30 p. m. Found her losing from vagina. Pulse, 84, and looking pale. Examination showed mass on left side. Diagnosis of tubal abortion was made, and advised transfer to an institution, where I saw her again at 5:30 p. m. She was then in an extreme collapse. Pulse, 160; cold and pale.

Immediate operation. Abdomen was found full of blood. Patient was practically well the next morning.

Mrs. H. Age, 32 years. Admitted September 27, 1912. Discharged October 10, 1912. Missed menses two months. Sudden pain in abdomen, had fainting spells. When seen by me one and one-half hours afterwards, patient was pale; pulse, 180; some pain in abdomen. Advised immediate transfer to hospital. Operation; abdomen was full of blood. Patient made a quick recovery.



I will not give the histories of the other cases for they show about the same details and it is my belief that only the prompt interference saved them from death.

In the management of these cases I have invariably followed the rule to have everything ready for infusion. Vein is exposed and infusion ready to be started as soon as abdomen is opened and bleeding under control. Under this routine the patients have been in better condition after the operation than in beginning.

The bleeding point is more easily found, and all other steps of the operation, as removal of tube and blood clots, are more easily carried out by the abdominal than the vaginal route.

As much valuable time may be lost removing blood clots, sponging away blood which has already been lost, etc., it is necessary to have clearly in mind what to do after the abdomen is opened. The hand is to be introduced into the abdominal cavity, toward the affected side, seizes broad ligament and diseased tube near the uterus and brings the mass into the wound. In this way further hemorrhage is stopped and a few seconds are sufficient to apply two clamps, one on the tube near the uterus, and the other on the infundibulo-pelvic ligament. The bleeding point now being under control, the operation can be finished more quietly in the usual manner. The large blood clots and liquid blood should be removed as much as possible with the hand and gauze sponges. I do not believe that it is necessary to remove all the small blood clots, especially if the patient's condition does not justify a prolonged operation, and moreover, such a procedure would necessitate too much handling of the intestines. Falk advises careful removal of blood clots, as fever may be caused by them.

The question to be considered next is what to do with the pregnant tube and what to do with the opposite tube if normal. There is no doubt a great deal of danger in leaving a pregnant tube after the removal of the products of gestation. This is partially due to possible bleeding, partially due to the fact that the tube, once the seat of an ectopic pregnancy, is likely to be the cause of such occurrence, as the reports of a number of such cases have demonstrated. I have always removed the diseased tube.

The question regarding the removal of the opposite tube, if normal, is not easily settled. The reports of a number of cases where extrauterine pregnancy occurred in the other tube, makes the advice of some authors easily understood—to remove the tube to

prevent this danger. Especially Jacobs, of Brussels, has advocated this prophylactic removal of the healthy tube. Others advise the removal only in cases where the woman had already a number of children. I believe that this social point of view should not be considered in the question.

In my opinion, the removal of the opposite tube should be done only in exceptional cases, as normal pregnancies will frequently occur. Puppel reports under eighteen cases of extrauterine pregnancies two normal cases. Cragin also reports two normal pregnancies. In two of my cases, normal pregnancy followed in a short time after the operation for the extrauterine development.

**DRAINAGE:** Most operators advise closure of the abdomen without drainage. In cases where blood is easily removed and no raw surface left, it may be possible to do so. I have always felt that in most cases drainage was a safe procedure. In my last six or seven cases, I used vaginal drainage. After disinfecting vagina posterior *cul-de-sac* is opened, as much blood removed as easily flows and then iodoform gauze drain is introduced. Abdominal operation is afterwards performed.

#### DISCUSSION OF DOCTOR KOHLMANN'S PAPER.

DR. SHLENKER remarked that such an excellent paper on such an important subject should not be permitted to pass without some discussion; though the Doctor's paper has fully covered the subject.

Surgical intervention for the relief of ectopic gestation was first advocated by Parry, though it was Lawson Tait who, in 1875, performed the first operation for the relief of this condition. Prior to this period the mortality was something awful.

The all-important question is when to operate. We must take into consideration the two common forms of extrauterine gestation and their mode of termination; in one there is a tubal rupture with active bleeding in the abdominal cavity. In the other we have a tubal abortion—then contents of the tube being emptied through the abdominal end of the tube, the bleeding being slow and limited.

In the former, we have a mortality of 17%, while, in the latter, the mortality is only 1.6%.

Ellice McDonald reports 4901 cases collected from operators of ability and found that the average death rate was about one and three-tenths per cent. thus showing the importance of immediate surgical interference.

Hunter Robb and his adherents advise the expectant treatment, delaying the operation from three to twelve days, anticipating that during this period of rest the patient will have an opportunity to recover from hemorrhage and shock. He tried to prove this contention of the desirability of waiting by experimental work on dogs. He cut both the ovarian and uterine arteries and found in most cases that the dogs stood the shock and loss of blood; but it has been more recently learned that this was due to the fact that the dog's peritoneum has more resistance than that of a man.

As to the causation of death we must take into consideration hemorrhage, shock and sepsis. Shock and collapse, according to McDonald, is not always due to hemorrhage, but to a reaction of the peritoneum to a foreign fluid. Dr. Kohlmann's fatal cases followed the rule as regards sepsis being the cause of death.

It is interesting to note the figures of Jacobs, of Belgium (who is quoted in Dr. Kohlmann's paper), reporting 615 cases operated by him within the first few hours after a diagnosis was made, with a mortality of 4.42%. One hundred and forty-two cases were operated on two days after first symptoms appeared with a resulting mortality of 8.45%, and of 45 cases which were treated expectantly—that is, without any surgical measures, resulting in a mortality of 54.5%. Judging from this experience, I believe that we should all conclude that once diagnosis of extrauterine gestation is made, there is but one treatment, and that is surgical.

I fully concur with Dr. Kohlmann in using the vaginal drain as the most desirable method.

DR. DEMPSEY: In the few cases that I have seen, abdominal drainage was used; furthermore, both of these cases have been diagnosed after opening the abdomen.

DR. KOHLMAN (in closing): The question of drainage raised by Dr. Dempsey has been solved by using vaginal drainage. I have formerly drained through the abdomen, but I find that vaginal drainage is better; the patient makes a quicker recovery. On the other hand, the wound in abdominal drainage heals slowly. The more I operate the more I dislike abdominal drainage.

The main idea of my paper is to show the necessity of immediate operation. Dr. Shlenker reports three to four per cent. mortality, but others report one to two per cent. in series of 200 or more cases. The diagnosis is difficult. What shall we do if we cannot make a

diagnosis? Aspiration through the vagina has been recommended. I have had three cases in which the diagnosis was in doubt, in which I made a small opening in the post-tubal vaginal wall, introduced my finger, found no blood, curetted and quit. Patient had no further trouble. In another case, I curetted and did not open the vaginal wall and in an hour the patient had a pulse of 150. I did a laparotomy and found ruptured ectopic pregnancy.

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## HEXAMETHYLENAMIN IN UROLOGICAL THERAPY.\*

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

Clinical Assistant in Genito-Urinary and Venereal Diseases in the Tulane University School of Medicine; Visiting Assistant Genito-Urinary Surgeon to Charity Hospital, New Orleans, La.

Hexamethylenamin,  $(\text{CH}_2)_6\text{N}_4$ , more commonly known by the trade-name of urotropin, was introduced into medicine by Nicolaier, in 1895, and has since then enjoyed wide popularity and extensive use the world over as a urinary antiseptic. In 1906, Churchman first pointed out that the true value of hexamethylenamin lies in its ability to inhibit rather than destroy bacterial growth. The only value set on this drug as a urinary antiseptic has been ascribed to its property of decomposing, in the urine, into formaldehyd and ammonia. Hinman has stated that formalin is a weak and a relatively slow germicide, but that even in high dilutions it exerts a powerful inhibitory influence to bacterial development. We know today, from experiments performed, that in order for formaldehyd in the urine to be of any clinical value it must be of a strength of at least 1-30,000; 1-15,000 will completely inhibit the majority of organisms; and an ideal effect is procured with a germicidal strength of about 1-6,000.

The recent research work of Burnam on urotropin has caused us to change our opinions considerably regarding this drug. He states that by giving the customary doses of from 5 to 10 grains three times daily not more than two patients out of ten will show any decomposition of hexamethylenamin into formaldehyd, and only 60% will show it on a dose of from 20 to 30 grains every four hours.

These results are explained in the following manner. It has

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been definitely proven that in order to get the therapeutic effect of urotropin, that is, the complete splitting-up of the drug into formaldehyd and ammonia, the urine must be strongly acid in reaction. In faintly acid, neutral or alkaline urines little or no formalin is liberated, even though the drug be given in enormous doses. Therefore it becomes the duty of the clinician to test with litmus the urine of his urological patients before putting them on urotropin if he desires to get results. When the urine is found neutral or alkaline an acid should be prescribed to be taken in conjunction with the hexamethylenamin. For this purpose, benzoic acid, acid sodium phosphate, boric acid, salicylic acid or dilute hydrochloric acid have been advocated. The acid should never be combined with the urotropin in the same prescription, neither should the patient be instructed to take them together, because the combination tends to convert the hexamethylenamin readily into formalin, and it might do so (when combined) to such an extent in the stomach as to cause gastric irritation as well as a loss for subsequent conversion in the urine.

As to the indications for its clinical use in treating diseases of the urinary tract, urotropin has been recommended to us for use in all suppurative and infective conditions of the kidney, ureter, bladder and urethra. To determine in what amounts formaldehyd was present in the renal pelvis and ureter of patients on hexamethylenamin (15 grains t. i. d.), Hinman performed ureteral catheterization and the urine specimens from each kidney were examined immediately, and those findings he compared to those on the urine voided just before cystoscopy. Three of the bladder urines failed to show formaldehyd, whereas, of the 23 catheterized urines, only 5 showed formaldehyd, and these had only a 1-60,000 content. That more formalin is not formed is explained by the lack of time necessary for formaldehyd conversion in an acid medium. The hexamethylenamin as it is excreted from an alkaline blood, is not allowed to remain at the level of the kidney long enough to give good conversion, and even with a high acidity and a high concentration, the amount of formaldehyd at the level of the kidney is seldom great enough to furnish antisepsis (Hinman). Clinical experience, both in our genito-urinary service at Charity Hospital and in private practice, has proven to us that urotropin exerts very little direct influence on ameliorating the infections of the kidney, its pelvis or the ureter. Exceptions might be conceded in

cases of dilatation of the renal pelvis and ureter with urinary stasis due to obstruction or ureteral kink; *e. g.*, hydronephrosis and hydroureter. It is in the infective types of cystitis that urotropin gives us its best results. The urinary bladder is the normal reservoir for the uropoietic secretion—the urine usually collecting here for several hours before being voided *per urethram*. It is only natural to suppose, therefore, that if we have formalin in sufficient strength in the urine, and if it remain in contact with the vesical mucosa for a reasonable length of time, retardation of bacterial growth will occur. As regards infections of the urethra, I think that the time-honored practice of giving urotropin in gonorrhoeal urethritis should be dispensed with, because the formalized urine, if formalin be present, remains in contact with the lining membrane of the urethra for so short a time (during every urination only) as to be of no appreciable benefit.

The average dose of this urinary antiseptic advised has been  $7\frac{1}{2}$  grains three times daily. We know now that it is only in exceptional cases that this amount of urotropin will cause sufficient liberation of formaldehyd to produce vesical irritation. When vesical irritation is produced, free formalin will always be found in the urine. No fixed dose of the drug can be stated, but when 10 grains causes no free formalin liberation, the dose should be increased to 20, 30, or 40 grains, to be repeated every four hours.

Now, how are we to know when our patients are "splitting" hexamethylenamin, should no signs of vesical irritation present themselves? The phenylhydrazin-nitroprussid test for free formaldehyd, as first applied by Rimini to foodstuffs, and later modified by Burnam so as to be applied to urine examinations, answers our question.

Briefly, the test is carried out in the following manner. About 2 c. c. of the suspected urine is warmed in a test tube. To the warmed urine are added three drops of a 5 per cent. phenylhydrazin-hydrochlorid solution and then three drops of a 5 per cent. sodium-nitroprussid solution. The mixture is slightly agitated and then alkalized with a few drops of a saturated solution of sodium- $\alpha$ -hydroxid,—usually three drops will suffice. When formalin is present in strengths of 1-20,000 or stronger, a deep blue coloration results, changing in a few minutes to green, then yellow, red or brown. In more dilute solutions (under 1-20,000) the blue color reaction, if present, lasts momentarily only and is quickly superseded by green, gradually passing off to brown.

This test is so simple to perform and the outfit so small (requiring but the three reagents, a test tube and a flame) that there is no reason why it should not be carried out as routine in office and bedside practice. It is hoped by the writer that, having presented this test at this time and lauded the simplicity of its technic, it will become more popular with his medical confrères.

#### DISCUSSION ON DR. WALTHER'S PAPER.

DR. ASHER: Dr. Walther speaks of the use of hexamethylenetetramin in large doses, which we have been led to expect to be beneficial; but his clinical experience has shown the fallacy of this. I want to take issue with him regarding the use of benzoic and other organic acids to acidify the urine; these acids alkanize the urine. The use of hydrochloric acid is all right. Regarding the formaldehyd test, I would say that the color plate is so delicate that the general practitioner cannot well use it. I would suggest the following test: Take a mixture of milk, a small amount of sulphuric acid containing a trace of iron, float the suspected urine on top of this and the presence of formaldehyd is shown by a purple ring. This test is delicate, showing 1 to 100,000 dilution of formaldehyd.

DR. L. J. GENELLA: Does not Dr. Walther find that the condition in the stomach of hypo—or hyper-chloridia is the determining factor as to whether you will get formaldehyd in the urine or not; or may not the formaldehyd be split off too soon in the stomach, before it reaches the kidneys? I would like to know if he finds it essential to give the drug in hot water, or will cold water do as well? Has he found that diabetics do not take the drug well?

DR. LAROSE: I would like to ask what is the best drug for acidifying the urine, and how to administer it?

DR. E. L. KING: I made a few experiments with Dr. Hume on hexamethylenetetramin a couple of years ago. We gave it to one or two gall-bladder cases, which were draining freely. We first gave large doses of the drug without acid and found no formaldehyd either in the urine or in the bile. We then gave large doses with acid and found formaldehyd in the urine, but not in the bile. In a case of cerebrospinal meningitis, we gave a large dose without acid a few hours before lumbar puncture and found no formaldehyd in the cerebro-spinal fluid. Negative results were also obtained in this case, after giving the drug with acid. Dr. Hume

took a very large dose himself, I think about 75 grains, without acid, and no formaldehyd was passed. Another dose with acid was taken and formaldehyd was passed in the urine.

DR. WALTHER (in closing): I have seen many patients both in hospital and private practice taking this drug. Practically all genito-urinary cases are given urotropin, because, in some few cases, the physician has gotten results. As regards combining the organic acids with hexamethylenamin, as questioned by Dr. Asher, will say that this point was taken from the work done at Johns Hopkins University. Personally, I have used only the dilute hydrochloric acid and the dose—to answer Dr. Larose's question—is 15 to 20 drops of this acid in a glass of water, one hour before or one hour after administering the urotropin. We always get formaldehyd in the urine, although at times only in traces. I am not prepared at this time to answer Dr. Genella's question regarding diabetics. In regard to the point brought up by Dr. King, would say that urotropin has been found (as formalin) in cerebro-spinal fluid and in bile, but not in therapeutic strengths; furthermore, the idea of its being beneficial in acute rhinitis is fallacious. We have been working energetically with this drug, having given it a thorough trial in all forms of urinary infection for the past two years and during this time our results have been gauged by the phenolhydrazin-nitroprussid test. We have about come to the conclusion that urotropin (as formaldehyd in the urine) exerts a beneficial effect only in infective conditions of the urinary bladder.



**CONFERENCE OF REPRESENTATIVES OF HEALTH AND  
EDUCATION BOARDS OF SOUTHERN STATES FOR  
THE BETTERMENT OF HEALTH CONDITIONS  
AMONG NEGROES.**

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**The Conference for the Betterment of Health Conditions  
Among Negroes Was Called to Order by Dr. Oscar  
Dowling, President, at 10:30 A. M., Friday, April  
24, in the Auditorium of the Association  
of Commerce, New Orleans.**

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DR. DOWLING: Gentlemen: As you are aware, we have met here for the purpose of discussing health conditions among the negroes. The State Board of Health sent out 72,000 invitations to this meeting to the various Southern States. I informed the railroads that probably 500 would be in attendance today; they may think I am not very good at making an estimate. However, I believe that the movement is of such importance that it is only a question of time when we shall have a larger gathering. I know of movements started with fewer representatives than we have this morning which wrought fundamental changes in the social order.

After three and one-half years of active work in the State I am convinced that the health of the negro is the most important single element in our problem of sanitary betterment.

At present the death rate of the negroes is 28 per thousand as opposed to 15 per thousand for the whites. The chief causes of this high death rate seem to be consumption, infant mortality, venereal and intestinal diseases. Forming as they do a large per cent. of our population, the prevalence of such maladies among them, can not but be a menace to the health of all.

The problem is many-sided; it is racial, social, moral and economic. Where shall we begin? To determine if there is a point of advantage for immediate, active, practicable measures is the purpose of this conference.

Education, as the best and most effective means, occurs to every student of the situation—we would like here to discuss and determine if anything more practical and effective can be instituted in this line of endeavor.

Housing is fundamental. No people can be moral or healthy

while they are herded together without privacy or decency as is the case in the thousands of shacks, shanties and tenements which obtain. Can we do anything to better these conditions? Are the laws adequate to give the health officer power to enforce provision of sanitary conveniences? Can the cleansing of houses after removal of each tenant be made obligatory?

In Louisiana the regulations are adequate. In the towns and cities we can, if we will, do much toward making sanitary houses which are now unspeakably bad. In New Orleans, three weeks ago, for one row of about 75 houses, 225 notices were sent to landlords asking that they obey the Sanitary Code in respect to sewage connection. In the rural districts the problem is in some respects easier, in some, more difficult. The work will have to be done by special health officers who practically will teach the individual. Until the negro develops a home-owning, home-defending instinct, the housing problem, I believe, will have to be wholly one of enforcement through the courts.

The next important feature, if in so complex a situation any one can be considered of more importance than another, is the prevalence of tuberculosis and the venereal diseases. As cooking, washing, nursing and housework of many homes are done by negro women, the condition constitutes an ever-present danger to the health of thousands. There is little hope that we can get cases of these diseases reported. The afflicted negro himself will not tell. We must get at it by a flank movement, and proper housing seems the best point of attack.

Underlying all is the need of training the negro to work. Make him an efficient member of society and some of these conditions will right themselves.

With the statement of these few fundamentals, again, how shall we begin?

It was not the purpose to have a fixed meeting this morning, but I have here a few topics I think pertinent:

### **Conditions:**

- “Shacks and Shanties.” The Remedy.
- Habits—Need and Good of Instruction.
- Food Question.
- Gatherings.
- Care of Children.
- Railway Camps.

**Enforcement of Law:**

Sewage Connection by Property Owner or Provision of Sanitary Conveniences.

Cleansing of Houses or Removal of Tenants.

Reporting of Communicable Diseases—Notably, Tuberculosis, Typhoid, Malaria, Syphilis and Gonorrhoea.

Vaccination.

**The Rural Negro School**—Industrial Education.

**The Rural Negro**—How to Reach Him.

**The Vagrant Negro.**

**The Criminal Negro.**

**What Educational Measures Are Practicable for Immediate Application.**

**Negro Leadership.**

**The Most Important Step in Control of Communicable Diseases.**

**Dr. B. A. Ledbetter**, member of the State Board of Health, opened the discussion.

**MR. CHAIRMAN**—Of all the health problems with which this section is concerned, that of the negro stands out pre-eminent. The racial and health problems of the negro await solution at our hands. Let us realize that the negro is an essential part of the body politic of this section. Health problems of the Afro-American, for obvious reasons, stand close to those of the white race. Since his emancipation, no problem has, perhaps, more vexed the statesmen and philanthropists of our country than that of the negro as a social and political factor in our midst.

We of the South have the negro with us, and have him here to stay, and it behooves us, not only as wise and public-spirited citizens, but as physicians, to improve his physical condition. The negro problem, in its final analysis, is one of medicine, not of ethics, religion or biased opinions. It does, however, involve grave issues, such as humanity, economics and common sense. Under no circumstances should it be complicated with emotion.

For the present condition of the negro, "who is responsible?" Without question, it is the white man! Let us be broad enough to place the blame where it belongs, and brave enough to acknowledge our faults. But, oh! let us as Southerners, as the ruling race, as physicians, as guardians of these simple and lowly people, be big,

progressive, be humane, so that the negro as a race might be conserved.

How much dependence can be placed in the negro? What does the negro know of hygiene and sanitation? What cares the negro about such problems as racial conservation and integrity?

We of the South can do nothing wiser or more expedient as a purely business measure than to develop in every way the health and physical comfort of the negro. The negro is eager to learn; all he craves is opportunity. Shall we deny him the opportunity? It is for this reason that the Louisiana State Board of Health is conducting an educational campaign for the betterment of health conditions among negroes. The Health Train of the Board of Health will shortly visit every hamlet, village, town and city in the State in an endeavor to spread the gospel of health and cleanliness among the negroes of Louisiana. The solution of the problem is education. Foremost in such measures should be, first, thoroughly accurate and reliable statistics, vital and morbidity, which have, heretofore, been too much neglected in this State. Secondly, the study of the laws of hygiene and sanitation should be made obligatory in all colored schools, for it is upon the rock of neglected hygiene that this race has most miserably foundered. No sort of medical skill or philanthropic aid can prove successful in combatting the frightful mortality of the negro until he realizes the alarming fact that he is dying twice as fast as his white-skinned rival.

All this, and more, should be made a part of his common school education, ingrained into his slowly-receptive intellect, and so harped upon as to make him realize in some degree the enormity of his sanitary sins. The high death rate of the negro is due to bad sanitation, gross neglect of the simplest laws of hygiene, and general ignorance of results. No wiser expenditure in behalf of the negro could be made than in teaching him how to maintain the superb physique transmitted to him as the result of the rigid discipline of his slave ancestors. It is not peering too far into the future to say that, unless reform of this kind is instituted, the negro race will begin, at no distant day, to rival the red man in rapid extinction in this quarter of the world.

We have sufficient laws and regulations covering the questions of hygiene and sanitation. But, can we expect the negro to comply with them, unless he is shown, in a most unmistakable manner, the benefits and advantages accruing therefrom?

For example, let us consider housing conditions, which are, in my opinion, the greatest cause for the high death rate from consumption among negroes. Consumption has been termed the great "white plague"; but if we consider this matter statistically and through the eyes of all experienced observers we could with greater propriety call it the "black plague," as it is unquestionably the supreme cause of the increasing death rate of the negro in our Southland.

Turning to the death roll of pulmonary tuberculosis, we find the ratio for blacks nearly treble that of the whites—this, too, of a disease of which, before the Civil War, a pure negro seldom died. Let us pause here and speculate a little! Why should the negro die, since emancipation, of a disease from which as a slave he was wholly exempt? There is but one answer—the white landlord. Our duty is plain; we cannot shirk the responsibility nor dodge the issue! The white landlord must be summarily dealt with by the health officer. The white landlord must improve his property. The negro cannot be blamed for housing conditions, as he is rarely a property-owner.

The facts are before us, and, as physicians and health officials, our duty is clear. Shall we prove recreant to a trust almost divine in character? Shall we stumble and totter under "The White Man's Burden?"

I pray not!

THE CHAIRMAN: When these invitations were sent out we asked the negroes to send representatives from their schools, churches, medical profession, etc. If agreeable to you, gentlemen, we will assign them a part of the house this afternoon and have them give their views of these questions.

There followed discussions by:

Dr. G. C. Chandler, City Health Officer, Shreveport.

Dr. Wm. T. O'Reilly, Chairman and Health Officer, New Orleans.

Dr. Jas. A. Hayne, Secretary State Board of Health, Columbia, South Carolina.

Dr. J. C. Bell, Health Officer, Memphis, Tenn.

Dr. T. F. Abercrombie, Health Officer, Brunswick, Ga.

Dr. J. D. Baucum, Assistant Hookworm Director.

Dr. S. R. Mallory Kennedy, Jacksonville, Fla.

Mr. B. C. Caldwell, Natchitoches, La.

Dr. Wm. C. Woodward, Health Commissioner, Washington, D. C., and others.

**Dr. G. C. Chandler:** This meeting should result in great good to the people and especially to the colored people of the United States for the unnecessary high death rate among the latter, regardless of the section in which they live is a discredit to the people of the United States. It has been customary to attribute this high death rate to the ignorance and indifference to sanitation by the colored people, but while this naturally adds to their death rate it is by no means the entire cause of this high rate. The poverty of the great mass of the colored people necessitates their living in sections of cities where there is lack of sanitary conveniences.

The Health Boards and scavenger departments have been sadly neglected in the cities of the country, and only in the last few years have the people awakened to the fact that it is the most important for their welfare of all the city departments. The result has been insufficient funds to do this work properly and when it is necessary for some section of the city to be neglected, what section is neglected? Where does the garbage cart fail to go? Where is there a lack of sewerage or where is it the garbage is dumped when a city is not able to care for it properly? It is in the colored sections of the city. It is very soothing to our conscience to shift the responsibility for the high colored death rate from our shoulders and attribute it to the colored people's ignorance and unsanitary lives, but I believe this high death rate is due largely to conditions over which they have no control and which can be easily removed.

The first step for the improvement of health conditions is a mortality report that shows the real health conditions of race and section. Once the whites and colored are rated separately and the high death rate of the colored people shown, cities through shame or the force of public sentiment will be compelled to improve the colored sections of cities. The rating of the whites and colored separately is of more vital importance in the North than in the South, for the same high death rate is there among the colored, but it is hidden when included in making out the total rate with the large white population.

A great corporation of New York City and of this city, The United Fruit Company, with its medical and sanitary departments under the able management of Dr. Robert E. Swigart and his lieutenant, Dr. Francis Murphy, has shown what can be done for the colored race. This corporation, simply because it pays its stock-

holders, spends hundreds of thousands of dollars for sanitation to protect the health and lives of their colored laborers. A city is nothing but a corporation and the people are not only the laborers and producers of the wealth, but are also stockholders of the corporation. The pitiful sums set aside by the city governments for the protection of the health and lives of the men, women and children of our cities, in view of the results obtained by this corporation are shown to be worse than criminal, for there never was a truer saying than that "Health is wealth." This corporation has reduced the death rate on their banana farms in the sickliest sections of Central America until it is lower than the white death rate in any of our cities.

A great deal can be accomplished by the health departments in improving health conditions and lowering the death rate among the colored without money. They are quick to respond in sanitary movements. In the middle of the year of 1912 we began a campaign to improve sanitary conditions among the colored people of Shreveport, making addresses on sanitation in their churches and by personal conversations with their leaders, enlisting their cooperation, and they were as fully responsive as the whites. A law was passed by the Board of Health allowing the burning of refuse on the premises with the view of enabling them to keep their premises clean, and we have had most remarkable results from our efforts. The death rate has been reduced from 25 to 15 to the 1000 and there was a remarkable reduction in the total number of deaths from all preventable diseases, regardless of a great increase in our population. This year we hope for a still further reduction.

No move for the improvement in the sanitary conditions of cities where the people rule can hope for the highest success without the intelligent and cordial cooperation of the people white and colored, and this can only be obtained by publicity. The laws of health are simple, if presented clearly, the great mass of the people have no difficulty in understanding them and you can rest assured they will cooperate with you.

We believe that mortality statistics which really show the health conditions as to race and locality are the basis for all work for the improving health conditions and lowering the death rate among Board of Health passed resolutions urging the requirement of all United States mortality reports to rate whites and colored separately and to rate cities on their resident deaths; certainly the sick

brought into cities for treatment of diseases contracted elsewhere have nothing to do with health conditions of a city and their inclusion in making up the rate only hides the real health conditions when it is of vital importance that the true health conditions of the city be known.

The resolutions, letters and compilations of data have been mailed to every Senator and Representative in Congress and to mayors and health officers of over 100 cities in the South, and a great number of favorable letters have been received from members North and South and, in my opinion, all that is necessary to correct this evil during the present session of Congress is for this body to push the movement. The Census Bureau has already sent out blanks to all cities of over 10,000 people to be filled out as to non-residents and to color, so I think the fight is already won; but Congress should pass an Act requiring this segregation for the power to issue reports: this misrepresentation should not be left in the hands of any man or bureau.

**Dr. Wm. T. O'Reilly:** MR. CHAIRMAN AND GENTLEMEN: The very complete report of our Chairman to-day, is of much value to us in arriving at conclusions. However, I wish to say that I rather think, as far as conditions prevailing in New Orleans are concerned relative to the negro question, I believe the report of the Chairman somewhat minimized the situation, quite familiar as he is with conditions throughout the extent of territory covered by him in the city and State. I fear conditions are worse than he represents them. I am convinced that they are worse than your report has shown them, Mr. Chairman.

And what is responsible for these conditions in the City of New Orleans?

Doctor Ledbetter has properly placed the responsibility where it belongs? I have, in my daily experience, had quite a number of incidents brought to my attention, which prove beyond the shadow of a doubt the responsibility rests largely with the white man and not with the negro. The negro will accept education; he will accept advice and it is but natural that he will apply any good, sensible advice that is given him when he feels he will derive personal benefit from the same. That is the manner in which our educational efforts must be exerted. Just to show the negro that he must comply with the law because it is law or go to jail, is not the right way, nor is it sufficient. But show him that this is where



his personal interests lie, that it is for his benefit, and I am sure you will get his personal coöperation, all the way through.

As evidence of proof of this, Dr. Dowling, as State Health Officer, and myself, for the city, have succeeded thus far in getting the negroes of the better class to interest themselves in sanitary work to the extent that they will become educators for the betterment of conditions of their sisters and brothers who lack educational training. Our efforts in New Orleans in that connection have been to come in contact with the negro and bring the better class of negroes to the front as educators. We have done considerable work and we are having a great number of colored educators take up this work and put it in execution.

The large number of sanitary violations which are credited to the negro, and which affect him, are oftentimes violations which are actually perpetrated and committed by the white man, and the negro is forced to accept the situation.

For the last three or four weeks, it has been of daily occurrence, that some one to whom we have sent notices from our office exacting water and sewerage connections of premises, comes in, presents his notice and says: "Doctor, why do you ask me to do that, that is only a negro shack." Yes, that is the feeling prevalent and that is why the negro's condition is so bad to-day. It cannot be said that those who invest money as a source of revenue in shacks, shanties and tenement houses do not get returns; it cannot be said, from a financial point of view, that it is not safe because it is a fine investment. Take an apartment house, we see there houses of that character from which the investor derives a revenue that is enormous from a commensurate point of view compared with the revenue of the man who invests in other directions. Take any old building, after it has been used for any purpose whatever, under the law, they can, and do, become tenement houses, living quarters to be occupied by the negro. An investment in places of that kind is one that the shrewd speculator knows to-day is a good one. He makes up his mind solely to derive returns and he has no thought for sanitary safety. That is where the mistake comes. Though there are hopeful signs, I must say that, as I said a few moments ago, conditions are, however, deplorably bad. I know, however, in four tenement sections, or, I should say, tenement rows, where the State Board and City Board of Health jointly made inspections, that there is to my certain knowledge an expenditure of

\$12,000 contemplated in these sections, with the purpose in view of improving conditions and increasing sanitary conveniences for those occupying those places.

The character or method of education carried on by the city and by the State, I think is the character of education that should be carried on by all throughout the country. I am reasonably satisfied that measures of this kind applied, where large numbers of negroes reside or, rather, we might say, are huddled together, will bring about excellent results.

Now, with regard to the spread of communicable diseases, it is hardly necessary to say that the negro alone needs education in that respect. Rather, those in charge of communicable diseases, are the ones who should be charged with violations in that respect. The proper way for that, of course, is for the case to be brought to the attention of the health officer. Then it is very easy to effect control, after anyone is advised of the situation, before the disease has spread and become general. But, without the knowledge of the presence of these diseases, you are fostering an enemy having the advantage of position, for you don't know where he is.

One more point on which I would like to say a few words is vaccination. I am not going to elaborate. I believe, personally, from my large experience in matters of this sort, that anybody who has been properly vaccinated will not contract smallpox, and will enjoy a long period of immunity. I have seen numbers of cases of varioloid and variola where, if you examine the reports of physicians, you will note, as I have, that the patients have never been successfully vaccinated. The records would show an unsuccessful vaccination even though there might be a scar. Some think because there is a scar, the vaccination was successful, but all scars do not show proper and successful vaccination. Now, I venture to say, not one per cent. of those properly and successfully vaccinated contract that disease within the period of immunity. Right here I want to say I am getting to believe, and do feel, that no quarantine against variola or varioloid should be instituted. We offer public protection in vaccination and they, the public, do not accept it. Then, let them suffer the consequences. Why should those, who do accept, bear the burden of taxation for quarantine purposes for the unprotected? Let them all be protected and, if they do not protect themselves, let them suffer. I feel we are getting to that point. I feel that it is safe and sound practice that

for protection against smallpox, nothing should be done but vaccinate. Those who will not accept vaccination should be made to suffer by letting them contract smallpox.

**Dr. J. A. Hayne**, Secretary State Board of Health, Columbia, S. C.: GENTLEMEN: I came here to be instructed. My ideas as to the solution of the problem of better sanitation among negroes are vague. I say again, I did not come prepared to make any talk; I simply came to learn. As far as what should be done for the betterment of sanitary conditions among the negroes, my ideas at present are extremely vague as I said. I, of course, believe that we should educate them and teach them better ways of living and give them better houses to live in—provided they deserve it. I do not know the conditions in Louisiana, but I do know the conditions in South Carolina, and I find that those negroes who deserve good housing in South Carolina get it. And I find that those who deserve bad houses on account of their laziness, lack of thrift, and indifference—which is characteristic of the race—have bad houses.

As far as education is concerned, I had the pleasure of lecturing at several colored institutions in our State, and I found the colored students there eager to learn and willing to apply the principles taught. As far as conditions in the rural districts are concerned, the school facilities afforded negro children in South Carolina are very poor. They, however, take advantage of them to the extent of their ability. They send their children to school and do the best they can; the proportion of negro children attending school is better than the whites. In other words in proportion to the population of white and colored children, more colored children attend school than do white children.

I was very much interested in the City Health Officer's remarks in regard to vaccination, because that is the rule that we have adopted in South Carolina. We do not quarantine against smallpox. We simply require vaccination. We have about threefourths of our people vaccinated and we tell the other fourth to protect themselves or contract the disease. We furnish the vaccin virus and are there to do the work; if they do not take advantage, why, we laugh at them when they get smallpox. When we get reports of men having smallpox, when they would not protect themselves, I say I am glad of it. That is true of white and colored. When necessary, we take whole batches of them and vaccinate as many as a thosand at a time without any mental reservation or apology.

We get a policeman and go at 12 o'clock at night, sometimes, and take it from house to house and vaccinate every one as we go along; I refer to negroes

Now, in regard to the white population. We give them credit for having some intelligence and judgment, and present to them arguments in favor of vaccination and prove to them that this is the only remedy and means of preventing this loathsome and awful disease. We send them bulletins and all kinds of literature on the subject; then, if they will not be vaccinated, their blood is on their own heads, and we feel no further responsibility in the matter.

The problem that we have found harder to solve among the negroes than any other—I do not mean that we have solved any problem yet, but I should say one that worries us more than any other—is, of course, tuberculosis. You will hear prominent educators, who should know better, tell you that tuberculosis was an unknown thing before the War. Now, the City of Charleston has had accurate vital statistics since 1810, and they show that instead of there being no tuberculosis before the War, there was a great deal in the city of Charleston; more among the negroes than there is at present. Charleston, as you know, has a larger negro population than white. This is also true of the State of South Carolina. There are 800,000 negroes and about 700,000 white people in the State. And we find from the statistics that tuberculosis has decreased among the negroes of Charleston, since the Civil War.

Now, as far as syphilis goes, we find that 90 per cent. of the negro population of Charleston has venereal diseases of some sort. I do not know about the whites in this respect, because the record has not been kept. But it is correct from accurate statistics, that 90 per cent. of the negro population is suffering from some form of venereal diseases; that is the conclusion reached.

I feel that it is the burden of the white man to take care of this alien race brought here into this country against their wishes—that it is our duty, as white men, to take care of them. We can not make them have the judgment, the thrift, the ambition of the Anglo-Saxon race; there is no way in the world to succeed in doing that; they are a different and alien race, and I want to stand firmly on that proposition.

**Dr. J. C. Bell**, Superintendent Health Department, Memphis, Tenn.: **MR. CHAIRMAN:** I came here with no solution of this problem firmly fixed in my mind, but hoped to hear someone

solve it. Doctor Ledbetter has solved it—*Education!* The manner in which we are to spread this education must be left to each State and municipal department of health governed by local conditions.

Education for the negro must be started by the white man and managed by him. We have between seven and eight million negroes and they are here to stay because we want them and they want us. So look the matter squarely in the face and go to work. Teach them how to live; the kind of houses in which to live, properly ventilated, etc.; to eat good food; personal cleanliness; to avoid disease, especially syphilis, which so weakens the system that it becomes a rich field for tuberculosis. Education is our only hope. The large sanitary measures will not reduce the death rate.

Memphis has paved her streets and alleys and keeps them clean. She has sewered the entire town; she gives her people an artesian water supply free from nonpathogenic bacteria; she burns her garbage; but there is no material reduction in death rate. So we must put our hopes in education. Let us reach him through the ministers' health sermons. Let the colored doctors lecture on preventive medicine and hygiene. Let the colored leaders reach the masses and let us instruct the leaders.

Now, along the line of vaccination, Doctor Dowling, I would say we have compulsory measures. You might say they are compulsory, that is, as far as we can enforce them. We allow no child to enter school unless it has been successfully vaccinated, except in those cases where the child has been repeatedly vaccinated and it failed to take. I suppose the same is true here and out in the State. Is it?

**Dr. Dowling:** "Yes, that is true in New Orleans, and it may be true also in Shreveport. Is it, Dr. Chandler?"

**Dr. Chandler:** "Yes, sir, we have that and more."

**DR. BELL:** We have had all the authority we wanted and now after having had the rule enforced so long, you might say we have gradually got our entire population vaccinated. We have very few cases of smallpox within the city limits; it amounts to practically nothing at present.

Mr. Chairman, we have heard smallpox vaccination discussed, but I would like to hear some of the gentlemen discuss typhoid vaccination. I have asked that we have a dispensary in our city for vaccination against typhoid and that we have it from one year to another. However, I have not accomplished that. We have a

dispensary for vaccination against smallpox, but not against typhoid.

I would like to hear something on that subject.

**Dr. Dowling:** "Just one question, Dr. Bell. Is your law sufficient to cover the situation?"

**Dr. Bell:** "Yes, sir."

**Dr. Dowling:** "Does it give you full power to act?"

**Dr. Bell:** "Yes, sir, absolute. We can enforce anything we see fit to enforce."

**Dr. Dowling:** "Dr. Hayne, what about your laws in South Carolina? Do they give you absolute power?"

**Dr. Hayne:** "All we need."

**Dr. O'Reilly:** I should like to say something regarding our supposed compulsory vaccination in the schools of the City of New Orleans. Both the State and city laws are very illusive. I doubt seriously if the State or city has the right, only under certain conditions, to enforce compulsory vaccination. Now, the act which is the State law that we go by says that the child attending a public school must present a certificate of successful vaccination on entrance, and only compulsory vaccination may be resorted to when smallpox prevails in the city or section where the school is located. With reference to typhoid vaccination, our Board has had some experience. I would recommend the use of the vaccin in every section where infection is prevalent. Our office made unsuccessful efforts in one of our colored institutions, where for four months every five or six days we would have reported a couple of cases of typhoid fever, and in spite of our efforts to get the trouble under control by destroying old water supply and tanks, screening, disinfecting the vaults and screening them, screening the dining room and kitchen and every place that was used for living quarters, it went right on. We took blood specimens from every subject in order to determine if there were any carries these or not. And still we are not successful in defeating the enemy from that method of attack. So it was suggested that we try typhoid vaccin, and every subject in that house, from the child 8 years old to the matron or person in charge, was vaccinated, and this was repeated on the tenth day, and a third time on the twentieth day, and I must say, from that day to this there has not been a case of typhoid fever reported from the home. It was gotten under control perfectly."

**Dr. T. F. Abercrombie, Georgia:** **MR. CHAIRMAN:** I come from a small town on the coast. I have been health officer there only two months. I have just succeeded in getting a sanitary surface privy law passed, thoroughly screening every privy on the outskirts of town. However, our records show that the mortality rate from intestinal diseases is small. What troubles us more, and is affecting our mortality statistics more, is tuberculosis, syphilis and venereal diseases.

Now, I have almost completed a plan for getting district nurses to go into the homes and teach the negroes the principles of health. I think I will be able to institute that in the next few weeks.

Another thing I find affecting our mortality statistics to a great extent is the negro midwife. That and venereal diseases are two of the biggest problems we have to contend with. I hope to have within a short time an examination of every woman that practices this profession. I have almost got that plan worked out where I can have that carried out there, too. Now, those are things I am trying to do. I have not really succeeded yet in doing anything, but having the privy law passed.

**Dr. Dowling:** "Are your laws adequate, Dr. Abercrombie?"

**Dr. Abercrombie:** "Yes, they give full authority."

**Dr. Ledbetter:** MR. CHAIRMAN: Regarding vaccination against typhoid fever, I desire to say that in the United States Army, while stationed in Texas, a few years ago, more than ten thousand soldiers were vaccinated for prevention against this disease, and out of this number there were not more than five who contracted the disease. This should be absolute proof in its favor; yet, how many people would consent to vaccination against typhoid to-day? Simply because they know nothing about it.

Just a word regarding the point brought out by Doctor Abercrombie regarding the trained nurse. I desire to call attention to the work of one great corporation now spending somewhere near one million dollars for its nursing system for the uplift and benefit of its policy-holders, without a dollar's cost to the insured. I refer to the Metropolitan Life Insurance Company; they have more than twelve million policy-holders, and every policy-holder in the industrial department is entitled to the benefits of a trained nurse. These nurses are going into the homes of the industrial classes, preaching the gospel of hygiene and sanitation throughout this broad land. This company has also recently established one of the most magnificent tuberculosis hospitals in the world, located at Mount McGregor in the mountains of New York State, where they treat all of its employees free of charge. This organization was the first life insurance company to join that unique corporation, "The Life Extension Institute." The business basis of a great philanthropy, its express purpose to lengthen human life by applying modern science. Policy-holders in the ordinary department are entitled to an expert physical examination without cost to himself. It is the belief of many great scientists that in the course of time, the results of this work may favorably influence the general death

rate for the entire country. Should this prove to be true, this philanthropy will eventually become one of the greatest influences in the nation of better health and longer life

If we could succeed in getting every great corporation to take up the work which this one is now doing what a great help it would be to the health officer and sanitarian in educating the people.

**Dr. J. D. Baucum:** MR. CHAIRMAN: I would like to relate a little experience I had with the negroes in my hookworm work in the delta. I find the negro is very appreciative. That was the first experience I had in visiting so many negro schools in the rural districts. On account of so few white people living there, I saw more of the negroes. I visited the negro schools; I always had a big crowd. I want to heartily endorse what Doctor Ledbetter said. It is largely due to the white man that his condition is what it is. I know I went to several planters and asked if I could examine their negroes for hookworm disease and they spoke as if they were not interested until I told them it would increase their working capacity. Then they consented for their negroes to be examined. I believe the negroes would do what we tell them if they could. I believe it is with the white man that the solution lies.

**Dr. S. R. Mallory Kennedy:** I want to take issue with my South Carolina friend. In his opening remarks he said something about the negro deserving just what he got. Treat every man according to his just deserts and who would escape whipping? I believe we ought to do a little better than that by the negro.

I believe the key-note should be education and public sentiment; that is, arouse a public sentiment. You can educate and legislate and recommend all you want to, but if there is no public sentiment behind that law to enforce it, then it is not going to be enforced; that is certain. The subject we are taking up today is a most difficult one. Now all of us are Southerners; we have all been practically raised up with the negro; we know just what they are as a class; we know there are intelligent leaders among them, but when those intelligent leaders, such as Booker T. Washington, make statements in their addresses in the Northern cities, "that the negro should patronize only the negro; that the negro should draw the color line," as Booker T. Washington made this statement in New York the other day, why, we are going to have a very hard fight on our hands, if they fail to cooperate with the white man.

I believe that if each individual here present would go home and



make himself a committee of one and try to interest his locality in this campaign for the betterment of the negro race and get the vital statistics in such shape that it will show the truth, we would accomplish a great deal of good.

I do not believe in sanctification meetings and I do not believe in getting religion and then backsliding. This reminds me of the story of the old negro who was fishing one day and every time he caught a fish, he would make a wry face. A white man coming along noticed this and he said to the negro: "Why do you make such a face every time you catch that fish?" He replied: "Well, because it's a Baptist fish, that's why." "Why do you call him that?" pursued the passer-by. And the fisherman said: "Because they spile so quick after you takes them out of the water." Now, I do not believe we should stop with sporadic meetings. I do not believe to meet and discuss these questions once, and then, maybe, again in another year is sufficient. I think we should make the fight systematically and continuously, if we expect to accomplish results

As far as typhoid vaccination and smallpox vaccination are concerned, the State Board of Health of Florida takes the ground that if you want smallpox, you can get it. We vaccinate free of charge; we furnish the vaccin free of charge. The men who go out in our hookworm campaign furnish the medicine for the hookworm treatment free of charge; they furnish typhoid vaccin free of charge to the indigent poor and at absolute cost, about 35 cents or 50 cents a package to the people who can afford to purchase it. We have employed district nurses, and a district nurse for tubercular patients, whose duty it is to go over the State of Florida and take county by county and make a survey. They are doing that. We have come to the conclusion that tubercular patients should not be cared for within the four walls of a room and for that reason we are not building sanitariums. Florida probably has more money to spend on health than any other State in the Union, but we do not believe in having hospitals for the people with tuberculosis. We spent \$120,000 year before last on health, and \$96,000 last year. We believe these nurses going around and finding tubercular patients and carrying on a campaign of education among them, or for them, will do more good than building sanitariums. When you build sanitariums you have the indigent tubercular patients from all over the world dumped on you.

I believe if we can make the white man realize the fact that in bettering the negro's condition he betters his own, that is the way to go after him. If you can show a man that he is being benefited, he is more apt to take an interest in it.

I believe that the work the Chairman here has started is a big work. I believe, however, that it is going to take hammering and hammering to make it effective. I believe if we can get every health officer. State, county and city, interested, we are going to accomplish something. We must not feel discouraged if we don't accomplish it all at once. It is going to take time.

*(To be continued in September Journal.)*

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## SYMPOSIUM ON PLAGUE.

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**SPECIAL MEETING OF ORLEANS PARISH MEDICAL SOCIETY,  
AT THE HUTCHINSON MEMORIAL, TULANE COLLEGE  
OF MEDICINE, SATURDAY, JULY 11, 1914.**

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The interest of the New Orleans medical profession and their co-workers was evident in the gathering of some five hundred persons in the main lecture room at the Tulane Medical College, to hear addresses by the men of the United States Public Health Service and by the heads of the State and City Boards of Health. The President of the Society, DR. C. N. CHAVIGNY, presided, and began with an announcement of the objects of the meeting.

DR. DOWLING, President of the State Board of Health, deferred to the Public Health Service officials for the more technical phases of the program, and himself delivered an appeal to public and professional spirit in the problem now before the people of New Orleans and of the South. He emphasized the policy of publicity which had been followed, and stated his gratification at the expressions of confidence which had been received. The direct effect upon the press comments on the situation was also noted. He concluded with a forceful declaration of the State Board of Health's entire subordination to the Federal officials in control, and to cooperate in every manner in making the sanitary work fully effective.

DR. W. T. O'REILLY, the City Health Officer, reviewed the history of the plague conditions in New Orleans, giving frank utter-

ance to the difficulties to be faced. He, too, discussed the publicity practiced as a principle to which his local board had been committed since it was first inducted in office. An appeal was made for general confidence in the work of the health officials jointly engaged in the problem of rat-extermination and of plague prevention, and he emphasized the entire coördination of the City Health Department as under the regulation and direction of the Public Health Service officials.

ASSISTANT SURGEON CHARLES WILLIAMS, U. S. P. H. S., then spoke of the bacteriology of plague, giving in plain terms the characteristics of *Bacillus pestis*.

The identification is not difficult; the organism is a large, short bacillus, one and one-half times as long as it is wide. Its staining is characteristic. The organism finds entrance through some opening or solution of continuity of the skin and travels along the lymphatics, finding especial localization in groups of glands, from which pure types may be recovered in the resultant "buboes." The bacillus grows in forty-eight hours on agar-agar, and it grows at a temperature lower than the ordinary body temperature (viz: at 20° to 30° centigrade). Experimental inoculations by rubbing the culture in the abraded skin of guinea pigs result in infection in from five to ten days. The positive inoculations in guinea pigs is conclusive evidence in suspected cases.

SURGEON G. H. CORPUT, U. S. P. H. S., spoke interestingly of plague quarantine. Plague is unique among quarantinable diseases, which include smallpox, leprosy, yellow fever, etc. It is a disease of rodents, and the quarantine of persons is not effective in itself. Detention of individuals is unnecessary, and even indefinite detention would be of no value. Plague has been known to have existed in rats from two to five years without the occurrence of a human case.

Some ports are favorably placed and arranged for prevention of plague. Where docks are of cement, stone or other substance which prevents harboring of rats, the rat may temporarily go ashore, but as soon as it finds the existing conditions so unfavorable, the rat reships at the first opportunity. It is, therefore, hard to say what ports are infected or not infected, as the rat population may vary continually.

It is easy to prevent spread of plague from a port known to have plague, as rats may be prevented in taking ship.

Human plague coming into a port means nothing; one such case on a ship does not mean that the ship is infected. This is particularly true if the ship is only a few days from port of sailing. If the ship is many days out, and a case of plague develops, then there is more reason for concern, as the rats on the ship may be infected. Care should be used in making rat quarantine as effective as possible; the healthy rats will leave a plague-infected ship as soon as possible, as they try to escape the plague-infected and dying rats.

Few ships can be entirely freed from rats by fumigation, as air spaces safe from gases are apt to occur in ships as constructed at present. Maritime architects have not yet given attention to structures preventing vermin.

The speaker compared various fumigants, condemning hydrocyanic acid gas on ships, because of the danger to human beings; sulphur and carbon monoxid were to be preferred.

In concluding, attention was called to lifeboats, and that these should not be overlooked in the destruction of rats. Rats find fresh water in the bottoms of lifeboats, and they may hide there safely when fumigation is going on below.

The conclusions drawn were that quarantine in plague does no good and is impracticable; rats should be starved out or burned out and destroyed.

PAST ASSISTANT SURGEON FRENCH SIMPSON, U. S. P. H. S., followed, with practical suggestions on rat-proofing. He declared the ideal to be stone, cement or brick buildings, with foundations protected by 18-inch-deep concrete borders, and all first-floor areas next the ground to be brick, tile or concrete; where buildings are elevated, the space should be ample; the pillars should be structural and the bases should be capped properly, so as to prevent ingress of rats.

In speaking of rat-extermination, he said that every one should constitute himself a health officer. Rats in San Francisco were trapped at the rate of 75,000 per quarter in 1906. With improved rat-proofing, this number dropped to 20,000 per quarter at the end of the first year.

SURGEON R. H. CREEL, U. S. P. H. S., gave a lucid, explicit and interesting description of the "Symptoms and Diagnosis" of plague. There are four types of plague—(1) Pneumonic, (2) Bubonic (*Pestis major*), (3) Bubonic (*Pestis minor*), (4) Septicemic.

Pneumonic plague is a plague pneumonia, differing little from ordinary pneumonia, excepting in its virulence. It is lobar pneumonia, with bloody sputum, having a mortality of 90 to 95 per cent., caused by the *Bacillus pestis*.

Incubation of plague is given at five days; sometimes the disease comes in three or four days. When a longer period elapses, it is hard to determine the incubation, as the victim may have been bitten in the meantime by fleas harbored in his clothes.

The onset of plague is sudden in bubonic types. It may start with chill. Fever is rapid. Headache, muscle pains and steady rise in temperature. The temperature usually precedes the buboes, which form on the second or third day.

The facies is not characteristic; may be suffused; the sclera is injected. There is extreme prostration, with rapid pulse and hebetude; *the prostration is out of all proportion to the symptoms present.*

Petechial spots are seen, but are not frequent.

The bubo is usually near the point of inoculation from the flea-bite. The axillary, or femoral regions, are the usual sites of buboes, though the cervical glands may be affected. At times these regions may be all involved in combined attack. The exposed parts of the body, not thoroughly protected by the clothing, are the places of inoculation.

Plague can hardly be mistaken for anything else. Some cases are compared with *mumps*. Case in San Francisco recalled. Man lived next door to child with frank case of mumps. A child across the street had plague, with cervical and femoral buboes. The patient had rise of temperature and swelling along the jaw; difficult to refer to the parotid. He was sent to the detention hospital for differentiation. He developed orchitis subsequently, and apparently had mumps. It was never determined whether he had plague, too, or not.

Other conditions confused with plague are leukemia, septic buboes from local infection, venereal buboes. Usually the severe onset and the constitutional symptoms make the differential diagnosis. In venereal cases, the femoral bubo does not ordinarily occur.

The laboratory findings, however, are usually determinative.

The bubo itself is of unusual lardy consistency, unlike other buboes.

Septicemic cases of plague are usually not diagnosed in life. Recovery is unusual, and these patients die on the second or third day.

In the *Pestis minor* form of bubonic plague there is very little prostration: the patient is ambulant, bubo not being hard. The bacteriologic examination in these cases shows the bacillus from the bubo, when plague would not otherwise be suspected.

The post-mortem evidences are strong in determining diagnosis of plague. *Bubo* shows marked destruction. Brawny, gelatinous exudate, varying in cases. The lungs are often involved in bubonic types, generally congestive. Secondary pneumonia is sometimes shown in bubonic plague. This may occur in bubonic plague in the same way that secondary pneumonia may occur with other diseases.

The *liver* shows evidences of cloudy degeneration.

The *heart* is enlarged and softened; at times the spleen is macroscopically normal.

The *heart* shows petechiæ beneath the visceral part of the pericardium.

The patient, *stricken suddenly, with marked prostration, rapid rise of temperature, followed in a few days by bubo*, should be counted as having plague.

ASSISTANT SURGEON GENERAL W. C. RUCKER, U. S. P. H. S., concluded the program with an exhortation to the people and to the profession in making the campaign a success in the extermination of rats first, and in making New Orleans a sanitary example afterwards. In illustration of the lecture of Dr. Rucker, he presented a number of telling lantern slides, selected for their direct application to the work in hand.

Among the many things said by Dr. Rucker, we quote: "The spirit which the medical men of New Orleans and the people of the city have shown generally is the finest ever shown by any municipality in America under a similar emergency. It speaks volumes for the intelligence in science that they should coöperate so willingly to erect a permanent fortification against pestilence. This spirit has inspired confidence in the commercial world, and will prove a most valuable asset to the business integrity of the city when the rodent carrier is built out of existence.

"The success of this campaign will depend entirely upon the medical profession and the citizens of New Orleans. The cam-

paign of cleanliness is reduced to plain business principles. We know what the carrier of the disease is. We know when and how to fight. All that remains is to put into practical use the knowledge we possess. It is a matter of duty for the citizens to remove the disease from a municipality which is the gateway to the commerce of the great Mississippi Valley, and it is a matter of gratification to me and my colleagues that the people, one and all, have shown so ready willingness to work with us and for their own salvation.

“Regarding our campaign, I can announce that we captured 750 rats yesterday. This is a fairly good start with green men, but we hope to make our average 20,000 rats a week soon. We will pick our men carefully, without regard to antecedents, political or otherwise. Here and there a laggard may get on the force, but he will have to deliver one dollar’s worth of man for every \$1 of pay, or he will not remain on the list. This should be the golden opportunity of New Orleans to make it the cleanest city in the country, and she will build in perpetuity against rats, thereby destroying future danger of infection.”—Reported by ISADORE DYER, M. D.

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## Society Proceedings.

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TRANSACTIONS OF SECTION ON SURGERY, AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 23—25, 1914.

(Reported by Urban Maes, M. D., Instructor in Surgery, College of Medicine, Tulane University of Louisiana, New Orleans.)

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### Officers of Section.

Chairman, Chas. H. Frazier, Philadelphia.

Vice Chairman, J. E. Thompson, Galveston, Tex.

Secretary, E. S. Judd, Rochester, Minn.

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The Section was called to order by the Chairman promptly at 2 p.m. on June 23. The Chairman’s address dealt with “The Cerebrospinal Fluid as a Problem in Intracranial Surgery.” He dealt largely with laboratory research into the secretory function of the choroid gland, and showed that disturbance of function in this body was as important a factor in diseases of the cerebrospinal system as was bacterial invasion.

The next paper, on the "Surgery of Brain Tumors," was to have been presented by Prof. Hermann Kuttner, of Breslau. On account of illness, Prof Kuttner was unable to appear, and his paper was read by his assistant, Dr. Felix Landois, an exchange teacher now in the clinic of Prof. Halsted. The paper was largely statistical, and, after analysis, some of the conclusions were that decompression was usually a safe operation, and gave more lasting results than puncture of the corpus callosum, especially since the latter closes so quickly in hydrocephalus. Local anesthesia is used exclusively, and the hand drill and Gigli saw are the most valuable instruments. Most cases are not suitable for radical treatment. Early and exact diagnosis is almost impossible. Due credit was given the work of Halsted and Cushing. The results show a 30 per cent mortality in the first few weeks following operation; 15 per cent. cures and 75 per cent. improvement in the patients with choked disc. Private patients showed over 50 per cent. permanent improvement.

The discussion by Dr. Spiller called attention to some of the dangers of decompression, such as hernia and fungus, and said decompression never did any good if there was optic atrophy. Spiller also made a plea for removal of a large piece of the corpus callosum, instead of simple puncture. Choked disc does not mean tumor always, as it has been seen by the speaker in malaria and lues. X-ray examination may help. Small gliomata often produce no symptoms, and yet a small tumor may produce great enlargement in the cerebellum. Local hydrocephalus is a common accompaniment of brain tumors.

Dr. Cushing called attention to the poor classification of brain tumors. Results depend on early diagnosis and localization. In 140 cases Cushing has had 5 per cent. permanent cures and a mortality of 7.1 per cent.

Dr. Allan B. Kenavel, of Chicago, was the next speaker, and showed the results of some laboratory work for permanent closure of the bony canals in trifacial neuralgia, with report of a successful case. The method consists of avulsion of the nerve and plugging the canals with bone transplants. The treatment is only indicated after failure of the simpler methods.

In the discussion Dr. S. J. Mixer, of Boston, claimed good results from nerve section from within the skull and plugging the foramina with amalgam.



“The Treatment of Unlocalized Intracranial Injuries by Drainage Through a Subtemporal Approach,” by Dr. Vilray P. Blair, of St. Louis, detailed a series of careful observations in some head injuries. He concluded that fractures of the base of the skull are really injuries (contusions) to the base of the brain, and space must be given for reactionary inflammation. When decompression with drainage was accomplished within two hours there were 75 per cent. survivals, while only 58 per cent. of the untreated cases survived. Concussion is a misnomer, and true shock is the usual condition present.

In the discussion Dr. Evans, of Milwaukee, showed a 20 per cent. mortality in operated patients and a 30 per cent. death rate in the unoperated, with fewer complications in the treated patient. Dr. Ruth, of Iowa, concurred in the above remarks. This paper was also discussed by Dr. Elsberg, of New York, who also agreed with the essayist.

In a “Consideration of 200 Cases of Acute Appendicitis, With Special Reference to Pelvic Complications,” Dr. Archibald MacLaren, of St. Paul, made a plea for rectal drainage through the cul-de-sac, and for the Fowler position. Always remove the appendix when it is accessible, but do not jeopardize the general cavity by breaking up adhesions. Dr. A. J. Ochener agreed with the speaker and made the point that only purged cases went to abscess and required rectal drainage.

Dr. Jas. E. Moore, of Minneapolis, summarized the present surgical attitude on the appendix in a paper entitled “Has the Last Word Been Spoken Concerning Appendicitis?” He made a plea for early diagnosis and early operation, even during pregnancy. One point not in accord with the view of most surgeons was that he did not use the Fowler position.

Dr. J. M. F. Finney, of Baltimore, made one of his characteristic and forceful talks, urging early diagnosis and early operation, especially in children. It is even better to explore in cases of doubt, as “pus or death is always somebody’s mistake.” Dr. Davis urged the avoidance of cathartics, the Fowler position, and rectal drainage for all residual abscesses.

### **Second Day—Wednesday, June 24.**

Dr. J. B. Murphy changed the title of his paper from one on Kidney Surgery to a consideration of “Ischemic Myositis of the Arm, Forearm and Leg.” This condition is not one of nerve origin,

but is a true fibrosis of muscle, with constant paralysis, and is always a surgical error. The pressure anemia causes the muscle destruction in forty-eight hours, and pain and swelling in a splintered limb should always call for change of dressing. The treatment recommended for Volkmann's contracture was tendon lengthening. In the leg the condition may be dropped foot, due to pressure on external popliteal nerve.

In the discussion Dr. LaPlace urged attention to primary dressing to allow for hemorrhage and secondary swelling due to inflammatory reaction. Dr. Dean Lewis, of Chicago, said 8 per cent of the cases of ischemic paralysis had been shown to be due to sub-fascial hemorrhage. Mr. Harold Collinson spoke of sub-fascial and intra-muscular hemorrhage as a cause of the condition. His results with tendon lengthening had been fair only. The deformity was overcome, but often the limb was functionally useless. Dr. Murphy closed with a plea for early liberation of sub-aponeurotic bleeding and cautioned against early passive motion in fractures about the elbow for fear of causing some bleeding.

The subject of "Congenital Cystic Kidney" was reviewed by Dr. F. B. Lund, of Boston. Dr. Lund called attention to the bilateral presence of this lesion and of the sudden death from uremia. Rovsing's suggestion of systematic puncture of the cysts was the treatment advocated, except in face of the co-existence of infection when nephrectomy was indicated.

Dr. D. N. Eisendrath opened the discussion by calling attention to diagnostic significance of such symptoms as dragging pain, bilateral dropped large kidneys and hematuria.

Pregnancy is especially dangerous in these patients. Dr. Chute, of Boston, spoke of the possibility of infection and the usually bilateral character of the lesion. Dr. Bevan (Chicago) reported two unilateral cases in whom nephrectomy was followed by complete cure. Another unilateral case was reported by Dr. McCrae. Dr. Ochsner dwelt on the benefit of diet in cases showing uremic tendencies and advocated sterilization by the X-ray in patients liable to become pregnant. Dr. Lund said, in closing, that all cases at autopsy were bilateral. Be sure of a unilateral lesion before performing a nephrectomy.

The next speaker, Dr. W. L. Rodman, of Philadelphia, showed a simple instrument fashioned like a trocar as "A Simple Method of Tapping a Distended Bladder and Making Permanent Drainage."

He also showed a photograph of a case of acute Carcinomatous mastitis, and spoke of the futility of operation in such cases.

Drs. Christian and Randall, of Philadelphia, recommended the instrument as valuable only in cases of emergency requiring vesical tapping.

Dr. R. Matas, of New Orleans, reviewed the literature in detail and discussed the recent methods of "Testing the Efficiency of the Collateral Circulation; Its Importance in Determining Surgical Intervention and Methods of Applying the Tests." After briefly reviewing the eight other methods recently suggested, Dr. Matas showed the value of the test suggested by him in aneurisms of the extremities and of the Matas-Allen band in aneurisms of the trunk.

Dr. B. M. Bernheim, of Baltimore, emphasized the value of the tests, and cautioned against the risks of thrombosis embolism and rupture from pressure in the Matas test. His objections were theoretical, and have not been borne out by clinical results. Dr. Alexander Primrose, of Toronto, reported a post-tibial aneurism successfully operated by the Matas method. Dr. Price, of Louisville, stated that failure could only be due to constitutional states of the patient or to the bad technique of the operator. The graft after excision would, of course, be the ideal operation, but is not perfect at present. Dr. Shelton Horsley reported good results. Dr. Matas, in closing, emphasized the practical value of the test devised by him and showed the fallacy of the objections offered by Bernheim.

Dr. Alexius McGlannan, of Baltimore, reported two cases of aneurism of the posterior tibial artery operated by the Matas method. The results were very good. In comparison with other methods, endo-aneurismorrhaphy gave a better functional result, and the convalescence was much more comfortable.

"Experimental Surgery of the Heart and Lungs," by Axel Werelius, of Chicago. This paper was a model of painstaking research in the private laboratory of Dr. Werelius. The experiments were illustrated by lantern slides. While such laboratory work is of tremendous importance, it has not found its place as yet in clinical surgery. Discussion by Drs. Murphy, Andrews and Willy Meyer brought out the fact that this is the next field for surgery to conquer, and Dr. Werelius' work would be epoch-making in the surgery of the thoracic organs.

The oration on surgery by Dr. J. C. Bloodgood, of Baltimore, dealt with "The Relation of the Surgeon to the Conquest of Can-

cer." Bloodgood stated that there were 75,000 deaths annually from cancer, and that 50 per cent. of these were inoperable when first seen. National, State and local education are necessary. Early recognition and radical treatment are the only certain remedies. When in doubt treat (operation), and then examine. In this way save time and life in doubtful cases.

Mr. F. M. Corner, of London, in a paper entitled "Exploration of the Knee-Joint and Its Teachings," showed the very important role of the crucial ligaments and the spine of the tibia in the pathology of the knee-joint. The method of exposure advocated by Dr. Corner was a median section, splitting the patella longitudinally. Subsequent suture is not necessary.

Dr. Murphy suggested the early exploration of joints with more care, if possible, than is used in exploration of the peritoneal cavity. Drs. Baer, Marcy and Fassett agreed with the remarks of the essayist.

"Exophthalmos and Methods of Surgical Treatment," by Dr. C. H. Mayo. This paper detailed the usual causes of exophthalmos (tumor, infection, myocarditis and goitre), and recommended removal of the cervical sympathetic (Johnnesco's operation) as a means of relieving the exophthalmos persisting after thyroidectomy. This is rational, as the cause of exophthalmos is irritation of the muscle of Landstrom, which is under sympathetic control. This idea was concurred in by Dr. Dean Lewis.

In a technical paper on the "Mechanism for Injuries of the Shoulder Region; Results of Forty Operations," Dr. T. Turner Thomas, of Philadelphia, showed that this class of injury was usually due to falls on the outstretched hand. The breaking point probably depends on the angle of the limb with the ground at the moment of impact. Discussion by Drs. A. C. Wood and J. W. McConnell brought out nothing noteworthy.

Dr. Henry H. M. Lyle, of New York, gave comparative results in the four types of amputation, viz., the osteoplastic, the tendinoplastic, the periosteal and the aperiosteal. His results with the "Aperiosteal Amputation" (Hirsch-Bernge) certainly justifies its use. With early massage and pressure-bearing exercises, his patients were able to use an artificial limb at an earlier date than by other methods. Dr. Cotton, of Boston, agreed with Dr. Lyle in the discussion.

**Thursday, June 25.**

"Anoci-Association in Relation to Operations on the Gall-Bladder and the Stomach" was another triumph for Dr. George W. Crile. In his dissertation Crile showed the rôle of the Hion in the blood and the effects of shock on the central nervous system. He also showed that morphin first inhibits the presence of the Hion in the blood and later, by overcoming general resistance, contributes to its presence. Crile now uses morphin, scopolamin, 1 to 400 novocain, 1 to 600 quinin-urea, gas and ether anesthesia.

Discussion, by Drs. LaPlace, Morris, Ochsner and Howell, was favorable by all.

"The Problem of Intestinal Obstruction; Effort to Explain Variable Clinical and Experimental Results," by Fred T. Murphy and Barney Brooks, of St. Louis. After reviewing the work of other observers, Murphy and Brooks, attempt to harmonize all of the findings by a series of experiments in their laboratory. They conclude that the effects of obstruction are due to bacterial causes in the intestinal tract, and that a damaged mucosa is necessary for toxic absorption. Dr. Hartwell spoke briefly in favor of his opinion that loss of water was a prominent factor in all deaths due to intestinal obstruction. Dr. J. W. Draper spoke on some of the complex chemical changes in the intestinal canal in ileus.

In Mr. Alexander Primrose's case report of an "Internal Hernia Due to an Aberant Middle Colic Artery," he called attention to the fact that all retro-peritoneal herniæ were in relation with blood vessels. In this case an aberrant middle colic artery arising from the right common iliac formed the mouth of a pouch containing the entire small intestine. No operative interference was undertaken after exploration. Drs. Powers, Coley and Andrews commended Mr. Primrose's good judgment in not interfering with the hernia.

Dr. Donald Guthrie of Sayre, Pa., reported a large series of cases in which he employed "The Rodman Operation for Cancer of the Breast." His results were excellent, and keeping the scar away from the axilla gave good functional use of the arm, even after very extensive dissections. Drs. Parker Syms, Rodman Lucid and Bloodgood commended the results and directed attention to the necessity for early diagnosis and extensive removal of all gland bearing tissue.

"Cancer Vaccin and Anticancer Globulius as an Aid in the Surgical Treatment of Malignancy" was the subject of a laboratory and clinical study by Dr. J. W. Vaughn of Detroit. Doctor Vaughn reported 23 cures in his first 100 cases with 8 per cent. still under observation. As this was a paper on some new work by the author, the discussion by Doctor Coley was very brief.

One of the very important papers of the meeting was a discussion of "Some Present Day Problems in the Surgical Treatment of Gastric and Duodenal Ulcer," by Mr. Harold Collinson, of Leeds, England. Mr. Collinson spoke of the diagnosis and treatment of perforated gastric and duodenal ulcer. His immediate operative results were far better than those operated at a more remote period. Simple closure of the perforation without gastro-enterostomy gave better results. In ulcer of the lesser curvature the following figures summarize Mr. Collinson's results which are in keeping with those of his distinguished chief, Sir B. G. A. Moynihan.

Ulcers of lesser curvatures:

Wedge-shaped excision—

30 per cent. cured.

4 per cent. improved.

45 per cent. recurrences.

Gastro-enterostomy alone:

61 per cent. cured.

5 per cent. marked improvement.

1 per cent. unimproved.

Excision and gastro-enterostomy:

6 in 9 cured.

These observations were in line with those of Drs. Deaver, Ochsner and Finney.

Dr. C. H. Bunting detailed his laboratory and clinical observations on "Hodgkin's Disease," with a description of the organism discovered by him and called the *corynebacterium hodgkini*.

A paper on "Penetrating Wounds of the Abdomen," by Dr. Randolph Winslow of Baltimore, brought the session to a close. Doctor Winslow summed up the modern ideas with a plea for intervention early, when conditions warranted. However, in military surgery, non-intervention might be the better policy.

The writer was unfortunately unable to be present for the Symposium on Surgical Service in the Hospital. This was a joint session with the Section on Hospitals.

The officers elected to preside over the Surgical Section at the next meeting were:

Chairman, Dr. Charles H. Peck, New York.

Vice-Chairman, Dr. Wallace Terry, San Francisco.

Secretary, Dr. E. S. Judd, Rochester, Minn.

Orator, Dr. S. J. Mixter, Boston.

Delegate, Dr. Dean Lewis, Chicago.

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## Orleans Parish Medical Society.

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### SPECIAL MEETING ON PLAGUE. NOTES.

On June 29 a large meeting of the members of the Society was held (157 members present), at which several papers were read relating to plague, and the cases of the disease occurring at the Charity Hospital were discussed. The meeting brought out the fact that the State, City and Federal authorities were active in the preliminaries against plague infection.

A motion prevailed directing the president of the Society to appoint a committee of five to assist the constituted authorities. The following were named by Dr. Chavigny, president of the Society: Chairman, Dr. Joseph T. Scott, with Drs. Wm. Kohlmann, C. C. Bass, I. I. Lemann and J. A. Danna. As alternates were named Drs. J. B. Guthrie, W. H. Block and W. T. Richards.

# N. O. Medical and Surgical Journal

## Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

### COLLABORATORS.

- H. D. BRUNS, M. D., Surgeon-in-Charge Eye Department, Eye, Ear, Nose and Throat Hospital, New Orleans.
- E. M. DUPAQUIER, M. D. (Paris), Prof. of Tropical Medicine, Tulane Univ. of La.
- A. G. FRIEDRICH, M. D., Dean of School of Dentistry, Tulane Univ. of La.
- J. T. HALSEY, M. D., Prof. of Pharmacology and Therapeutics, Tulane Univ. of La.
- JOSEPH HOLT, M. D., Ex-President Louisiana State Board of Health, New Orleans.
- FELIX A. LARUE, M. D., Prof. of Operative Surgery, Tulane Univ. of La.
- E. S. LEWIS, M. D., Emeritus Prof. of Obstetrics and Gynecology, Tulane Univ. of La.
- OTTO LERCH, M. D., Prof. of Medical Diagnosis, Tulane Univ. of La.
- R. CLYDE LYNCH, M. D., Prof. of Diseases of Ear, Nose and Throat, Tulane Univ. of La.
- E. D. MARTIN, M. D., Prof. of General Surgery, Tulane Univ. of La.
- RUDOLPH MATAS, M. D., Prof. of General and Clinical Surgery, Tulane Univ. of La.
- AUGUSTUS McSHANE, M. D., Lecturer on Diseases of Ear, Nose and Throat, Tulane Univ. of La.
- PAUL MICHINARD, M. D., Prof. of Obstetrics and Gynecology, Tulane Univ. of La.
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- F. W. PARHAM, M. D., New Orleans.
- A. W. DEROALDES, M. D., Surgeon-in-Chief, Eye, Ear, Nose and Throat Hospital, New Orleans.
- E. A. ROBIN, M. D., Prof. of Diseases of the Eye, Tulane Univ. of La.
- EDMOND SOUCHON, M. D., Curator Museum of Anatomy, Tulane Univ. of La.
- J. A. STORCK, M. D., Prof. of Diseases of the Digestive System, Tulane Univ. of La.
- ROY M. VAN WART, M. D., Lecturer on Diseases of the Nervous System, Tulane Univ. of La.
- ESPY M. WILLIAMS, M. D., Patterson, La.

### UTOPIA IN MEDICINE.

**\$40,000,000 for medical education!** Such a startling announcement was recently made in the daily press anent the will of one Patrick Campbell, of St. Louis, leaving such a sum to the St. Louis University Medical School, under conditions which make this vast amount available some seventy-five years hence. As generally received, the news makes us dream of possibilities in medical education and provisions. No one can foresee the status of medical education in another generation, but plans may be laid looking to ideal conditions with all of the facilities and entirely untrammelled so far as the means of carrying these out are concerned.

Already the effort of the medical world is towards preventive medicine. Governments are organized and are organizing in large



lines to attack the very elements creating disease. Bodies of thoughtful scientific men are engaged in many phases of the problems in disease. Morbidity statistics everywhere show the indications for attack and with the laboratory discoveries developing every day measures for prevention, diseases of communicable types are on the way to obliteration in the future office of medical practise.

The initiative has already been taken in the hygienic care of future generations, so as to anticipate disease, by thoroughly charting the infant and even the adult in health institutes so that, by systematic physical examination at regular periods, any variation from the normal may be noted and corrected before disease makes any advance. The surgeon, on the other hand, has attained that degree of skill, which will before long make of him an expert at pruning the unnecessary or threatening tissue so that before disease threatens, a healthy economy may be established in perfect accord with the intention of the human body and its functions.

There are acute problems today, and perhaps there will be others fifty years hence, for civilization carries with its ponderous progress many evils which forecast the sacrifice of life in the development of society to its highest purposes and efficiency, and diseases of functioning organs develop as a logical consequence.

But, with unlimited wealth available, the progress of medical science can be imagined only as the future opens up.

Conquest of the terrors of disease has already been attained. The people of the world have grown suddenly sane in the rational apprehension of diseases formerly wildly epidemic, largely through fear and ignorance. The education of the public has accomplished much, but, when the physician himself is put in the way of unlimited opportunities, then the day of disease is past—except where accident or the exigencies of a strenuous life may define unusual forms which may need special care.

But, with a princely bequest of forty millions of dollars, the Utopia of medicine should be at hand. A fraction of that sum suffices to-day for the best of medical schools; what the future of the school selected for such a blessing may be, must be divined, for it may not be read by any mind to-day.

**PROGRESS IN MEDICAL EDUCATION.**

Under Government imprint there has just been issued an analysis of ten years' changes in medical education in this country, prepared by Dr. N. P. Colwell, the efficient secretary of the Council on Medical Education of the American Medical Association. The data have been made possible by the systematic work of the Council, which was created in 1904, and by the continued concentration of effort in the Association of American Medical Colleges, for the past four or five years, concerting its endeavors with those of the Council.

In the ten years a total of 79 colleges went out of existence; 47 by merging with other schools, and 32 by extinction. This renovation of medical schools has been largely due to the efforts of the Council, together with the direct result following the report of the Carnegie Foundation.

The indirect result of ventilating the state of medical education in colleges has been upon State examining boards, which have reacted by making better requirements for licensure and by a better administration of the requirements, through more thorough examinations. Twenty-five State examining boards (Louisiana among them) do not recognize diplomas from inferior schools, and fifteen State boards are now requiring one or two years of preliminary college work before the study of medicine is begun, thus practically limiting examination to graduates of schools in the first rank.

There are now 52 medical colleges requiring one or more years of college work preparatory to medical study and the report states that 23 more will require one or more years within the year.

The improvement in the make-up of the faculties, the attention to research, the increased clinical facilities are all noted.

The cost of medical instruction is presented very plainly and it is to be hoped that many citizens outside the medical profession may read that part of the report so as to assimilate the altruistic motives which at present govern medical education as administered in schools of the first rank.

In returns from 65 medical schools for 1912, the total average annual cost per student was \$410, while the average annual income was \$122. In some schools, the excess of cost over income was from \$500 to \$2,744 per student.

The proper emphasis is laid upon the comparatively small increase in the charges to students, in spite of the great increase in

cost of instruction. Even thus there are many students, otherwise qualified, who are knocking at the door of medical education, asking for smaller charges or for free tuition. State Legislatures have responded liberally in some States but, for the most part, the political bodies have not realized the value of the medical college among the assets of the State.

There is a very sane interpretation by the reporter of the current opinion regarding the hospital intern year. Some colleges are endeavoring to require it for the degree. The trend is, however, to leave this requirement for State examining boards, where such essentially post-graduate fulfillment would seem to belong.

No survey of medical education could be complete without some reference to post-graduate medical instruction, and Doctor Colwell devotes considerable space to this phase of the general problem.

The old-time post-graduate medical school has no place in modern medical education. The graduate of to-day is so much better trained that he has no need for such schools. The older practitioner needs modern methods and technic, and the future post graduate instruction must provide these. The plea is made for coördination of facilities in the large cities so as to make all of them available and the argument is submitted that no post-graduate school has an excuse for existence outside of a close connection with a properly equipped university with modern laboratory facilities. The Council has already begun the study of post-graduate schools and with a view to some standardization for the proper enlightenment and information of the physician who may intend to avail himself of instruction at such institutions. Considerable notice is given by the writer of the report to graduate courses in public health, and attention is called to existing schools at which such instruction is given. In naming Harvard, the University of Pennsylvania and the University of Michigan, we presume the reporter inadvertently overlooked the School of Hygiene and Tropical Medicine, including Preventive Medicine, in the College of Medicine of the Tulane University of Louisiana, which has been giving such instruction for the past two years and which is authorized to grant degrees, just as do the schools mentioned in the report. The interest in public health now generally prevailing, and the fact that the Rockefeller General Educational Board has undertaken a special study of the question, would argue the continued effort on the part of the Council to make this an important feature of future deliberations in medical education.

A plea is made, in the final passages of the report, for a uniform standard for medical licensure and for medical education, though no solution is suggested.

Both the Bureau of Education of the Department of the Interior and Doctor Colwell are to be congratulated upon this report, which is timely and comprehensive, and which should be placed in the hands of every intelligent citizen, lay or medical, so that it may provoke earnest contemplation for the good of further progress in medical education.

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### THE SOUTH'S NEW STANDARD IN MEDICAL EDUCATION.

For a number of years the state of medical education in the South has been held up as deplorable and as in the way of reform. The question has even been mooted of having separate standards for the South so that lower entrance requirements might prevail. It is gratifying, therefore, to learn from the report of the Council on Medical Education to the House of Delegates at Atlantic City that things have changed. We are appreciative, too, of the fact that the following statements have emanated from authoritative sources without undue influence, and we would especially note the last sentence here quoted:

#### “MEDICAL EDUCATION IN THE SOUTH.

“It is desirable at this time to pay a deserved tribute to the medical colleges of the South for the remarkable manner in which the problems of medical education have been grappled with. Although they have had apparently greater obstacles to work against than were found in other sections of the country, nevertheless it seems these hindrances are rapidly being overcome. They still have to deal with a very large problem—that of preliminary education—but even this is being firmly and admirably met.

“In 1907, when the Council's first classification was prepared, the Southern section of the country (not including Missouri and Kentucky) had forty-one medical colleges, and of these only seventeen, or 41.5 per cent., could be rated in Class A. On the other hand, several were almost entirely without equipment and one was an out-and-out diploma mill. Since that year, however, by mergers or otherwise, the total number of medical colleges in this section has been reduced to twenty-four, and of these, twelve, or 50 per cent., are in Classes A and A+, and, leaving out of consideration a few of the colleges in Class C, the proprietary feature in medical education has entirely disappeared.

“As to requirements for admission, of the twenty-four colleges in the Southern section, eighteen, or 75 per cent., are either already requiring the one year of college work in addition to a four-year high school education, or have announced the requirement to begin this fall. The most serious problems of medical education are no longer to be found in the South, but rather in some of the large cities of the East and North.”

## MERIT MEETS REWARD.

The American College of Surgeons had a successful gathering in Philadelphia on June 22, with a large attendance of fellows. Many addresses were made and a number of names were added to the list. Louisiana has her quota, including Drs. Blanchard, Hunt, Lawrason, Ragan and Sutherlin, of Shreveport; Drs. Crawford, Joachim, Landfried, Lynch, Nelkin, O'Kelley, Smith (Victor), and Smyth, of New Orleans. These, with the earlier elected members, give Louisiana a fair representation.

Of more gratification, however, than the recognition of the good work of our friends named above, was the unusual distinction conferred upon our fellow-citizen and much esteemed confrère, Edmond Souchon, Emeritus Professor of Anatomy and Clinical Surgery in Tulane University. There were three American surgeons named as Honorary Fellows, Thomas Addis Emmett, of New York, Francis J. Shepherd, of Montreal, and Edmond Souchon, of New Orleans. We, who have enjoyed the tutelage of this Nestor among teachers feel that we may share the honor which has come to him and that this recognition of past services and of earned distinction may be a stimulus to those who come after to follow in the shadow of his example of service.

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## THE EXPANSION OF THE PUBLIC HEALTH SERVICE.

Rural sanitation and mental hygiene are the objects of recent national legislation placing these two fields of effort within the province of the United States Public Health Service.

Gradually the Treasury Department is taking over the main health functions of the people and with the activity of the State boards of health everywhere there will be coördination in the course of time.

There is also agitation afoot for the national control and care of leprosy. The American Dermatological Association, in May, and the American Medical Association, in June, have both memorialized Congress by comprehensive resolutions. At the American Medical Association meeting, the dermatological section made leprosy the subject of special discussion and Assistant Surgeon-General Rucker, of the Public Health Service, submitted a comprehensive bill for consideration.

The expansion of the Public Health Service is desirable. We have long ago concluded that the Owen Bill was decadent, if not deceased, and with the activity of the Public Health Service in obtaining almost all desired legislation, it is only a matter of time when all the main issues of the Owen Bill will have become fixed by law as parts of the function of the Public Health Service.

We can see the growth of the Public Health Service to that point when the Treasury Department can no longer consistently control it, then an independent division of the government will develop and demand recognition. So long as the main object is attained, we should be content. The politically inclined among the American Medical Association may not wish to surrender the principle of the independent administration of a health bureau, but the main object is the consideration of public health.

The effective work of the presently constituted Public Health Service must commend itself to all, even though we may now and then be critical of certain lapses, due more to organization, or lack of it, than to intent.

The duty of the Federal Government is plain in the matter of preventive medicine and if to the quarantine functions of the Public Health Service there are added the opportunities of research, of rural education in sanitation, and the study of mental conditions, there can only good come of it. The public needs education and, no matter how well individual States may have undertaken the task, a paternal government, with unlimited means, can always do better.

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### **MEDICAL ADVERTISERS REACHED BY LAW.**

The pure food and drug law permits patent medicines and leaves their final fate to the growing intelligence of the consumer. Many newspapers still further the fakirs by accepting advertising matter. A bill has been presented for act of Congress covering the use of the United States mail by medical frauds. The bill calls upon the Interstate Commerce Commission to restrict transportation of such substances. The best of the bill, however, covers the use of the mails by magazines or newspapers carrying such advertisements of frauds. The section in point reads as follows:

“That no person or corporation owning a newspaper, magazine or other publication, nor any agent or representative thereof, shall publish

and send by United States mail or by any common carrier, from one State or Territory, or from the District of Columbia, into another State or Territory, or from any State or Territory into the District of Columbia, any advertisement, publication, or other information of, or concerning, any false and fraudulent remedy or cure, or any false or fraudulent remedy or device for the curing of any human disease, injury, or ailment; and, for the purpose of enforcing this section of this act, the acts of any corporation, in violating the provisions of this section, shall be taken and considered as the acts of the officers thereof.

“That any person or persons who knowingly and wilfully violate any of the provisions of this act shall, for every such offense, be punished by a fine of not more than \$5,000 or by imprisonment at hard labor for not more than five years, or both, at the discretion of the court.”

So much for the bill, which is ample in its provisions and which is just what is wanted to give the *coup de grace* to the patent medicine fraud. But so many newspapers are dependent upon the advertisements of these drugs that a strong lobby may be expected in opposition to such manifestly advanced legislation.

The outcome of the bill will demonstrate whether the people really believe in sane, preventive medicine legislation or not.

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## THE PLAGUE AND ITS PREVENTION.

In 1912, when one rat in New Orleans was found infested with plague, some agitation resulted, and several hundred rats were examined to the negative laboratory findings. In the meantime, plague has occurred at a number of points to the South of us, and in Porto Rico and Cuba (Havana) enough cases have been reported to have occasioned extraordinary precautions.

Elsewhere in THE JOURNAL we print the observations on the first cases of plague recognized in New Orleans, and call attention to the type so far found.

The Public Health Service has been promptly placed in charge of the situation in New Orleans, and with the voluntary subordination of the State and city health authorities, who are coöperating in every way.

Surgeon-General Rupert Blue was prompt in reaching New Orleans, and when he had looked over the field, he placed Assistant Surgeon-General W. C. Rucker in control, with a corps of experienced and qualified assistants. Assistant Surgeon-General Rucker has repeatedly declared that there is no need of apprehension; that all precautions have been taken; that commerce and shipping need

not be interrupted except so far as proper provision for rat destruction and rat-proofing are concerned.

The people of New Orleans and the medical profession are cooperating fully, with a view to a wholesale rat extermination throughout the city, and all means will be employed. The State and city have together provided the means to begin the campaign. New Orleans has the distinct advantage over San Francisco, where practically no serious measures were employed until two years after plague was known to exist. In many hundreds of rodents examined, as yet only seven plague rats have been found, in spite of the \$5 bonus offered by the authorities. The district in which the cases so far have emanated is under sanitation, and this is thorough.

The people of the whole South are concerned in rat-extermination and the effort should be simultaneous everywhere, so as to remove the likelihood of spread of the disease.

In 1912, when the plague was agitated THE JOURNAL printed a suggestive outline for public instruction intended for general discussion, and we now abstract a part of this bulletin with the idea that the information may attract more notice to-day than it did two years ago.

The public should know the media of plague spread and should be warned of the precaution to take.

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### THE RAT, THE FLEA AND THE PLAGUE.\*

*Bubonic plague is a rat and a rat flea disease.*

Plague has existed since earliest historic times.

For 3,000 years the rat has been suspected as the means of the spread of the plague.

Rats may be infected with the plague for years before human plague develops.

#### **NO RATS—NO PLAGUE.**

The plague is due to a germ, called the plague bacillus (*Bacillus pestis*), discovered by Yersin, of the Pasteur Institute, during the Hong Kong epidemic in 1894.

This germ depends upon some living body for its life and existence and it lives in animals and insects as well as human beings; the rat and the rat flea are the particular animal and particular

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\* From a bulletin prepared by Dr. Isadore Dyer for the Medical Plague Conference Committee in September, 1912.



insect preferred by the plague bacillus. Ground squirrels and other rodents may become infected with plague as well as rats.

The plague has been around and over the earth several times—traveling overland and by sea.

Wherever ships carry rats the plague may go.

Plague may be chronic in a rat, lasting a long time without killing the rat. The body companion of the rat, the rat flea (*Pulex Cheopis* and *Pulex Ceratophyllus fasciatus*), shares the disorder; only the plague usually kills the rat, while the germ of the plague grows in the flea without killing it. Dead rats in plague times are apt to be more dangerous than live rats, for the fleas leave them and, though they prefer rats, if there are no rats, they will attack the next passerby, human usually.

**PLAGUE, RAT, FLEA, MAN, PLAGUE, RAT, FLEA AND MAN AGAIN, so the cycle runs, unless interrupted.**

**KILL THE RAT AND THE FLEA and there can be no plague.**

The plague usually spends itself finally, when epidemic, by attacking or destroying rats and human beings in a community, to such an extent that there are no more victims.

Two plague pandemics in the 14th century destroyed over 75,000,000 people in two years! A loss of life almost equal to 85 per cent. of the present population of the United States! Even today the mortality runs to about 70 per cent. of those attacked by the disease.

The plague kills the human being rapidly; the rat less rapidly, and the rat flea not at all.

**NO FLEA, NO PLAGUE; NO RATS, NO FLEA!**

Plague is usually less prevalent in cold weather because fleas are not as active as in hot weather and because rats keep more in their nests and burrows.

Rat fleas bite human beings, *the scratching rubs in the infection* and the victim of the flea is liable to inoculation with the plague.

*Don't scratch insect bites!*

It requires personal contact with the victim of the plague for another human to contract the disease from him, *provided there are no fleas about*. Segregation of the victim of the plague prevents the spread of the plague, just as with small-pox, scarlet fever or diphtheria. There is no reason for an epidemic of plague, if there are no fleas and no rats to carry the infection from house to house, and, therefore, from man to man.

In 1900 plague appeared in San Francisco. If the public had been educated as to what plague is and what to do to prevent its spread, there would have been less to do to check the disease. The spread of plague in former times should have been sufficient warning to San Francisco—and the likelihood of its coming was a matter of constant apprehension by all who had thought seriously about it.

**IT IS NOT TOO LATE TO BEGIN THE WARFARE NOW.**

Even if plague-infected rats are found in the laboratories of the Health Board, there is still only the *likelihood* of human infection and not a *necessary* infection. *If rats are killed with their fleas*, the likelihood grows less.

This is the age of common sense and, with common sense of *preventive* medicine.

**NO RATS, NO FLEAS; NO FLEAS, NO PLAGUE!**

**KILL THE RATS AND THE FLEAS!**

San Francisco had a second epidemic of the plague beginning in 1907. This time the people *were* educated.

The health authorities joined with all the people in a crusade against rats and their fleas. All commercial bodies, religious and fraternal organizations and all organized bodies joined in a common cause.

Every householder became interested, and a systematic rat extermination was instituted and the pest checked.

Everybody worked, and there was no unnecessary fright or scare.

We have that experience to guide us. We have the advantage of San Francisco, for we have begun in time.

We are trained by the experience of San Francisco and we are warned by the experience of all ages in the spread of the plague.

In San Francisco all kinds and sorts of people got together to meet an emergency.

**We must get together now!**

WHAT EACH HOUSEHOLDER AND EVERY CITIZEN CAN DO  
TO PREVENT PLAGUE.

1. Obey the Law. Use only metal garbage cans and see that they are always covered.
2. See that no foodstuffs are lying around for the rats. *Starve the rats* and they will be forced into the traps. Set the example for your neighbor.

3. Catch and kill all rats on the premises. See that rats when caught are AT ONCE dipped in strong (1-1,000) corrosive sublimate solution or in kerosene oil. The traps and rats together may be sprayed instead with equal parts of kerosene oil and soap suds water. *This will kill the fleas.* Pure kerosene is better still.  
**Do not handle rats nor cages nor traps** with the hands until the dipping or spraying has been done—for *one infected flea may come your way.* Use tongs or cloths soaked in kerosene for handling the traps and rats.
4. See that all barns and stables are cleaned up. Where there is wooden flooring, try to have this changed to concrete, or tear up the wooden flooring and use gravel.  
 Leave no grain, hay, manure, or the like lying about. In other words, remove all possible rat food or material for rat or flea nesting.
5. Sprinkle cholride of lime in all places likely to be infested with rats— or sprinkle the kerosene soap suds emulsion. Both will kill fleas.  
 In mopping floors in homes, stores, etc., use a small amount of kerosene in the bucket used for the purpose. This will fill the cracks of the floors with a substance which is preventive of fleas.
6. *Chicken yards are rat nests.* Either concrete the flooring of chicken coops or use elevated cages for the chickens, with a concrete flooring beneath to catch the droppings and the stray corn or foodstuffs. The floor should be cleaned frequently so as to prevent accumulations which might attract rats.
7. Keep all premises clean. *Rubbish harbors rats.*
8. *Talk rats* to every one of your neighbors and to every one you meet, until the extermination of rats and mice becomes a prime question. Keep it up as long as a rat or a mouse can be destroyed, and do not overlook the fleas.  
**NO RATS, NO FLEAS; NO FLEAS, NO PLAGUE.**  
**Make that the slogan!**
9. When subscription is asked for the campaign against rats, give your share, *no matter how small.*  
 It will mean organization of the proper forces to fight the conditions here.
10. Remember that *one* diseased rat in your backyard may cost the lives of all of your household.
11. Until asked to bring rats to a central point, burn all carcasses promptly, after dipping or spraying for the fleas.

In Manila, both rat plague and human plague have been controlled and eliminated by systematic and open co-operation in destroying rats in all dangerous areas first and wholesale afterwards.

Previously, both rat and human plague prevailed epidemically. The example of Manila should preclude any fear of failure here. Rats may have plague for years and no human case develop.

*Kill the rats!*

**No rats, no fleas; no fleas, no plague!**

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## Department of Internal Medicine.

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In Charge of DR. E. M. DUPAQUIER, New Orleans.

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NOTES ON THE PLAGUE.—While it is correct on the part of our Public Health Service experts, for practical purposes, to direct their attention to the rat exclusively, and to so instruct the public, it is desirable to publish more extensive information regarding plague, which may account for the occurrence and location of cases, under peculiar circumstances, with a view of solving the primary question of preventing the spread of the disease. The knowledge of all etiological factors is essential for the control of preventable diseases. It is quite natural to assume that physicians and laymen will seek all possible information on the subject in the *JOURNAL*, so I thought it useful to collect many of the scattered facts relative to plague which are worth reading and weighing. Nowhere have I found, of course in the limited boundary of my researches, a more compact presentation of uncommonly known facts, next to commonplace statements, than in the "*Précis de Parasitologie*," 1913, Paris, by Prof. E. Brumpt, chief of laboratory of the Faculté de Médecine, Paris, etc., pages 648, 649 and 650, under the head, "*Rôle of Fleas in the Transmission of Plague*," the translation of which chapter follows:

Epidemics of plague in man are preceded by epizootics in various wild animals, in particular rats, which present the type of bubonic plague. This fact is known from the remotest antiquity.

Spontaneously, plague has been observed in the large brown rat, the black rat, the mouse, even in the swine (?) which presents an attenuated disease, in the ambulatory form, therefore, very dangerous; finally, in two other large rats: *Nesokia bengalensis* and *Nesokia bondicota*.

Squirrels, apes and other animals may probably play a rôle in certain epidemics.

In Australia, spontaneous plague has been observed by A. Thompson, in 1904, in the brown rat, black rat, the mouse, and in the Zoo at Sydney, in one cat, one antelope, seven marsupials and three guinea-pigs. In Oriental Siberia and Northern India it is frequently found in a marmot, *Arctomys bobac*.

It is a French physician, P. L. Simond (1898), who first explained the link between the human and the animal epidemics. Simond demonstrated that fleas taken from a rat which died of plague could transmit the disease to healthy animals. He demonstrated, moreover, that the *Bacillus pestis* multiplied in the intestines of the insect. That discovery was confirmed by Gauthier and Raybaud (1902) at Marseilles; by Verjbiske (God bless him!), 1902-1903, and by the important English commission in India.

The experiments of these different authors have shown that the following fleas, in order of importance, are capable of transmitting plague: *Xenopsylla cheopis*, *Ceratophyllus fasciatus*, *Pulex irritans*, *Ctenopsylla musculi*, and *Ctenocephalus canis*.

All these species bite the rodents; the second and the fourth do not bite man, fortunately so, since they are quite common on the rodents of all Europe. It can be affirmed that many other fleas can transmit plague, since but a few species experimented with have given negative results. It is interesting, therefore, on the one hand, to know the fleas which live on domestic and on wild animals, and, on the other, the species capable of biting man.

The *Bacillus pestis* can live twenty days in the digestive tube of fleas.

Most recent researches show that the flea does not inject the microbe of plague with its saliva; **its dejections, feces**, are the infectious material. The germs deposited on the skin penetrate into the organism through any solution of continuity, but particularly through the punctured orifice of the flea-bite.

Bubonic plague, whose starting point is cutaneous, is the most common clinical form, in man as in animals. On 4,000 dead rats examined in India, the English Commission has always observed the bubonic form, which fact allows us to discard infection of rats by way of the intestines; this latter channel, indeed, produces only hypertrophy of the mesenteric glands.

The localization of fleas on the necks of the rodents, back of their heads, explains the frequency of cervical and axillary buboes in those animals.

Closing, I add to this translation the following from the *International Medical Annual*, 1914, page 439:

Extensive inoculations of wild rats caught in various parts of India, to test their degree of immunity, have been carried out, which clearly show that they are most immune where plague has been most severe and prolonged, and least where epidemic plague has not occurred, as in Madras City. This immunity may be transmitted by the parents to their offspring who have not been exposed to plague. Chronic and resolving plague is again dealt with at length, and many new data are recorded, while the condition has been produced experimentally and its stages traced.

Interesting observations on flea-breeding are given, which show that the process is most active in wet weather, with a moderate temperature, and least active under dry and hot conditions, the humidity being the most important factor at Poona. The seasonal variations correspond to those of the natural prevalence of fleas on rats. Adult fleas live longer in a cool and moist atmosphere than in a hot, dry one.

We are ready to stand in New Orleans some "hot, dry ones," if only it could help us.

DUPAQUIER.

EMETINE IN THE TREATMENT OF BRONCHITIS AND PULMONARY TUBERCULOSIS.—The good results obtained with emetine by French practitioners in diseases of the respiratory tract induced Mr. Raeburn (*Brit. Med. Journ.*, March 28, 1914) to experiment with the drug, administered sub-cutaneously, in patients at the Antituberculosis Dispensary at Battersea, and he was so much pleased with the results that, in view of the notable lack of drugs at our command in the routine management of broncho-pulmonary affections, he does not hesitate to consider emetine as a new and valuable therapeutic measure. The author's observations can be divided in three groups:

In the first are cases of chronic bronchitis, more or less suspected of having tuberculosis, but with no symptoms or signs of the disease. Mostly all were rapidly improved, and even cured; cough and expectoration stopped, general condition righting itself.

Those who suffered from a weak heart were the only ones not deriving any benefit from the drug. Patients whose cardiac function is lacking must be prepared beforehand by appropriate means

to stand the action of emetine. As the development of pulmonary tuberculosis is assisted by chronic bronchitis, emetine, which may cure the latter, can be looked upon as a prophylactic against phthisis.

In the second group are positive cases of tuberculosis, but with closed pulmonary foci (no bacilli in sputum). In these, emetine cured the bronchitis and improved the general condition.

In the third group are cases of tuberculosis with bacilli in sputum. Here, emetine quite frequently exercised a most favorable action, but less constantly than in the preceding groups.

The author thinks that, in cases of this third group, emetine, though having no influence on the tubercle bacilli, can, however, check the congestive state of the pulmonary parenchyma and of the bronchial mucosa.— (*Biologie médicale*, April, 1914.)

DUPAQUIER.

EMETINE INTOXICATION. RECOVERY.—Just now, when emetine is more and more employed, not only in amebic dysentery, with its complications, and in medical hemorrhages, but also in diseases of the respiratory tract, bronchitis, pneumonia and pulmonary tuberculosis, it is interesting to know the secondary ill-effects which, like all active drugs, it can produce at times when administered in large doses. From that viewpoint a communication recently made before the "Société clinique des hôpitaux de Bruxelles," by Messrs. Spehl and Collard (*Presse médicale*, April 15, 1914) is most instructive. It refers to a male, 28 years old, having lived in the tropics, who was suffering from amebic dysentery (fifteen stools a day). Upon admission, December 19, 1913, he was given three centigrams of emetine hydrochloride by needle, twice daily, during the first six days, then three times daily. There was no reaction, local or general. Under this treatment, aided by enemata, with solution of hydrogen dioxide and by a milk and vegetable diet, the number of stools decreased rapidly, and abdominal pains were markedly bettered, though persisting. The number of stools, from ten to fifteen daily in the beginning, was reduced to three to four daily after one week's treatment. Yet the appearance of the feces was hardly changed, and the persistence of mucus and blood induced the continuation of the emetine; so, for six more days, the three injections of three centigrams each were continued daily.

It is then that the period of intoxication began without warning.

About January 20 the patient complained of a general lassitude, pronounced in the upper and lower extremities, but mostly in the nucha and neck—so much so that he was unable to hold his head up. Injections are at once suspended, but, to no avail. .

January 25 the sensation of fatigue was manifested by a flabby paresis of all muscles. Voluntary movements were very painful. There existed a great difficulty to chew, swallow, and articulate sounds. The voice was faltering, low, monotonous. The amount of urine remained normal. The following day the situation was aggravated. A paralysis of the respiratory muscles was feared. The heart, instead of being slowed, as stated in ipecac intoxications by Pecholier, Rebaul, Grasset and Amblard, beats rapidly and weakly. Pulse, 130; no change of temperature (which remained normal) to explain this acceleration. The cutaneous reflexes persisted, but they were weakened. The tendon reflexes were markedly decreased. Face was edematous.

Examination of urine at this time showed a decrease in the amount of urea and chlorides; no albumin. Tanset's reaction, with ammonia and mixture of ether and amylic alcohol for alkaloids, was negative.

Owing to the seriousness of the situation, patient received diuretic draughts, tannic acid, camphorated oil, and alcohol rub.

January 30 the condition was better; weakness still extreme, but speech easier; motions freer, but still very painful; pulse still beat 118.

February 5, improvement very marked; reflexes were normal again; edema of the face has disappeared; urine showed increase of urea and chlorides; asthenia was very much less pronounced. Patient still complained of some pain along the descending colon, but the stools were formed and contained no more blood or mucus. A few days later the patient left the hospital, feeling a little weak yet.

Summing up, this patient received daily a dose of nine centigrams of emetine—that is, a dose inferior to that which was recently recommended, viz: eight to twelve centigrams daily. Such a dose appears to be harmless if continued during six days; but, if continued, accidents like those related above may show. The toxic phenomena which had already been determined by the experimentations of Choupe, Polichronie, Dyce Duckworth, are rather hard to detect, being so insidious from the onset.



The characteristics of this intoxication are, paresis of the extremities, decrease of reflexes and muscular contractility, finally asthenia. To prevent such a mishap, Messrs. Spehl and Collard advise, after an intensive treatment (series of five successive injections of ten centigrams daily, for instance), to discontinue the emetine and resume the course a few days later should signs of the disease be still present.—*Ibid.* DUPAQUIER.

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## Department of Obstetrics and Gynecology.

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In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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RUPTURE FOLLOWING CESAREAN SECTION.—Breitenstein, L. J., in the *Journal of the A. M. A.*, Vol. LXII, 1914, page 689, reports an unusual case of rupture following an abdominal Cesarean section on a young woman seventeen years of age, with a normal pelvis, which operation was done because of the presence of a large pelvic hematoma. The section was followed by a purulent discharge from the vagina and the abdominal wound. She recovered from this. Two and a half years later she was delivered spontaneously, and with a normal puerperium. Eighteen months later she applied for treatment in a San Francisco hospital, when it was found that an eight months' pregnancy existed. She had irregular pains, abdomen distended, temperature 37.6° C., pulse 100, and respiration 24.

There was neither nausea, evidence of hemorrhage nor shock. Although the patient claimed life was felt the day before her admission to the hospital, when she was examined there was no sign of it. By abdominal palpation the position of the fetus could not be made out. The head was freely movable. The cervix was hard and thick, and there was no blood in the vagina. "On introducing the finger into the lower segment of the uterus it was found empty." Cesarean section was done at once, when it was found that the *intact* bag of waters containing fetus was free in the abdominal cavity and the placenta lying on the external surface of the uterus. The fetus was dead. There was no blood in the abdominal cavity, but a large black clot was removed from the left broad ligament.

The uterus was *firmly contracted*. The rupture was confined to the old scar from the Cesarean section. Hysterectomy was performed. Recovery.

The author's conclusions:

1. A Cesareanized woman who gives a history of an infection with a purulent vaginal discharge in the puerperium, is a good candidate for rupture of the uterus in one of her consequent pregnancies.
2. The mere fact that a Cesareanized woman has delivered herself spontaneously is no reason for believing that she is free from the danger of rupture of the uterus with her future pregnancies.
3. Rupture of a Cesarean section generally takes place in a scar resulting from an improper wound-healing in the presence of infection. Where such a probability is apprehended, operative measures for sterilizing the patient should be employed.

MICHINARD.

RADIOTHERAPY IN CARCINOMA.—Schauta, F., as reported in the 1913, Vol. XXXVIII, of the *Monatsschr. für Geburtsh. u. Gynäkologie*, found that no effects other than neurotic change occurred in cervical carcinoma after twenty-four hours' use of 10 milligrams of mesothorium. Sixty-six milligrams of mesothorium, with a lead plate 0.3 m. m. thick and a silver plate 0.5 m. m. thick, were applied for seven days. With other cases, he used radium through a 2 m. m. of lead, and 50 to 100 milligrams were used for eight to nine days, and then a rest for eight or ten days given. He found radium more effective than mesothorium. He recommends surgery in all operative cases. After the operation, a not too intense radium treatment is indicated.

The radium treatment is contraindicated where there is severe cachexia or where the septa between the bladder or rectum are involved. He claims that a dose of 40 to 50 milligrams of radium is sufficient. It should be left in position five days, followed by ten days' rest. This to be repeated. He has treated sixteen cases.

MICHINARD.

LUTEUM EXTRACT.—In the April 4, 1914, No. 7, issue of the *Journal of the A. M. A.*, Prof. Henry R. Elliott reports successful treatment, with extract of luteum and uterine massage, of a case of infantile uterus in a patient 27 years of age, who had been married five years without pregnancy ever having occurred. The uterus

was the size of a walnut; ovaries not palpable. Menstrual flow of a few days, and that only three or four times during life. Epistaxis very free at times. Her form was that of a boy 18 years of age; narrow hips; undeveloped breasts. No sexual feeling.

Treatment began April 6, 1912, with luteum tablets three times a day, with uterine kneading once a week until May 10. On the 20th of May menses appeared with fair flow for one day. Kneading discontinued entirely, but luteum continued. Her shape later became rounded, breasts and uterus enlarged, and sexual feeling developed. November 25, 1912, evidence of pregnancy. July 2, 1913, delivered of a healthy 6-pound baby. MICHINARD.

RESULTS OF RADIUM TREATMENT IN UTERINE AND VAGINAL CANCER.—The results of radium treatment in more than 150 cases of uterine and vaginal cancer are tabulated by Cheron and Rubens-Duval (*Arch. d'electr. med.*, January 25, 1914). The authors have relied upon massive dosage and the use of penetrating rays and heavy filters. Applications made with apparatus containing 1 or 2 cg. of radium salt may give appreciable results in favorable cases, but most frequently doses as small as this are unavailing. The failure should be attributed, not to radium therapy, but to the tentative and insufficient methods employed. In only two cases have the authors met with entirely negative results, and these were patients whose exhausted organism was incapable of taking advantage of the therapeutic agent in its defense. One of them, for example, was a woman, alone in a foreign city, ignorant of the language, evidently suffering from privations, and believing herself incurable owing to a large cancer of the neck of the uterus. Her nervous vitality, therefore, was low, and there was no spontaneous defensive power available for the radium to assist. On the other hand, turning to their successful cases, the authors assert that massive doses have brought about the cure clinically of an inoperative cancer of the neck of the uterus after only two applications, and in one such case they have been able to verify the cure anatomically. The patient had a large tumor of the right half of the uterine neck, infiltrating the base of the large right ligament and adhering to the bladder. Two applications of radium were given, with a two months' interval between them, and the growth disappeared completely. The patient, however, had an affection of the nerve centers, from which she died fifteen

months after the radium treatment had been stopped, and at the autopsy, which included a histological examination of the organs previously affected, no trace of cancer was found. The following is the authors' summary of results in their 158 cases of inoperable uterine and vaginal cancer and relapses after hysterectomy:

Cure verified anatomically.....	1
Complete clinical disappearance maintained—	
For more than one year (in some cases four years)	22
For about one year.....	15
For varying periods, but patients lost to view.....	9—46
Purely local or temporary with return or extension—	
In situ. . . . .	16
In neighboring organs (bladder or rectum).....	9
Metastases. . . . .	6—31
Improvements under radium rendering operation possible....	12
Improvement, but treatment interrupted from—	
Extramedical circumstances. . . . .	2
Intercurrent disease. . . . .	2—4
Palliation (arrest or diminution of hemorrhage or pain, improvement in general state).....	62
No appreciable clinical result.....	2

—(*British Med. Jour.*, April 25, 1914.)

MILLER.

ACTION OF RADIUM UPON ENLARGED SPLEEN.—H. Schuller (*Berl. klin. Woch.*, February 16, 1914) details some cases of leukemia and similar diseases, characterized by changes in the blood and enlargement of the spleen, in which the application of radium seemed to exercise a strikingly curative effect. In some of these Röntgen rays had been previously tried, and had either failed altogether or ceased to act after a time. The radium was applied either as such, or mesothorium or rademanit were used. The latter are most suitable, as they can be spread over a wider area. In each case the applicators were adjusted in the manner taught by Kietman and Mayer and *a* and *b* rays, as well as the secondary rays, were shut out. Thus, any burning of the skin or harmful effect upon the peritoneum was avoided. The applicators (usually four in number) were applied from five to twelve hours every two or four weeks, according to the skin reaction in each case. The dose was equivalent to from 150 to 500 mg. of radium bromide; 150 to 20 was the quantity mostly used. Altogether nine cases were

treated, and of these sufficient time had elapsed to be sure of the result in four cases. The improvement, both as regards blood count, disappearance of edema and ascites, and diminution in the size of the spleen followed so swiftly upon the adoption of the treatment as to leave no doubt as to its effect. Owing to the careful filtering out of harmful rays, undesirable effects upon the skin or peritoneum were not observed, and where the removal of the spleen was afterwards undertaken the operation was not in any way impeded by peritoneal adhesions. On the contrary, the operation might be facilitated, or rendered possible, where it would otherwise not be so, by the preliminary use of radium to diminish the size of the organ. Even after the employment of large doses (1,500 mg.) the author did not observe any bad general effects. There was no vomiting or dizziness, or feeling of illness, such as has been known to occur after Röntgen therapy. Rather, the patients declared themselves to experience a remarkable feeling of general well-being.—*Ibid.* MILLER.

USE OF PITUITARY EXTRACT.—Frey and Kumpiess (*Zietschr. f. d. Ges. exper.*, May 2, 1914) state that the intramuscular injection of pituitary extract in man is followed by a marked inhibition of the secretion of urine. After a few hours there is reactionary polyuria. This secondarily increased secretion of urine is not a simple diuresis; there is in addition a relative increase in the output of sodium chloride. The effect of extract of the hypophysis cerebri is therefore to be compared with that of other excitants of NaCl excretion; it is in contrast to the diminution in the output of salt which occurs during anesthesia. Ebele (*Zietschr. f. gyn. Urol.*, 4, 1913) has found pituitrin invaluable for the treatment of retention of urine in women during the puerperium or after operations. He finds that its action in promoting micturition is only exhibited if the bladder is full; he therefore waits on an average sixteen to thirty-six hours after the last micturition before giving an intramuscular injection. When once the bladder has emptied itself retention is not again experienced. This action of pituitrin on smooth muscle is taken advantage of by Vogt also (*Dres. M. Woch.*, 1913). He gives it therapeutically in post partum hemorrhage, and also as a prophylactic whenever for any reason flooding may be anticipated as a possibility. In these cases it not only controls or prevents bleeding from the uterus, but stimulates

the normal separation of the placenta. Manual separation of the placenta is a proceeding fraught with danger. It should only be resorted to after the injection of pituitrin and Crede's method of expulsion under anesthesia have equally failed. Pituitrin has also given good results in cases of retained placenta after miscarriage. The dose is up to 6 c. cm., and may be injected either intramuscularly or into a vein. In the latter case the injection should be made very slowly. It should be noted that ill effects upon the mother have been observed to follow the injection of doses even within the limit stated above.—*Ibid.* MILLER.

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## Department of Therapeutics and Pharmacology.

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In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

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STUDIES IN THE METABOLISM OF SOME DISEASES OF THE SKIN.  
—Neiditsch (*Archif. f. Dermatologie u. Syphilis*, Band cxvi, Heft 1) studied a series of forty-one cases of various diseases of the skin, such as psoriasis, ichthyosis, dermatitis herpetiformis, dermatitis exfoliativa, acute and chronic eczema, urticaria perstans urticaria pigmentosa, for the purpose of determining whether there was a greater increase than normal in the excretion of the amino acids, i. e., whether there was a disturbance in albumin catabolism, regarding these acids as the most characteristic elements of the albumin molecule. His investigations led to practically negative results, since in none of these diseases, psoriasis, eczema, nor ichthyosis, could an increase of pathogenetic significance be demonstrated; nor was the quantity of amino-acids contained in a spontaneous bleb of pemphigus vulgaris increased. Geber (*Dermatologische Zeitsch.*, Band, xxii, Heft, 5, 1913), in a study of the nitrogen and sulphur metabolism in psoriasis, found, contrary to the conclusions of Haemerli, recently published, that with a constant weight of nitrogen there was no increase in the excretion of sulphur in psoriasis. The variations in the sulphur excretion which he observed in his cases stood in close relationship to the increase or diminution of nitrogen intake. Although an increase in the

sulphur excretion in proportion to the intake was noticed with a nitrogen-poor diet, he did not regard this at all characteristic of psoriasis.

J. A. S.

THE FUNCTIONS OF THE SPLEEN.—Bayer regards the spleen and the thymus as capable of functionally compensating each other; after splenectomy the thymus does the work of the spleen, and after the thymus ceases functioning the spleen takes up its task. He tabulates the metabolic findings before and two and six months and two years after splenectomy in two cases of Banti's disease, and compares them with those from experimental research and other clinical experiences. The data all confirm the multiple functions of the spleen; it retains the iron set free by destruction of blood cells; it wards off hemolysis and utilizes the stored-up iron in it for production of new cells and hemoglobin, and it produces a hormone which has an inhibiting action on the sympathetic nervous system. The liver can store up iron in the place of the spleen, but it has not such avidity for the iron. With Banti's disease the spleen functioning is seriously impaired, as also is myeloid leukemia, but it is not the same function which is impaired in these two affections. In Banti's disease the retention of iron proceeds normally or is even exaggerated, but the spleen has lost the faculty of working it up into new cells. The iron lies in the spleen as unutilized ballast. After removal of the spleen the iron is eliminated in much larger proportions and intestinal functioning is exaggerated from lack of the inhibiting hormone from the spleen, an exaggerated vagotonic condition. His two patients were young women, and one has passed through a pregnancy since her splenectomy, normal except for signs of pregnancy nephritis.—*Medizinische Klinik, Berlin.*

J. A. S.

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## Department of Nervous and Mental Diseases.

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In Charge of DR. R. M. VAN WART, New Orleans.

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HEMIPLEGIA FOLLOWING OPERATION ON THE PLEURA.—Remark-  
ing that operations on the pleura are known to cause severe nerv-  
ous symptoms, which may be classified as syncopal, convulsive, or  
hemiplegic, Cottin (*Rev. med. Suisse Romande*, June 20, 1912)

relates a case of hemiplegia which followed an operation for empyema. The patient, a robust man of 36, had made a good recovery from the operation, by which, on January 14, about three pints of pus containing pneumococci had been drawn from his left pleura. The cavity was frequently washed out with 2 per cent. solution of collargol and insufflated with oxygen. On February 15, when he was practically convalescent, an attempt was made to measure the capacity of the pleural cavity by Bard's method (*Sem. med.*, 1901, p. 337). The small drainage tube was replaced by a larger tube, which was in connection with a manometer. As soon as a negative pressure was produced in the plural cavity the patient fell back on the bed. He was found to have paralysis of the left arm and leg and conjugate deviation of the eyes and head to the left. The pupils were dilated and it did not react to the light. Babinski's sign was noted. Sensation was everywhere diminished, and there was no perception of light. He complained of pain in his head, and the temperature gradually rose from subnormal to over 102° F. On February 18 a lumbar puncture was made, and clear fluid, containing albumen, urea and polynuclear cells, but no micro-organisms, escaped at considerable pressure. The patient's symptoms were somewhat relieved, and after two more lumbar punctures (February 20 and 25) he left the hospital cured on February 28 and has since been in constant work. In discussing the diagnosis the author notes, first, that the presence of Babinski's sign and the general symptoms showed the hemiplegia to be of organic and not of functional origin. The suggestion of embolism is rendered improbable both by the rapid recovery and by the absence of any cardiac lesion. Moreover, embolism would not account for the amaurosis or for the hemolytic reactions shown by the cerebro-

The possibility of uremia, which might cause very similar symptoms, could hardly be contained, as the patient's kidneys were quite healthy. The author attributes the condition to simple meningitis. It is urged that the disturbance of the pleura was the pretext for an outburst of latent meningitis, to which prolonged suppuration and the slow convalescence of the patient had pre-disposed him.

This theory is in harmony with the observations of several authors who are unanimous in recognizing that the purulent nature of an effusion, a neurotic condition, prolonged sepsis and disturbed renal



functions predispose to these reflex nervous occurrences, of which the determining cause is some operative interference with the pleura.—*Brit. Med. Jour.* VAN W.

CRIMINAL TENDENCIES AND MENTAL DEFECTS IN CHILDHOOD.—Raecke (*Med. Klin.*, January 18, 1914) has pointed out that amongst the children in reformatories and similar institutions mental defects and abnormalities are much more frequent than among children in other institutions. In Frankfort during the last two years Dr. Raecke has carefully and systematically investigated 371 children and youths of this class. Of these, 292 (up to 16 years of age) had already shown criminal tendencies, 175 (or about three-fifths) had been guilty of offenses against property. This corresponds with the usual experience that stealing is the most frequent crime amongst children. The next largest section were those who exhibited sexual deviations from the normal. No less than 52 (or nearly one-fifth) were in this class. Amongst the offenses against property were 23 cases of burglary and 26 instances in which boys had formed societies or bands for burglarious purposes. Some of these were highly organized and had names evidently borrowed from the lurid fiction so plentifully and cheaply provided for this class of youth. They were led by a "captain," elected by themselves, and sometimes took an initiatory oath written in their own blood. In this class the cause is frequently to be found in desire for adventure fostered by undesirable reading, picture theatres, etc., rather than in any real dishonesty. The mental conditions found are very interesting. In only one-fourth of the cases were these normal and the crime the result of circumstances and upbringing. In nearly half of the cases there was an intellectual defect of higher or lower degree. Actual imbecility occurred in 82 cases. In this matter the method of Binet-Simon proved very useful. There were 22 cases of epilepsy, distinct hysteria in 16 cases, and various psychopathic symptoms in 58 cases. Amongst the last mentioned were included only those without accompanying intellectual defect. When that was present the case was classed amongst imbeciles. Actual insanity was rare. It was suspected in 8 cases; in only 4 could the diagnosis be definitely made. The author points out the harmful influence which the sexual cases frequently exercise over their playmates and the undesirability of allowing them to mix freely with other children. VAN W.

PATIENT'S SERUM AS A SOLVENT FOR NEO-SALVARSAN.—In a preliminary note, E. Von Schubert (*Muench med. Woch.*, 1913) states that neo-salvarsan is easily soluble in serum. For an injection 0.45 gram should be dissolved in 10 c. cm. of serum. Patients treated by this method do not experience the unpleasant sequelæ which frequently occur after the use of watery or saline solutions. No carefully distilled water is required, and the operator has a perfectly sterile medium at his disposal. VAN W.

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## Medical News Items.

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THE AMERICAN CLIMATOLOGICAL ASSOCIATION held its thirty-first annual meeting in Atlantic City, N. J., June 26, 1914. The name of the Association was changed to the American Climatological and Clinical Association. Dr. Henry Sewell, of Denver, was elected president. The next meeting of the Association will be held in 1915 in San Francisco.

THE INTERNATIONAL CONGRESS OF ANATOMY will hold its next meeting at Amsterdam in August, 1915.

THE ARKANSAS TULANE ALUMNI ASSOCIATION held its annual banquet on May 20 at El Dorado, during the meeting of the Arkansas State Medical Society. A committee was appointed, consisting of J. M. Proctor, R. A. Hilton and A. H. Cook, to present to the next Legislature a bill to create a State hospital, to be located in Little Rock, to be under the control of the Medical Department of the University of Arkansas. The officers elected for the ensuing year were: President, George W. Murphy, Strong; vice-president, J. S. Mitchell, El Dorado; secretary-treasurer, Earle Hunt, Clarksville, re-elected.

LOUISIANA REPRESENTED AT THE A. M. A. MEETING.—The State of Louisiana was well represented at the Atlantic City meeting. In the House of Delegates, Dr. Louis Abramson, of Shreveport, was in attendance, and the following members were registered in the various sections: Drs. L. Abramson, J. A. Hendrick, J. C. Willis, Shreveport; Thos. E. Wright, Monroe; A. C. Eustis, W. W. Butterworth, S. M. D. Clark, C. G. Cole, H. Daspit, Jr.,

O. Joachim, L. H. Landry, R. C. Lynch, U. Maes, M. Feingold, C. J. Miller, P. A. McIlhenny, J. Smyth, A. T. Weil, F. P. Chillingworth, L. R. DeBuys, J. B. Guthrie, J. B. Elliott, Jr., W. M. Perkins, R. Matas and Isadore Dyer, New Orleans.

ALUMNI ELECT.—At the annual meeting of the Alumni of the State Medical College, Galveston, May 30, the following officers were elected: President, Dr. Holman Taylor, Fort Worth; vice-president, Dr. W. Wallace Ralston, Houston; secretary, Dr. Harry O. Sappington, Galveston.

THE AMERICAN OPEN-AIR SCHOOL ASSOCIATION has been inaugurated at the Bache School, Philadelphia, and this movement has promise of being of much benefit to the twenty million school children in America, as it is intended that other big cities of America will follow the example of Philadelphia.

MEDICAL BILLS IN THE LEGISLATURE.—Considerable activity in medical legislation was evidenced in the recent session of the Louisiana State Legislature, no less than eight bills having been favorably acted on, dealing with pure food, pharmacy regulation, medical practise and medical education. The following bills were passed:

Act No. 282 (House Bill No. 423, by Mr. Martin)—To prevent the manufacture or sale of adulterated or misbranded or poisonous food, medicine or liquor.

Act No. 285 (House Bill No. 530, by Mr. Manion)—To grant to the Louisiana Post-Graduate School of Medicine access to the New Orleans Charity Hospital.

Act No. 56—The general Medical Practice Act.

Act No. 66—Establishing a State Board of Embalmers and prescribing its powers and duties.

Act No. 98—Appropriating \$16,500 to pay for two new dormitories at the Louisiana Hospital for the Insane, Pineville.

Act No. 165—Creating the State Board of Pharmacy, and providing regulations for the sale of poisons and habit-forming drugs.

Act No. 162—Making it unlawful to publish dishonest or misleading advertisements.

Act No 174—Making it a misdemeanor for any physician or midwife to fail to take measures to prevent blindness from ophthalmia neonatorum.

Act admitting the New Orleans Post-Graduate School of Medicine to clinic rights in the Charity Hospital.

Of these bills, the one which concerns the general profession most is that which substitutes a new Medical Practice Act for the old one, which was recently declared unconstitutional. The only

changes made by the new bill in the existing law are in the wording and for the purpose of so clarifying the language of the former law so as to get rid of certain constructions which had been interpreted by the courts. In other words, the new law declares the purpose of the Medical Practice Act in particularity, while the former law allowed a license of procedure which was capable of misinterpretation. In a future issue the *JOURNAL* will publish the new act in full.

THE REGISTRATION AT ATLANTIC CITY.—According to the *Journal of the A. M. A.*, the total registration at the Atlantic City session was 3,958, an increase of 360 over the number of registrations here in 1912 (1912 registration, 3,598).

#### REGISTRATION BY SECTIONS.

Practice of Medicine . . . . .	1,031
Surgery . . . . .	977
Obstetrics, Gynecology and Abdominal Surgery . . . . .	309
Ophthalmology . . . . .	352
Laryngology, Otology, Rhinology . . . . .	211
Diseases of Children . . . . .	142
Pharmacology and Therapeutics . . . . .	24
Pathology and Physiology . . . . .	113
Stomatology . . . . .	68
Nervous and Mental Diseases . . . . .	150
Dermatology . . . . .	87
Preventive Medicine and Public Health . . . . .	153
Genito-Urinary Diseases . . . . .	117
Hospitals . . . . .	24
Orthopedic Surgery . . . . .	86
Registrations without specifying any one section . . . . .	84
Foreign guests and others who registered . . . . .	30

MISSISSIPPI MEDICAL MONTHLY CEASES PUBLICATION.—According to press reports, the *Pan-American Surgical and Medical Journal* of New Orleans has consolidated with the *Mississippi Medical Monthly* of Vicksburg.

NEW DRESS FOR THE ANNALS OF SURGERY.—Because of the increasing amount of material of value offered for publication in the *Annals of Surgery*, the publishers have found it necessary, beginning with the July issue, to enlarge the size of the page and also

to somewhat reduce the size of the type in which the original contributions have heretofore been printed. It is thought that the enlarged size will also enable the publishers to make a better display of the illustrations.

THE WELLCOME HISTORICAL MEDICAL MUSEUM, which was founded by Henry S. Wellcome in connection with the Seventeenth International Congress of Medicine, was reopened on May 28, 1914, as a permanent institution in London. Since closing last October the collections in the museum have been considerably increased and entirely rearranged. Many objects of interest and importance have been added, which, it is hoped, will increase the usefulness of the museum to those interested in the history of medicine. Members of the medical and kindred professions are admitted on presenting their visiting cards.

THE FRANKLIN PARISH MEDICAL SOCIETY met in Winnsboro, La., July 15. Physicians from Gilbert, Wisner, Holly Grove, Baskin, Fort Necessity, Crowville and Lamar were in attendance.

NEW JERSEY MEDICAL SOCIETY MEETS.—The one hundred and forty-eighth annual meeting of the Medical Society of New Jersey was held at the New Monmouth Hotel, Spring Lake, N. J., June 29 and 30 and July 1, 1914. A very interesting program was furnished, which was very much enjoyed by those in attendance.

THE AMERICAN RÖENTGEN RAY SOCIETY will meet in Cleveland at the Hotel Hollenden on September 9 to 12, inclusive. The program promises to be of unusual interest and value, and includes a paper by Dessauer, of Frankfort, on the subject of artificial production of gamma rays. Coolidge, the inventor of the Coolidge tube, and Shearer and Daunne will also read papers. The subject of deep therapy and the production of the hard rays will be fully presented and discussed. The rest of the program will be taken up by a large number of papers on general subjects. The medical profession is cordially invited to attend these meetings.

THE JOURNAL OF PARASITOLOGY.—Owing to the increasing amount of work in the field of parasitology, it has been thought advisable to establish an American publication as a medium for the printing of brief papers and research notes on animal parasites. The *Journal* will be issued quarterly and the subscription price will be \$2 a year.

COMPLETELY EXONERATED.—Mr. George E. Reed, of Parke, Davis & Co., who was indicted some three years ago, under the Pennsylvania Drug Act, regarding the statement of strength upon the label of the essence of pepsin, has been acquitted of the charges preferred against him.

MILLIONS TO BE DISTRIBUTED.—By the will of Mrs. Morris K. Jesup, of New York, the American Museum of Natural History receives \$5,000,000 for research work, the Syrian Protestant College at Beirut \$400,000, and Yale University \$300,000.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination, August 10, 1914, for expert on sanitation, for both men and women. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Children's Bureau, Department of Labor, Washington, D. C., at a salary of \$2,800 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. The duties of the position will be to act as adviser of the Bureau in matters requiring knowledge of hygiene and in coöperation with other experts to conduct investigations into dangerous and injurious occupations, the social factors responsible for high infant mortality, and other matters involving health. Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated.

SUBJECTS.	Weights.
1. Education. . . . .	40
2. Experience. . . . .	40
3. Publications or thesis . . . . .	20
	<hr/>
Total. . . . .	100

Graduation from a medical school of recognized standing, and at least three years' specialization in the hygiene and diseases of childhood, or three years' experience in sanitary inspection work, are prerequisites for consideration for this position. Under the third subject the applicant may submit publications on matters pertaining to hygiene or a thesis on some phase of child hygiene, or both. Statements as to education and experience are accepted

subject to verification. Applicants must have reached their twenty-fifth, but not their fiftieth birthday, on the date of the examination. Under an Act of Congress, applicants for this examination must have been actually domiciled in the State or Territory in which they reside for at least one year previous to the date of the examination. This examination is open to all persons who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, postoffice, Boston, Mass.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Cal.; Custom House, New York, N. Y.; New Orleans, La.; Honolulu, Hawaii; old Custom House, St. Louis, Mo., or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate and filed with the Commission at Washington, with the material required, prior to the hour of closing business on August 10, 1914. The exact title of the examination, as given at the head of this announcement, should be stated in the application form.

INCREASE IN TUBERCULOSIS.—At an informal meeting of the Louisiana Anti-Tuberculosis League facts were presented to show that there has been a great increase of tuberculosis patients to apply at the free clinic in Tulane avenue. The situation has made it necessary to call for the help of more practitioners. Camp Hygeia, in St. Tammany Parish, houses at present more patients than at any time in its history. Thirty-four patients are being cared for now, but there is no congestion, as the Camp is capable of handling fifty or more patients.

ALLOWED TO PRACTICE IN VENEZUELA.—Because of the fact that there is an impression among the members of the medical profession in the United States that foreign physicians are not allowed to practice in Venezuela, the Government of Venezuela has recently complied with the request of the American Legation to grant full legal authority to American citizens to engage in the practice of medicine.

**WAR ON CHARBON.**—Much concern has been felt lately regarding the appearance of charbon among the cattle in the State. Although this is a cattle disease, it also attacks human beings, and the first case of charbon in fourteen years was sent to the Charity Hospital during the past month. The State Board of Health has asked for coöperation in stamping out this disease by having all cases of charbon promptly reported to the Live Stock Sanitary Board and the State Board of Health. The disease is not contagious, and is infectious only through blood contact. It is invariably fatal.

**DR. KENNEDY ACTING HEALTH OFFICER.**—Dr. R. S. Mallory Kennedy, of Pensacola, has been appointed acting State Health Officer for Florida. Dr. Kennedy has been active in work in Pensacola for a number of years and the appointment is a well-deserved one. Dr. Kennedy is a graduate of Tulane Medical College.

**DR. EDMOND SOUCHON HONORED.**—At the Convocation of the American College of Surgeons, held in Philadelphia on June 22, Dr. Edmond Souchon was elected an honorary member of the American College of Surgeons. The other honorary members are: Drs. W. W. Keen, of Philadelphia; Collins Warren, of Boston; W. Halsted, of Johns Hopkins; Robert Weir and Thomas Addis Emmet, of New York, and F. J. Shepherd, of Montreal.

**PERSONALS.**—Dr. W. W. Keen, of Philadelphia, has been elected president of the Fifth International Congress of Surgeons to be held in Paris in 1917.

Dr. Theodore C. Janeway has accepted the professorship of medicine in Johns Hopkins University, under the full-time basis made possible by the gift of \$1,500,000 by the General Education Board.

Dr. Mazyck P. Ravenel, of the University of Wisconsin, has accepted the chair of preventive medicine in the University of Missouri.

Dr. William Hallock Park, of New York, has been elected dean of the Bellevue Hospital Medical College, to succeed the late Dr. Egbert le Fevre.

Dr. Hiram Byrd has been elected president of the Florida Tuberculosis Sanatorium at Trilby, Fla.

Dr. and Mrs. C. G. Cole have returned from the Gulf Coast and will reside with Mrs. Cole's parents, Mr. and Mrs. R. R. Barrow, on St. Charles avenue.



Dr. R. C. Kemp, of Baton Rouge, and Dr. C. Jeff Miller, of New Orleans, were among those in attendance at the Clinical Congress of Surgeons of North America, held in London, England, during the latter part of July.

REMOVALS.—Dr. A. Kappel, from Shreveport Charity Hospital to Franklin, La.

MARRIED.—On June 27, 1914, Dr. Chaillé Jamison to Miss Alice Aldige, both of this city.

On July 1, 1914, Dr. Guy St. Amant, of Gonzales, La., to Miss Hilda Laville, of Plaquemine, La.

DIED.—On July 13, 1914, Dr. A. L. Morris, of Gulfport, Miss., aged 54 years.

On July 6, 1914, Dr. R. C. Webb, of Rayne, La., aged 52 years.

On July 15, at Amite, La., Dr. William Dixon Wilson, aged 82 years.

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## Book Reviews and Notices.

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

**Progressive Medicine.** Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Vol. XVI, No. 1. March 1, 1914. Lea & Febiger, Philadelphia and New York.

The value of comprehensive reviews of current medicine and surgery can hardly be estimated, but to one to whom first-hand reading of many journals and books is denied, this digest must appeal. No volume has failed in interest heretofore, and, if we may declare our impressions, each new volume seems better than its predecessor. The one in review presents Surgery of the Head and Neck (C. H. Frazier); Surgery of the Thorax, Excluding Diseases of the Breast (George P. Müller); Infectious Diseases (John Ruhrah); Diseases of Children (Floyd M. Crandall); Rhinology and Laryngology (George B. Wood), and Otology (Arthur B. Duel). Certainly a variety of material for the busy practitioner wanting knowledge.

The pages devoted to infectious diseases are especially noteworthy because of the large number of topics engaged, including malaria, leprosy, diphtheria, dysentery, measles, cerebrospinal fever, tropical

diseases, pellagra, pneumonia, rabies, poliomyelitis, and a host more. In each there is annotation of recent opinion and research, with enough of commentary to make the presentation interesting.

The other divisions of this work are equally valuable, but space does not permit extended notice; besides, the reader may anticipate the pleasure of the perusal for himself. DYER.

**State Board Questions and Answers**, by R. Max Goepf, M. D. Third edition. W. B. Saunders Company, Philadelphia and London.

Over seven hundred pages are covered in this edition, which has been demanded within two years of the previous edition. The revision has been extensive and painstaking, and many additions have been made. For purposes of review, as well as for preparation for examination, this book will serve a useful purpose. DYER.

**The Junior Nurse**, by Charlotte A. Brown, R. N. Lea & Febiger, Philadelphia and New York.

The introductory chapter of this little book should be read by every intending nurse who, above all, in the opinion of the author, should be a "God-fearing, self-respecting woman." Rather good advice is given the prospective nurse, and if the precepts laid down are accepted by the nurse at the beginning she can make no mistake in going on with the training.

The main chapters are devoted to practical instruction in the everyday detail of the nurse's duty and work, and they deal with the dietary and bed, with the care of the sick and with the unusual exigencies arising in the nurse's office.

There is no attempt at encroaching upon the physician's province; on the contrary, the book is a book for nurses written by a nurse who knows what the duty of the nurse should be. DYER.

**Text-Book of Anatomy and Physiology**, by Amy E. Pope. C. P. Putnam's Sons, New York and London.

Just elementary enough to be readily understood, this book furnishes all the nurse really needs to know of the structure and function of the body. Terms are explained and illustrated, and every part and important organ of the body is discussed in more or less detail. A glossary is appended, giving a number of unusual words needing definition. Should prove a useful textbook for the nurse in training. DYER.

**Diagnostic Methods**, by Herbert Thomas Brooks, A. B., M. D. Second edition. C. V. Mosby Company, St. Louis.

This little book deals especially with laboratory diagnosis, but a few pages are devoted to general methods, such as history-taking and physical examination. One good method for each examination is described briefly and definitely, and other methods are not mentioned. A feature of much value is the discussion of proper interpretation of results of the examinations described. Absence of illustrations detracts somewhat, but the book will be found of much service to students and practitioners.

C. C. BASS.

**Practical Sanitation.** A Handbook for Health Officers and Practitioners of Medicine, by Fletcher Gardner, M. D., and James Persons Simonds, B. A., M. D. C. V. Mosby Company, St. Louis.

While no credit is allowed on the title page, Dr. J. N. Hurty, the experienced and well known sanatarian of Indiana, has written the introduction and his willingness to do so makes merit for the book.

Any comprehensive work on Public Health at this time is welcome and fills a need, for there is no field in which the general run of physicians needs information more sorely. The pretention of the book in instructing health officers would seem to make it of practical value for exact instruction of the everyday physician whose public health service is casual at least and a matter of duty at most.

The work is systematically presented, first the processes of health service being discussed and then these in application to epidemic and zymotic or contagious diseases. Chapters are provided to cover the general functions of sanitation related to milk, garbage, school and factory hygiene, vital statistics, &c. An appendix outlines a schedule for sanitary surveys. Much care has been exercised in preparing the text, but as in all first editions some anachronisms are apt to appear. The authors must know, for example, that the Treasury Department now recognizes the United States Public Health Service and that the added "Marine Hospital" is no longer employed, yet this mistake is made whenever the Bureau is mentioned.

The authors have made no attempt at exhaustive discussions nor have they undertaken debatable questions. The book is what it claims to be, a "Handbook," and as such it should serve well. The individual diseases are briefly but succinctly presented and modern viewpoints are employed. The illustrations are not numerous and some of them show signs of age, but they are apt, notwithstanding. Altogether the book is timely and deserving of a proper and widespread distribution. DYER.

**Man's Redemption of Man.** A Lay Sermon, by William Osler. **A Way of Life.** An Address to Yale Students, by William Osler. Paul B. Hoeber, New York.

These two duodecimo volumes have come in pleasant format, with bold black letter-press, bound in dainty boards and carrying the atmosphere of bibliophilism.

The texts do not belie this introduction. The physician is so near the sublime truth in all Nature that an expression of a plane of thought away from the everyday routine of life may bring some sort of message which the usual preacher misses.

Such books may not be reviewed; they must be read, for, where can commentary add anything? We do learn, however, from "**The Way of Life**," much of the foundation of Osler's philosophy, which is now so permeating as to be often quoted. He acknowledges Carlyle and his own schoolboy days as having large influence. There is no utilitarian principle involved in his advice to Yale students to labor for the day at hand and to give no heed to the morrow. "To look back, except on rare occasions for stock-taking, is to risk the fate of Lot's wife," says the author, and this epigram carries both his humor and his philosophy. But we have said that one may not review such books; if we are essaying to do so we are only palatizing some of the pabulum they contain, with the thought that our enjoyment may lead others to the feast. DYER.

**The Midwife in England.** Being a Study in England of the English Midwives' Act of 1902. By Carolyn Conant Van Blarcom, R. N., with an introduction by J. Clifton Edgar, M. D. Published by the Committee for the Prevention of Blindness of the State of New York.

All physicians should read this pamphlet. It carries a large lesson in duty and obligation. The people must learn, among other things, that blindness is preventable—50 per cent of all blindness, in the words of the author of this book. So much has depended upon the midwife (who cares for some 40 per cent. of confinements) that the future endeavor should aim at either educating the midwife or legislating her into proper observance of precautions against blindness at childbirth.

Ignorance of midwives is deplored, but it cannot be condoned nor overlooked. The statistical relation of midwives to births in seven large American cities shows them officiating in 35 per cent. of cases in San Francisco and Omaha, 75 per cent. in St. Louis, 39.2 per cent. in New York, and 70 per cent. in New Orleans. In the State of Mississippi available statistics point to a midwife practise of some 80 per cent.!

The chief fault is found, not with the midwife as such, but with midwives as they exist. Comparison with European cities shows in some places even larger percentage of attendance at births, but the women are trained and the relative proportion of death and disaster among infants is strikingly less.

Many examples of ignorance of ordinary hygiene, even of cleanliness, are given by the author, urging better laws and better training for midwives. In America midwives are allowed by law to practise unrestricted in thirteen States, and in fourteen other States there are no laws affecting midwifery in any way. Even where laws prevail, they are statutory, but not everywhere in force.

The body of the pamphlet before us gives the working-out of the English midwifery laws. The history of English midwives is given with considerable detail, working up to the Act of 1902, which is now in force. Evidence of training in hospitals or under medical direction is essential to obtain licensure. Midwives are supervised. The results in England are urged as strong argument for proper laws and their enforcement in the United States.

DYER.

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## Publications Received.

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**MEDICAL PUBLISHING COMPANY, St. Louis, 1914.**

**Practical Points on Syphilis**, by R. B. H. Gradwohl, M. D.

**F. A. DAVIS & CO., Philadelphia, 1914.**

**A Handbook on Psychology and Mental Diseases**, by C. B. Burr, M. D. Fourth edition, revised and enlarged.

**Diseases of the Rectum and Anus**, edited by A. B. Cooke, A. B., M. D.

**J. B. LIPPINCOTT, Philadelphia and London, 1914.**

**Ten Sex Talks to Boys**, by Irving David Steinhardt, M. D.

**P. BLAKISTON'S SON & CO., Philadelphia, 1914.**

**Practical Pediatrics**, by James H. McKee and William H. Wells, with an appendage upon **Development and Its Anomalies**, by John Madison Taylor, A. M., M. D. In two volumes.

**MISCELLANEOUS.**

**Public Health Reports**, Volume 29, Nos. 22, 23, 24, 25 and 26. (Washington Government Printing Office, 1914.)

**Anatomy and Physiology of the Eye and Its Appendages**, by John Welsh Croskey, M. D. (Smith-Edwards Company, Philadelphia.)

**The Reporting of Diseases**, by Louis I. Dublin, Ph. D. (Meeting, Association Life Insurance Presidents, June 5, 1914.)

**Bacteriological Standards for Milk**. (Washington Government Printing Office, 1914.)

**Typhus Fever**, by John Goldberger, Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Rocky Mountain Spotted Fever**, by L. D. Fricks, Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Pure Drugs and the Public Health**, by Martin I. Wilbert. (Washington Government Printing Office, 1914.)

**The Notifiable Diseases**. (Washington Government Printing Office, 1914.)

**The Transactions of the American Society of Tropical Medicine**. Volume 8, 1913.

**The Opening and Dedication of the Hall of the Georgia Medical Society (Savannah)**.

**Quarterly Bulletin of the Louisiana State Board of Health**. Volume 5, No. 2.

**Biennial Report of the Louisiana State Board of Health to the General Assembly of the State of Louisiana**. 1912-1913. (American Printing Company, New Orleans.)

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**Reprints.**

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**Pressure Anesthesia**, by R. Kendrick Smith, D. O.

**The Indian Operation for Cataract; Elliott's Trephining Operation for Glaucoma**, by Flavel B. Tiffany, A. M., 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, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	5	—	5
Intermittent Fever (Malarial Cachexia).....	—	—	—
Smallpox.....	—	—	—
Measles.....	—	—	—
Scarlet Fever.....	—	—	—
Whooping Cough.....	1	—	1
Diphtheria and Croup.....	2	1	3
Influenza.....	—	1	1
Cholera Nostras.....	—	—	—
Pyemia and Septicemia.....	—	2	2
Tuberculosis.....	29	41	70
Syphilis.....	3	—	3
Cancer.....	28	11	39
Rheumatism and Gout.....	—	—	—
Diabetes.....	3	—	3
Alcoholism.....	—	—	—
Encephalitis and Meningitis.....	1	—	1
Locomotor Ataxia.....	—	—	—
Congestion, Hemorrhage and Softening of Brain.....	25	11	36
Paralysis.....	2	1	3
Convulsions of Infancy.....	4	1	5
Other Diseases of Infancy.....	11	8	19
Tetanus.....	1	3	4
Other Nervous Diseases.....	7	1	8
Heart Diseases.....	61	42	103
Bronchitis.....	1	1	2
Pneumonia and Broncho Pneumonia.....	18	15	33
Other Respiratory Diseases.....	1	3	4
Ulcer of Stomach.....	2	—	2
Other Diseases of the Stomach.....	10	4	14
Diarrhea, Dysentery and Enteritis.....	22	15	37
Hernia, Intestinal Obstruction.....	6	1	7
Cirrhosis of Liver.....	3	2	5
Other Diseases of the Liver.....	2	3	5
Simple Peritonitis.....	—	—	—
Appendicitis.....	8	2	10
Bright's Disease.....	22	28	50
Other Genito-Urinary Diseases.....	4	8	12
Puerperal Diseases.....	6	3	9
Senile Debility.....	1	1	2
Suicide.....	7	—	7
Injuries.....	27	21	48
All Other Causes.....	10	13	23
TOTAL.....	333	243	576

Still-born Children—White, 28; colored, 26. Total, 54.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 per Month for Month—White, 14.69; colored, 28.89. Total, 18.53.

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

Mean atmospheric pressure. . . . . 30.01  
 Mean temperature. . . . . 84.  
 Total precipitation. . . . . 3.51 inches

# *New Orleans Medical and Surgical Journal.*

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VOL. LXVII.

SEPTEMBER, 1914.

No. 3

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## Original Articles.

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

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### THE ARKANSAS CHILD WELFARE ASSOCIATION.

By WILLIAM H. DEADERICK, M. D., President, Hot Springs, Ark.

There exist in Arkansas five factors which, compared with conditions in many other states, render constructive efforts in child welfare work difficult and discouraging. These are: first, inefficient local health supervision on account of inadequate financial appropriation; second, entire absence until within the past few weeks of dependable vital statistics; third, a large negro population; fourth, a large rural population; and fifth, the prevalence of two important endemic diseases, malaria and hookworm.

There are in Arkansas, according to the most recent census, 620,241 children under 15 years of age. Of these only 57,815, or about 9 per cent, live in towns of 2,500 or more, while the remaining 91 per cent. are classed as rural. Twenty-seven per cent. of the children under 15 years of age in Arkansas are negroes.

In 1912 the Department of Rural Sanitation examined 4,139 children in the state and found 52 per cent. infected with hookworm. In 1913 7,514 children were examined for hookworm infection and 1,681 (22.2 per cent) were found infected.

Doctor von Ezdorf, of the United States Public Health Service, has recently made a malaria survey of Arkansas. During September, October and November, 1913, 6,000 postal cards were sent to physicians throughout the state requesting information as to the prevalence of malaria during these three months; 1,245 replies reported 18,528 cases, of which number 7,035, or about 38 per cent., were reported to have occurred among children under 15 years of age. With the assistance of Dr. Garrison, the blood of 802 persons in the state was obtained and 6.6 per cent. were found infected with malaria.

While these conditions indicate obstacles, they serve also to emphasize the necessity of endeavor commensurate with the task with the assurance of gratifying results, for malaria and hookworm are curable and preventable diseases.

Child welfare work in this state has been confined largely to the independent efforts of local organizations, such as school improvement associations and women's clubs, but until the organization of the Arkansas Child Welfare Association in October, 1913, there was no agency whose sole duty it was to stimulate such local organizations and to systematize their efforts to prevent overlapping and duplication of activities.

**INFANT MORTALITY.**—One of the most important aspects, if, indeed, not the most important, of the work ahead of us is the reduction of infant mortality, and this is practically a virgin field in this state. Figures are entirely lacking, but from the nature of things, the large rural and negro populations, the almost total lack of supervision of milk supply, the meddlesome superstition of the negro mammy, the large number of babies delivered by midwives and the unregulated practice of midwifery, our infant mortality must be far in excess of the normal.

The most powerful weapon in the campaign against infant mortality is the dissemination of the knowledge that the breast-fed baby has ten times the chances for life that the bottle-fed baby has. Efficient boards of health and philanthropic organizations are spending thousands of dollars in the teaching of this single principle, and with telling results. The New York Milk Committee is devoting a large share of its energies to the teaching of this and other fundamental doctrines. This Committee, realizing that one-third of infant deaths occur during the first month of life, and assuming that this mortality depends largely on conditions acting



before and during the birth of the baby, begins its campaign of education before the baby's birth. The result of this prenatal instruction was that within the first year after its institution the death rate in the campaign territory was reduced one-third.

The center of infant mortality work in a community should be the milk station. Here are furnished at cost, or even free, ice and a pure quality of milk to those mothers unable to nurse their babies. A competent nurse is in attendance, who instructs mothers in the care of infants, and a doctor has office hours in the station to advise in the care of sick babies and to visit those too sick to attend the clinic. After hours the nurse visits the sick babies in her territory and induces others to attend the station. An intelligent nurse with a broad social viewpoint can in this field of work save more human lives than is possible to anyone else. The call for this work is imperative, when we consider that a child under one year has less chance of life than an old man over eighty, and that 50 per cent. of all infant deaths are preventable.

Another opportunity in infant mortality work has crystallized in the formation of "Little Mothers' Leagues," the "Little Mothers" being the older school girls, who help with the care of the babies at home. The meetings are under the supervision of a doctor and a nurse, and the girls are instructed in the practical methods of baby hygiene and feeding.

The care of foundlings and the supervision and sanitary regulation of foundling institutions are duties every community owes this class of unfortunates.

**SCHOOL HYGIENE AND SANITATION.**—Most of the period between babyhood and adult life, embracing the age of puberty, is covered by the school age. The child of school age is very susceptible to physical influences. Next to that of the parents, the influence of the teacher is more effective than any other in molding the welfare of the child. It is in the power of the teacher either to correct unhygienic habits acquired in a poorly organized home life or to undo the best teachings of well-informed parents.

If children are required to go to school, it is their right that they be surrounded by every safeguard. No state has the moral right to force healthy children to congregate in insanitary buildings or to mingle with diseased children. We are fast learning that if a child is to be taught to its capacity its body must be given an equal chance with the mind. Many backward, retarded and ex-

ceptional children are so because of physical defects, and a child with adenoids, enlarged tonsils or defective vision is a greater burden to the community than one with a contagious disease.

While a vigilant teacher can detect many physical defects, this comes properly in the sphere of the medical inspector and the school nurse.

The medical inspector pays short visits every day to each school in his charge to examine those children referred to him by teachers as suspected of having contagious diseases. Children found with contagious ailments are excluded and the parents advised to send for the family physician. This, however, is the smallest part of his work. The rest of his school period is divided between physical examination of children, sanitary inspection of the school plant and lectures to teachers on hygiene. The children are carefully examined in rotation for physical defects. The attention of both teachers and parents is called to defects found, and the latter are advised to have the defect corrected by the family physician. The inspection of the building includes condition of cleanliness and method and time of cleaning, condition of plumbing and drinking facilities, efficiency of heating, ventilation and lighting, manner of seating the children, with practical reference to physical defects found, etc. Teachers are instructed in the control of the heating and ventilating systems and in general sanitation and hygiene.

The school nurse is an important personage in the school inspection system. She renders first aid to the injured, makes daily classroom inspections for contagious eye and skin diseases, and, most important of all, does the follow-up work necessary to have corrected the defects found. This includes conferences with parents at the school, visits to the home and conducting the children to the physician or the clinic. Free school clinics are maintained in many cities for the benefit of the indigent.

**SEX HYGIENE.**—The fundamental fact upon which the sex hygiene movement is based is that youth does not and cannot remain innocent of sex, but acquires its knowledge in a distorted form, and often at the price of costly experience. It is not a question of whether the youth should remain ignorant or be instructed. It is a question of whether he or she shall be well or ill instructed. It resolves itself into a choice of evils. We cannot afford to wait until the child asks questions about these matters, but should assume an aggressive attitude and instruct him truthfully before he receives the misinformation to which every child is subjected.

This much will be accorded by the majority of thinking persons ; the mooted question is, Who will teach the child?

I do not believe that we are prepared yet for class teaching of sex hygiene in the public schools, excepting possibly indirectly by the biologic or comparative method. The instruction should originate in the home. Nor are ignorance or timidity on the part of the parents any longer excuses for neglect of this sacred duty. The American Medical Association, various state boards of health and other organizations have prepared literature suitable for the sex instruction of both sexes and various ages, designed to be placed in the hands of children. These truths have been faithfully portrayed even in drama and in poetry, as in the "*Damaged Goods*" of Brioux, and "*The Price He Paid*," by Ella Wheeler Wilcox.

EUGENICS.—Every child has the right to be well born. While we of the present generation must calmly accept our heredity as we find it, we should see that succeeding generations are better favored. There exists too great a tendency to gaze complacently up into the family tree, rather than to plan carefully our future harvest.

The degenerate, like the poet, is born and not made, and he should be restrained from begetting more children like himself. Much time has been wasted in speculating upon who are the unfit and who shall decide who are unfit. That idiotic, feeble-minded, epileptic, tuberculous, syphilitic, morally degenerate and alcoholic subjects should be barred from procreating their kind should be closed to discussion.

There are at the present time in this country half a million insane, epileptic, blind and deaf persons in asylums; 80,000 prisoners, and 100,000 paupers, that are costing \$100,000,000 annually to support.

The influence of heredity upon moral and physical degeneracy and their cost to the commonwealth is impressively illustrated by the brief histories of two families.

The Juke family descended from an idle and unreliable fisherman born in New York in 1720. Juke had five daughters, and in five generations the family had increased to about 1,200, of whom the histories of about 1,000 have been traced. Three hundred and ten were professional paupers in almshouses, totaling 2,300 years at public expense; 440 were syphilitic; more than half the women were prostitutes; 130 were convicted criminals; 60 were habitual

thieves, and 7 were murderers. The family has cost the state of New York a million and a quarter dollars, and the expense is continuous.

“One of the most striking and convincing family histories, illustrating both the ill and the good that may come through heredity, is detailed by Goddard in his story of the Kallikak family. The name is, for obvious reasons, not the true one. At the beginning of the Revolutionary War a young man known in the history as Martin Kallikak had a son by a nameless, feeble-minded girl, from whom there have descended in the direct line four hundred and eighty individuals. One hundred and forty-three of these are known to have been feeble-minded, and only forty-six are known to have been normal. The rest are unknown or doubtful. Thirty-six have been illegitimate; thirty-three sexually immoral, mostly prostitutes; twenty-four alcoholic; three epileptic; eighty-two had died in infancy; three were criminal and eight kept houses of ill-fame. After the war Martin Kallikak married a woman of good stock. From this union has come in direct line four hundred and ninety-six, among whom only two were alcoholic, and one known to be sexually immoral. The legitimate children of Martin have been doctors, lawyers, judges, educators, traders, landholders, in short, respectable citizens, men and women prominent in every phase of social life. These two families have lived on the same soil, in the same atmosphere, and, in short, under the same general environment, yet the bar sinister has marked every generation of one and has been unknown in the other.”—Vaughn.

The remedies that have been employed for this social disease are education, legislation, segregation, and sterilization.

In Arkansas, in addition to most of the problems of other commonwealths, plus a serious race question, we will have to contend with the eugenic aspect of those twin sisters of wretchedness, malaria and hookworm disease. These diseases, leaving their subjects anemic and neurotic, are responsible for inertia, loss of will power, intemperance and general mental and moral degradation. Jones, who concludes that malaria was a potent factor in the decline of Greece and Rome, states that “malaria made the Greek weak and inefficient; it turned the sturdy Roman into a bloodthirsty brute.” Monfalcon attributes abortion, infanticide, universal libertinism, drunkenness, want of religion, gross superstition, assassination and other crimes to the direct influence of malaria.

MENTAL HYGIENE.—On January 1, 1910, there were 187,454 insane persons in institutions in the United States, which exceeded the students enrolled in all the colleges and universities at that date, and if all states provided as adequately for the insane as some states, Arkansas, for example, the number committed would be largely in excess of these figures. The cost of these patients during 1910 was \$32,804,500. Adding to this the economic loss to the

country through the withdrawal from productive labor of so many people, the annual cost of insanity to the United States is more than \$164,000,000, and insanity and its cost are still increasing.

It is necessary to eradicate from the public mind the old idea that insanity is a visitation of Providence or of the devil and to substitute in its place the knowledge that it is a disease and largely preventable. The question of prevention is intimately associated with eugenics, sex hygiene, housing conditions, physical welfare during childhood, proper home discipline, education and the prevention of syphilis and intemperance.

It is necessary to create a public demand for efficiently conducted state institutions (which Arkansas now has), and to teach the public that such an institution is the best place for mental defectives.

There is widespread lack of knowledge of mental pathology on the part of physicians. To supply this deficiency the state institutions should be used for post-graduate instruction.

Social work in insane asylums is a neglected but fertile field.

The problem of feebly endowed, exceptional and backward children and of the so-called "ungraded classes" has to be faced. Most of these children are good for something, and that something must be found.

We in this state might advantageously adopt, with slight modifications, the platform of the National Committee for Mental Hygiene: To work for the protection of the mental health of the public; to help raise the standard of care of those threatened with mental disorder or actually ill; to promote the study of mental disorders in all their forms and relations and to disseminate knowledge concerning their causes, treatment and prevention; to obtain from every possible source reliable data regarding conditions and methods of dealing with mental disorders; to enlist the aid of the state government as far as may seem desirable; to co-ordinate existing agencies and help organize in each community allied committees for mental hygiene.

OPHTHALMIA NEONATORUM.—This disease, the purulent sore eyes of new-born babies, although a preventable condition, is responsible for about ten per cent of the blindness in our country. A blind child is said to cost the community more than \$4,500 for its schooling, and the total annual loss from gonorrhoeal ophthalmia in the United States is seven million dollars. In the state of New

York alone more than 600 of the 6,000 blind persons are in this deplorable condition because of this disease.

Arkansas has recently made a decided step in advance by making this a reportable disease. Much, however, remains to be done, and difficult it will prove, on account of our large negro and rural populations and a natural outgrowth, the midwife problem. We must make known the true cause of this terrible disease. It is true that some parents may be caused to feel that their blinded child is a disgrace which cannot be hidden, but, as Helen Keller says, the problem "should be dealt with frankly. The facts are not agreeable reading; often they are revolting."

The American Medical Association's Committee on the Prevention of Blindness has made the following recommendations with reference to ophthalmia neonatorum:

1. Require registration of births; licensed midwives to be under control of board of health; they and physicians being required to report each case of disease.
2. Let boards of health issue circulars of instruction to midwives and mothers.
3. Let health boards circulate tubes containing prophylactic, with directions for use.
4. Insist on complete records in all hospitals and maternity institutions.
5. Periodic reports by all physicians on all cases treated.
6. Educate the public.
7. Organize the medical profession throughout the country.

VOCATIONAL GUIDANCE.—The possibilities in the field of vocational guidance cannot be better put than by the Vocation Bureau of Boston, the general aims of which are:

1. To study the causes of the waste which attends the passing of unguided and untrained young people from school to work, and to assist in experiments to prevent this waste.
2. To enable parents, teachers, children and others in the problems of thoughtful choosing, preparing for and advancing in a chosen life work.
3. To work out programs of co-operation between the schools and the occupations for the purpose of enabling both to make a more socially profitable use of human talents and opportunities.
4. To publish vocational studies from the viewpoint of their educational and other efficiency requirements and of their career-building possibilities.
5. To conduct a training course for qualified men and women who desire to prepare themselves for vocational guidance service

in the public school system, philanthropic institutions, and in business establishments.

6. To maintain a clearing house of information dealing with life-career problems.

**FIRE PREVENTION.**—The functions of fire prevention in child welfare work run along two lines: fire drills and regulations for schools and other places where children assemble, and safe and sane Fourth of July celebrations. The first has received attention in this state from the Arkansas Fire Prevention Association.

The need for reform in our methods of displaying patriotism upon the Fourth of July is shown by the following record of deaths from the casualties of this day:

1903.....	466	1909.....	215
1904.....	183	1910.....	131
1905.....	182	1911.....	57
1906.....	158	1912.....	41
1907.....	164	1913.....	32
1908.....	163		

It is gratifying to note the small number of Fourth of July deaths and accidents in the state of Arkansas:

1904.....	0	1909.....	1
1905.....	3	1910.....	4
1906.....	4	1911.....	1
1907.....	0	1912.....	1
1908.....	5	1913.....	0

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19

This table, however, does not show the number resulting during the Christmas holidays, which is probably larger than the Fourth of July list. It is to be hoped that this small list of casualties is because we are safer and saner, and not less patriotic, than some other states.

The needs in this direction are:

1. Laws regulating the sale and use of fireworks.
2. Substitution of attractive programs for the celebration of these holidays.

The Russell Sage Foundation publishes several pamphlets of great value in this field.

For the present the activities of the Arkansas Child Welfare Association will be limited to infant mortality, school hygiene and sanitation, sex hygiene, eugenics, mental hygiene, infant blindness, vocational guidance and fire prevention. Others may be added, as there is a provision in the constitution for this.

How do we intend to bring all this about? Does the Arkansas Child Welfare Association hope out of its treasury to establish milk stations, employ medical school inspectors and nurses, institute free clinics, a eugenics record bureau and all the other machinery necessary for the end we hope to attain? Assuredly not. What we hope to do and can do, with proper co-operation, is through the molding of public sentiment to *create a demand* for these things, and they will be forthcoming.

We aim to serve as a clearing house for the state on the subject of child welfare, and to serve as a co-ordinating agency for all local agencies interested in these problems.

It is a far cry from a national organization with headquarters in a large Eastern city to an individual living in the rural districts of Arkansas. It is to serve as middleman between the national organizations or wholesalers and the individual or consumer, that we hope to accomplish results.

We intend to use the press, the printed page and the platform to disseminate this knowledge. We intend to enlist the co-operation of parents, teachers and physicians, of women's clubs and civic organizations. When we have organized local associations in every community and have a field secretary devoting full time to the work our task will be well on its way.

For this work we need money and we need members.

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## BLOOD-PRESSURE STUDIES, WITH ESPECIAL REFERENCE TO THE "ENERGY INDEX" AND THE "CARDIAC LOAD."\*

By GEORGE WILLIAM NORRIS, A. B., M. D., and J. R. DAVIES, M. D.,  
Philadelphia, Pa.

Two methods have recently been suggested for using the data obtained by pulse and blood-pressure observations for the purpose of estimating the work done by the heart.

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\* Read before the American Climatological and Clinical Association, Thirty-first Annual Meeting, Atlantic City, June 19, 1914.



**THE ENERGY INDEX.**

This term has been suggested by Barach<sup>1</sup> as a gauge of cardiovascular energy as indicated by the arterial pressure per minute. The index is determined by multiplying the (1) systolic, (2) diastolic, and (3) combined pressure by the pulse rate per minute. *e. g.*

In systole . . . . 120 mm. Hg. x 72 = 8,640 mm. Hg.

In diastole . . . . 70 mm. Hg. x 72 = 5,040 mm. Hg.

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In both . . . . . 190 mm Hg. x 72 = 13,680 mm. Hg.

It is quite evident that there may be great variations in the amount of energy expended dependent upon relatively slight changes in any one of the three factors under consideration. It appears that the normal average index is about 20,000 mm. Hg. per minute.

**THE CARDIAC LOAD.**

Another method of applying blood-pressure data has been designated by Stone<sup>2</sup> as the cardiac load. The rationale of the method is as follows:

“The act of transferring energy, or work, of the heart in systole on a column of blood gives motion to that blood column. The energy thus acquired is kinetic energy, since kinetic energy is energy of motion and is opposed to static energy, which pertains to bodies at rest without motion. If resistance is offered to the movement of the column of blood, work is done against the resistance and the column loses kinetic energy in proportion to the amount of resistance offered. The column of blood which has acquired kinetic energy through the work of the heart exerts force or pressure. Newton’s third law of motion, however, expresses the fact that all action of force is of a dual character in the nature, in this instance, of a stress between the end pressure of the blood-column and the restraining or lateral pressure of the arterial walls.

“The end or systolic pressure represents the sum total of effort developed by the heart systole to maintain the circulation. The restraining lateral or static pressure of the vessel walls on the blood-column represents the amount of pressure remaining at the moment the transfer of energy or work of the heart systole ceases—that is, during diastole. In other words, the diastolic pressure represents the stress or minimum pressure borne by the arterial system during diastole as a force contrary to cardiac force. As the intra-ventricular pressure rises in preparation for the next systole, the diastolic pressure represents immediate resistance which must be overcome. When systole occurs, and the intraventricular pressure approximates the diastolic pressure in the aorta, the aortic valves open. The cardiac energy must be sufficient to overcome the diastolic resistance, and in addition must be sufficient to propel

(1) Barach, J. H.: “The Energy Index.” *Jour. Am. Med. Assn.*, LXII, 1914, p. 525.

(2) Stone, W. J.: “The Clinical Significance of High and Low Pulse Pressures with Especial Reference to Cardiac Load and Overload.” *J. Am. Med. Assn.*, LXI, 1913, p. 1256.

the blood-column forward toward the periphery, of which the systolic pressure is the culminating point.

“The difference between the maximum pressure exerted by the kinetic energy of the blood-column and the minimum pressure or potential energy exerted by the vessel walls is the pulse-pressure. It represents the intermittent burden of pressure imposed on the arteries by the heart’s energy in systole in order to force the blood toward the periphery and maintain the circulation. The pulse-pressure may, therefore, be defined as the amount of pressure exerted by the heart during systole in excess of the diastolic pressure. It measures the excess of dynamic over potential energy. For clinical purposes it represents the load of the heart. Under normal conditions it is approximately 50 per cent. of the diastolic pressure. The systolic and pulse-pressures represent myocardial values, while the diastolic pressure represents arterial resistance. Incidentally, it may be mentioned that the pulse-pressure is that part of the heart’s energy which produces the distention of the arteries which is recognized as the pulse.”

With a systolic pressure of 120 and a diastolic pressure of 80, the pulse pressure is 40. The amount of energy required, therefore, to maintain the circulation in excess of that necessary to open the aortic valves is 40. The normal cardiac load may thus be considered as 40/80 or 50 per cent. of the diastolic pressure.

Several questions now suggest themselves as to: (1) how much overload the normal heart can stand before the symptoms of broken compensation arise? (2) Can the effects of therapeusis or disease be explained upon or correlated with the foregoing hypothesis?

With a view to investigating these questions we have made blood-pressure observations on the cases in our service in the wards of the Pennsylvania Hospital, the results of which will be considered in this article. In all, 57 cases were studied; an effort being made to take complete blood-pressure observations daily. In special cases observations were made more frequently as, for instance, before and after bleeding, sweating, lumbar puncture, pneumonic crises, etc. The more important findings as summarized constitute the basis of this communication. The blood-pressure was estimated by the auscultatory method, the fourth phase being used as the criterion of the diastolic pressure.

### I. LOBAR PNEUMONIA.

It is generally admitted that blood-pressure readings are of distinct utility in pneumonia, both from a prognostic and a therapeutic standpoint. Many cases die as the result of toxic vasomotor failure in which the heart is only secondarily at fault. As was pointed out by Gibson, a falling pressure and an increasing pulse rate is of un-

toward significance and if the blood-pressure in mm. Hg. falls below the pulse rate per minute, active treatment, directed toward increasing vasomotor tone, must be instituted.

Among five *fatal cases* studied by us, both the systolic and the diastolic pressure fell before death. The pulse pressure and the cardiac load increased in two, and decreased in three cases, while the energy index increased in only one and decreased in four. Among nine *non-fatal cases* the *crisis* was accompanied by a fall of pressure amounting in one instance to 23 mm. Hg. It is quite common for pneumonia cases to require stimulation at this time, even when none was required previously. In one case studied just before and just after the crisis the cardiac load increased from 50 to 61 per cent., while the energy index decreased from 19,000 to 11,560.

The relative duration of different auscultatory phases may also be of some practical significance. The second phase as has been emphasized by A. A. Howell is the first to disappear, owing to circulatory weakness and a long, loud second phase is therefore prognostically favorable. The same statement may be made concerning all clear, tapping sounds, whether heard as part of the third phase or not, while, generally speaking, weak, muffled sounds have the opposite significance, and point to vasomotor weakness.

Among nine *non-fatal cases* of *pneumonia*, the pulse pressure and the cardiac load increased during the course of the disease in four cases. In five cases both factors showed a decrease, while in all the cases the energy index showed a diminution.

The following figures from a fairly representative case of pneumonia clearly shows that too many factors enter into the problem of pneumonia to be estimated by any single index such as blood-pressure:

#### NO. 23.

**On Admission:** Pulse 108, respirations 28, temperature 104.2°. Systolic pressure 110, diastolic pressure 70, pulse pressure 40 mm. Hg. Cardiac load 57 per cent., energy index 19,440. There is slight *dyspnea* and *cyanosis*.

**Three Days Later:** Pulse 104, respirations 44, temperature 104.1°. Systolic pressure 110, diastolic pressure 55, pulse pressure 55 mm. Hg. Cardiac load 100 per cent., energy index 17,160. *Dyspnea* and *cyanosis* have increased.

3. **After the Crisis:** Pulse 80, respirations 20, temperature 98°. Systolic pressure 105, diastolic pressure 50, pulse pressure 55. Cardiac load 110 per cent.; energy index 12,400.

4. **During Convalescence:** Pulse 68, respirations 20, temperature 98°. Systolic pressure 105, diastolic pressure 55, pulse pressure 50 mm. Hg. Cardiac load 90 per cent., energy index 10,880.

5. **At Time of Discharge:** Pulse 72, respirations 24, temperature 98°. Systolic pressure 110, diastolic pressure 55, pulse pressure 55. Cardiac load 100 per cent., energy index 11,880.

Here numerous blood pressure values were essentially identical at the time of discharge and during the most critical stage of the disease.

## II. TYPHOID FEVER.

The blood-pressure curve, as studied in a number of cases, showed hypotension on admission, with a continued fall to 95 or 90 mm. Hg., which was more or less approximate to the degree of toxemia, and a gradual rise during convalescence. Sometimes a more or less sudden increase occurred upon getting out of bed. The cardiac load and energy index showed nothing noteworthy.

## III. PERICARDITIS.

In one case of acute, non-fatal of endo- and pericarditis the systolic and diastolic pressures fell continuously from 115 to 87 and from 60 to 52, respectively. The cardiac load decreased from 109 to 67 per cent. and the index from 17,000 to 16,000. Neither dyspnea, pain of pericardial effusion showed any constant relation to pressure variations. In another case of chronic pericarditis, with cardiac hypertrophy with systolic and diastolic values, ranging between 155 and 150 and between 130 and 105 mm. Hg., respectively, the cardiac load averaged 18 to 42 per cent., the index 25,000 to 36,000. The case progressed unfavorably and was taken home by his family. In this instance again neither increasing edema or loss of compensation showed any constant pressure changes. In a third case the onset of pericarditis was definitely associated with a temporary increase of the systolic pressure.

## IV. VALVULAR DISEASE.

Broken compensation in valvular disease may show either an increase or a decrease of arterial pressure coincident with symptomatic improvement. The latter occurs especially in cases of high pressure stasis in which the venous pressure is high and the arterioles contracted by an increase CO<sub>2</sub> content in the blood. A case of cardiac dilation with a systolic diastolic pressure of 210 to 130 mm. Hg. was bled with the result that the pressure fell to 175 and 120, a level which was afterward maintained, while the patient showed marked improvement.

### V. NEPHRITIS.

A case of acute nephritis showed a marked decrease of all pressures with symptomatic improvement. The cardiac load decreased until the edema disappeared and then steadily rose from 29 to 47 per cent.

A fatal case of chronic diffuse nephritis long under observations with pressures constantly about 210 systolic, 150 diastolic, showed a steady fall of pressure down to 105 systolic and 85 diastolic just before death. The cardiac load falling from 70 to 23 per cent. and the index from 17,000 to 2,800. This illustrates terminal hypotension and furnishes a text to warn against the ruthless depression of high pressure by medicinal or otherwise. In the particular case in question, no such measures were employed, the fall of pressure being due to gradual exhaustion.

### VI. PHLEBOTOMY.

Phlebotomy was practiced upon three cases (1 pneumonia, 2 uremia). The systolic, diastolic and pulse pressure, and cardiac load were lowered in each instance, whereas the energy index was lowered in only one, and increased in two cases. The intravenous saline infusion with epinephrin in other cases caused a rise of all three pressures.

### VII. SWEAT BATHS.

Sweat baths which were employed in a number of cases of chronic nephritis with hypertension generally produced a marked fall of systolic and pulse pressure, as well as of the cardiac load and energy index. The diastolic pressure was much less affected.

The amount of "overload" which the heart can bear varies greatly. Stone's statement that when this factor exceeds 50 per cent. the patient must lead a restricted life, owing to the danger of myocardial exhaustion is, in our experience, correct, although some cardiovascular systems do stand this strain for years.

### VIII. FATAL AND NON-FATAL CASES.

If we indiscriminately group all of the fatal cases we find no constant relation between the cardiac load or the energy index when we regard these factors as present at the time of admission and shortly before death. As a general rule, both factors decreased. Thus in Case No. 1 (endothelioma of the pleura) the following figures were collated:

## IX. LUMBAR PUNCTURE.

In a case of cerebro-spinal meningitis, lumbar puncture caused a fall of 10 mm. Hg. in the systolic pressure, the diastolic pressure remained unchanged, the cardiac load and the energy index decreased 13 per cent., and 1,000, respectively.

## X. INTRAVENOUS SALINE INFUSION.

In a case of typhoid fever with toxic vasoparesis saline infusion with epinephrin temporarily raised both the systolic and the diastolic pressure, 13 and 5 mm., respectively, even shortly before death, when intravenous infusion without epinephrin produced no effect. Both the cardiac load and the energy index showed the highest readings just before death.

## XI. URINARY SECRETION.

Our investigations failed to show any relationship between the quantity of urine secreted and any of the blood-pressure readings. The secretion of urine depends upon many factors other than those of blood-pressure, and while, as a general rule, high pressure cases secrete a larger quantity, and while most diuretics do not have a depressor action, yet local vascular changes in the renal vessels far outweigh the importance of general systemic changes in blood-pressure.

## No. 1—"Two days before death."

P. 132..	Syst. 95.	30 — 65)3000(46% 260	Energy index 12,540 Energy index 8,580 Energy index 3,960	Patient slightly cyanotic and dyspneic, with slight pretibial edema.
R. 36..	Diast. 65	400 390	S. & D 21,120	
T. 104°.	P. P. 30.	Card. load 46%		

## "Six hours before death."

P. 160?.	Syst. 95.	25 — 70)2500(35% 210	Energy index 16,200 Energy index 11,200 Energy index 5,000 .28,400	Intense dyspnea, cyanosis, cold perspiration.
R. 44..	Diast. 70	400		
T. 100°.	P. P. 25.	Cardiac load 35%		

## "One hour before death."

P. 160†.	Syst. 80.	10 — 70)1000(14% — 300	Energy index 12,800 Energy index 11,200 Energy index 1,600 24,000	All symptoms have increased.
R. 40..	Diast. 70			
T. 100°.	P. P. 10.	Cardiac load 14%		

## CONCLUSIONS.

1. We do not feel that either of the methods studied offer any especial advantages over the routine blood-pressure observation. The calculation of the energy index perhaps helps us to visualize more clearly just how much energy the heart is expending, but the "cardiac load" feature teaches us nothing that is not evident from the mere inspection of the diastolic and the pulse pressures.

2. When the results obtained by the two methods coincidentally on a given case are contrasted they are often found to vary not only quantitatively, but often qualitatively. Either method is more useful for the continuous study of a given case than it is for the purpose of comparing different cases or for gathering statistical data.

3. Comparative daily observations of the "cardiac load" and the "energy index" throw some light upon the progress of the circulatory function, but identical figures may be obtained from a dying heart and from an organ which still has a good functional capacity and a large reserve force.

4. The diastolic pressure which is now readily obtained by the auscultatory method, is often of greater importance than the systolic pressure, which varies much more widely as the result of psychic processes and other evanescent causes.

## HOW TO FIT GLASSES.\*

By T. J. DIMITRY, M. D., Chief of Clinic, Ophthalmological Division, Charity Hospital, New Orleans.

Everyone knows that illustrations to-day occupy a very high place in the elucidation of scientific and technical facts. I have attempted by these rough sketches to make clear the subject; to review ele-

\* Read before the Orleans Parish Medical Society, May 25, 1914. [Received for publication July 24, 1914.—Eds.]

mentary facts that are hazy to some, and to cover the subject in the time allotted for the reading of this paper.

Three out of every ten children have defective vision and it is incumbent upon the medical profession to see that their defective eyes are properly handled.

All members of the medical profession can easily become qualified to correct the simple errors of refraction. In knowing the eye and its diseases only good would result from the review of this article.

### HOW TO FIT GLASSES.

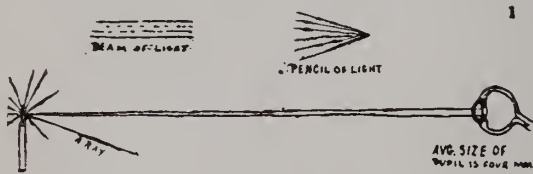


Fig. 1.

Luminous and illuminated bodies always give off divergent rays of light. If the source is twenty feet or more away we say it is an infinite distance; and the rays entering the eye from this distance are to all intents and purposes parallel. Twenty feet or more is equal to infinite distance, hence means parallel rays of light.

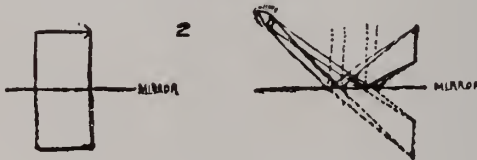


Fig. 2.

Polished surfaces reflect light best. In the mirror, when you are perpendicular to its surface, your image is as far behind the reflecting surface as you are in front of it. When you are to the side, it is reflected at an angle; hence, the **angle of incidence** equals the **angle of reflection**.

When perpendicular rays of light strike a section of glass with parallel surfaces, the light will pass through this medium in straight lines, when the surfaces are not parallel the rays will be bent. A



prism is a section of glass wider at bottom than top, thus having an apex and a base, its side surfaces inclining toward each other. A prism always bends light towards its base. This bending of

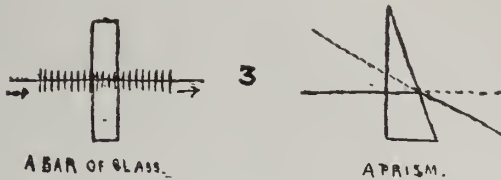


Fig. 3.

light is called **refraction**. An object seen through a prism will appear to come from its apex.

Lenses are sections from a sphere or from a cylinder. Convex or plus lenses converge rays of light, and thereby gather the rays to a point, or what is called a **real focus**; for it can be thrown against the screen.

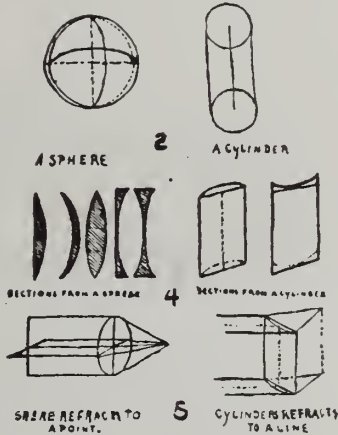


Fig. 4.

Fig. 5

Concave or minus lenses, diverge rays of light. Their foci are **virtual**, i. e., the focus is situated where the divergent rays of light appear to come from.

Spherical lenses refract equally in every meridian. Cylindrical lenses do not refract equally in all meridians.

A cylinder does not refract in the direction of its axis, but re-

fracts most at right angles to its axis. Spherical lenses are used to correct defects that are equally faulty in all meridians, while cylindrical are used when one meridian has a greater curvature than the other.



Fig. 6.

There are two kinds of glasses that act as forces in opposite directions and serve as a standard with opposite signs. This provides a simple way in which to ascertain the strength of a lens. If we place two lenses together of opposite signs and of the same dioptric power the effect of either is **neutralized** and a plane glass is the result. By this **neutralization** you find the strength of the glass worn.

**Trial cases** consist of lenses, a few prisms, opaque discs and a trial frame. These lenses refract in decimal parts of a unit of measurement which we call a **dioptry**. Thus:

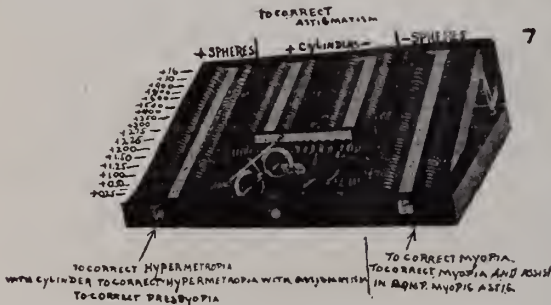


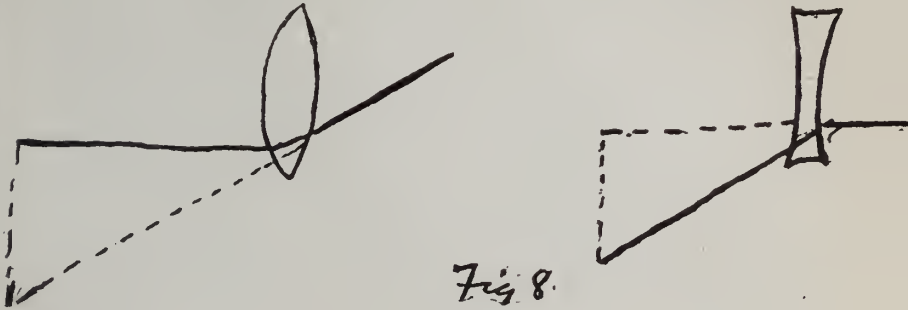
Fig. 7.

**One diopter lens.** The unit lens is one dioptre; has a focus for parallel rays, and this focus is situated forty inches from the lens. This distance is called the focal distance. A four-diopter lens has one-fourth the focal distance of one diopter—ten inches—for it is four times as strong. A ten-diopter lens has a focal distance of four inches.

*To change the new system into the old, or the old into the new, divide the given lens into forty.*

To tell glass worn or one used, look at a horizontal line through it; and move the lens up and down; and if the line moves in the opposite direction, it is a convex lens. In the concave lenses these lines will appear to move in the same direction as that in which the lenses are moved.

A cylindrical lens does not refract in the direction of its axis.



*Fig 8.*

Fig. 8.

The line moves with or against it at right angles to its axis, depending upon the convexity or the concavity of the cylinder.

Lenses are made by using what would appear to be moulds; these discs are called lens surfacing laps.

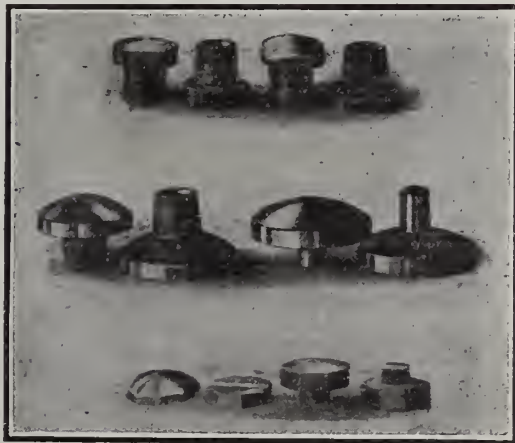


Fig. 9.

The eye is about three-fourths of an inch in its antero-posterior diameter. The **cornea** is the transparent (watch crystal-like) part on the front of the eye. It is convex on its anterior and con-

cave on its posterior surface. It has about forty diopters of refractive power and should have the same refractive strength in every meridian. When the curvature is not the same in each meridian then we have *astigmatism*. The cornea may have too great a convexity, producing a focus in front of the retina, a condition termed

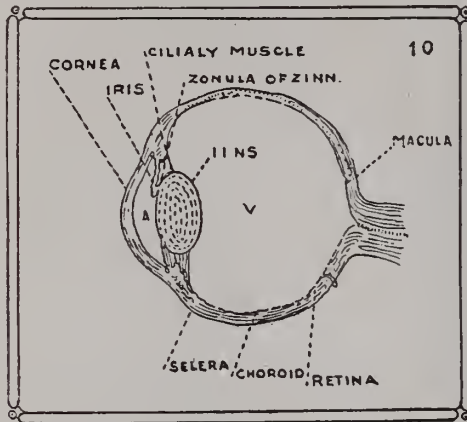


Fig. 10.

**myopia.** The cornea may not be convex enough, thus causing a focus behind the retina, i. e., if the ciliary muscle is not trying to replace that want of convexity in the cornea by adding to the convexity of the lens. This condition is called hypermetropia.

The **aqueous** humor is a secretion from the ciliary body. The secretion passes through the pupil and thence out of the eye through the angle formed by the iris and the cornea. This angle empties into the **canal of Schlemm**. This canal sometimes becomes blocked, backing up the aqueous and causing an increase of tension in the eye (**glaucoma**). We frequently dilate the pupil to assist us in seeing into the eye. It is generally dilated for the purposes of examining the fundus and measuring the errors of refraction with the retinoscope.

The **ciliary muscle** is much like a sphincter muscle and encircles a part of the inner globe. When paralyzed it stretches outward as do the sphincters, and pulls on the capsule of the crystalline lens through the little zonules of Zinn. It flattens the lens when the muscle is paralyzed. It relaxes the capsule when the muscle is active. And the lens, by its own elasticity, becomes more convex, and thereby increases its power.



Fig. 11.

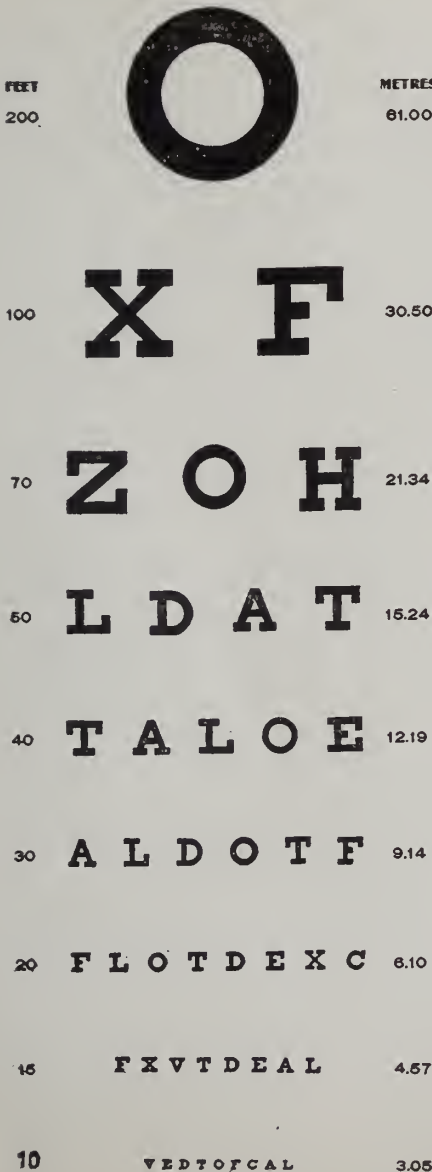


Fig. 12.

The **sclera** is the shell of the eye. The **choroid** is a pigmentary layer. The **retina**, through its rods and cones, is the precipient element of the eye. The yellow spot of the retina is where the focus must be formed to get the most accurate and best of vision. The **vitreous fluid** fills the large chamber of the eye, behind the lens.

Acuteness of vision is measured with test card. A test card consists of letters of different sizes, and these different sized letters should be seen at different distances. At its respective distance each letter embraces an angle of five minutes on the retina, because twenty feet is infinite distance; hence, parallel rays of light, twenty feet away, is the distance the card is placed from the patient. The eye should read what should be seen at 200 feet, and, if not, vision is 20/200 of normal. The eye should read what should be seen at seventy feet, at fifty feet, at thirty feet, and at twenty feet, when vision is then 20/xx of what is accepted as the proper line for a normal eye to read.

Each eye should be tested when the other eye is properly covered. We express the measurement of vision of the eye taken as 20/cc., 20/c., or 20/xx, etc. The numerator is the distance indicated by the type which is read.

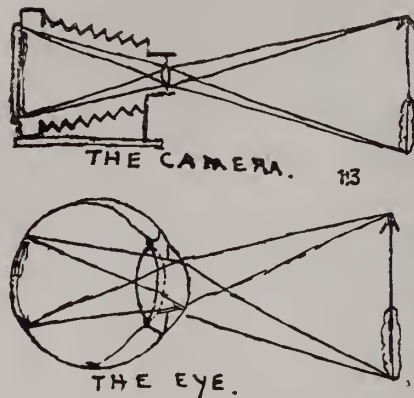


Fig. 13.

The eye accommodates by changing the convexity of its crystalline lens. In this way the eye focuses from all distances a clear image on the retina. The crystalline lens is of the consistency of butter, and is contained in a capsule. This capsule is attached to the ciliary muscle by the zonule of Zinn. This muscle, when paralyzed, pulls upon the capsule and flattens the lens, and when active relaxes the capsule and the lens becomes more convex.

We say the ciliary muscle is paralyzed when the lens is flattened to its utmost. This lens undergoes change when we grow older, and does not so rapidly adapt itself to these different distances, and ultimately loses this power entirely.

Atropin paralyzes accommodation; it is a **cycloplegic**, and it dilates the pupil. Cocain dilates the pupil (mydriatic), but is not a cycloplegic.

If the ciliary muscle is paralyzed and the eye reads 20/xx, it is *emmetropic*. Parallel rays of light are then focused upon the retina without accommodative assistance. When parallel rays do not focus under the same conditions we have an **error of refraction**; hypermetropia, myopia or astigmatism.

In the myopic eye the cornea and crystalline lens may have too great dioptric power, or the eye may be too long *antero-posteriorly*, thereby the focus is in front of the retina. The myopic eye does not see at a distance, but it does see near by. It may not read the largest letters on the test card, yet can read the smallest of type

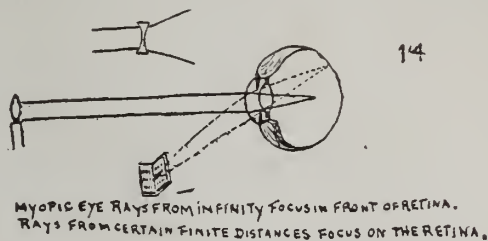


Fig. 14.

when held near to the eye. Divergent rays of light from certain distances will focus on the retina. To correct this error of refraction, we use a concave lens, so as to compel the focus further back upon the retina. The minus lens disperses light, and we find the exact amount of dispersion needed by trying minus lenses in front of the eye.

The myopic eye does not call upon the ciliary muscle for assistance, but, on the contrary, attempts to relax the crystalline lens. The myopic eye is usually fitted, for this reason, by a glass too strong. An increase of minus lens over what is needed stimulates accommodation. The myopic eye should be put under atropin for accurate correction.

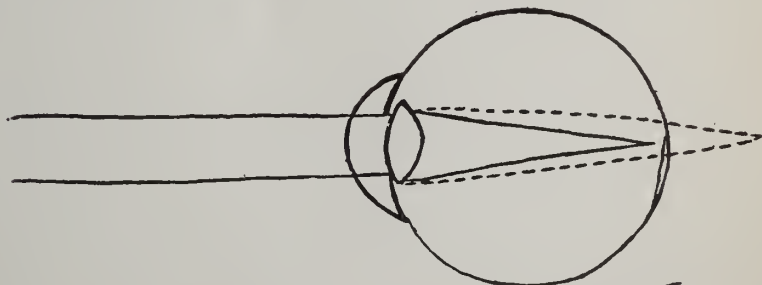


Fig. 15.

Fig. 15.

In the hypermetropic eye, parallel rays focus behind the retina, and the ciliary muscle must be paralyzed to measure and discover the exact distance accurately.

It is in the hypermetropic eye that the ciliary muscle plays such an important part. To obtain sufficient accommodation, this focus—that is, behind the eye—can be brought upon the retina. Remember, however, the desire is to have a normal eye, and this focus should be there without any accommodation. *Though an eye sees 20/xx*, it is not necessarily normal, for it may be accommodating. The normal eye sees 20/xx under atropin. The hypermetropic eye causes headaches and various reflex pains (asthenopia) by this effort of accommodation to keep this focus on the retina.

How is hypermetropia corrected? Put the eye under atropin and try convex lenses till that focus which is behind is brought upon the retina. We thus have a plus lens doing the work of the crystalline lens of the eye.

**Prescription of Glasses in Myopia or Hypermetropia:** Right eye—1.25 diopter sphere (D. Sph.). Left eye—0.50 diopter sphere (D. Sph.). *For constant use.*

In myopia you prescribe just what is found under the atropin: Right eye (R. E.) or oculus dextra, (O. D.), 2.00 D. Sph. Left eye (L. E.) or oculus sinistra, (O. S.), 1.25 D. Sph. *For constant use.*

In prescribing for hypermetropia you usually make a small deduction, but each case is studied separately and there is not a fixed rule for prescribing.

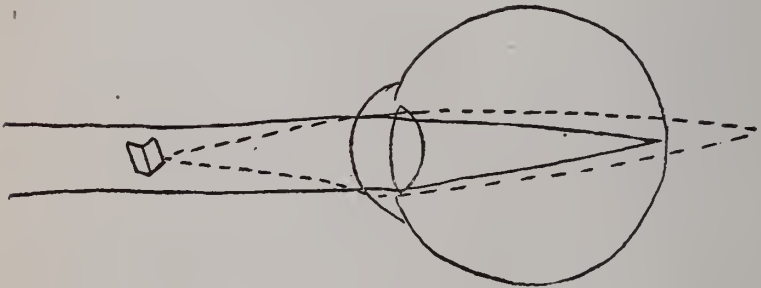


Fig. 16.

**Presbyopia:** When you can no longer do your most important work, such as reading writing of fine handwork at the usual distance, inasmuch as this distance has receded from the eye, a condition has developed which we call **presbyopia**.

The crystalline lens permits of greater change in its curvature in the young than in the old. Is presbyopia an error of refraction?



No, the diminution of accommodation in old age is a physiological phenomenon.

This inconvenience of reading usually starts at forty years of age, and it is then that one needs presbyopic correction.

The loss of accommodating power increases year after year, and every year a proportionately stronger glass is needed until seventy, when it becomes fixed.

### Correcting glasses for near work according to Holtz:

Age 40, +0.75<sup>s</sup>; age 45, +1.50<sup>s</sup>; age 50, +2.00<sup>s</sup>; age 55, +2.50<sup>s</sup>;  
age 60, +3.00<sup>s</sup>; age 65, +3.25<sup>s</sup>; age 70, +3.50<sup>s</sup>; age 75, +3.50<sup>s</sup>;  
age 80, +3.50<sup>s</sup>.

*Don't forget:* Correct first your error of refraction, then, if patient is over forty, add for your presbyopia.

## BIFOCAL LENSES

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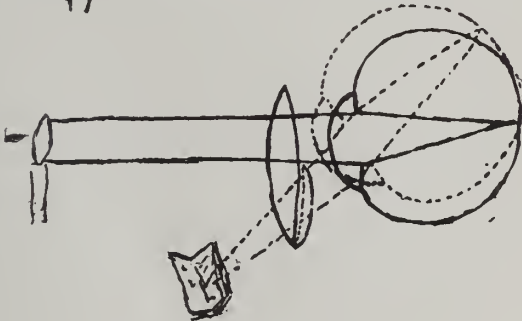


Fig. 17.

**Bifocal Lenses** are used to correct, first, the top glass for your error of refraction and making the eye normal, while the lower glass is added to the first glass in the form of a segment on its lower border to correct presbyopia.

**Prescription in Presbyopia:** O. D. +1.00 Sph.; O. S. -1.00 Sph. For distance add 2.00 Sph. For near: another example: O. D. -1.50 Sph.; O. S. -1.50 Sph. For distance, patient forty-five years of age need not use any glasses for near, for his myopia neutralizes his presbyopia.

The cornea is divided into meridians, and each meridian should have the same curvature. When one meridian has a greater curvature than the other, we have astigmatism. Then the error of refraction

tion is such that a focus is not produced. Some rays may meet on and some behind the retina.

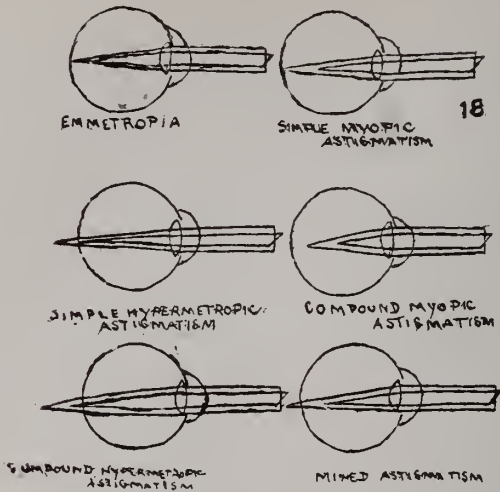


Fig. 18.

Astigmatism is corrected by cylindrical lenses, and the trial frame is marked off into meridians so as to tell where the axis of the cylinder is to be. This is more difficult, and, as you no longer deal with

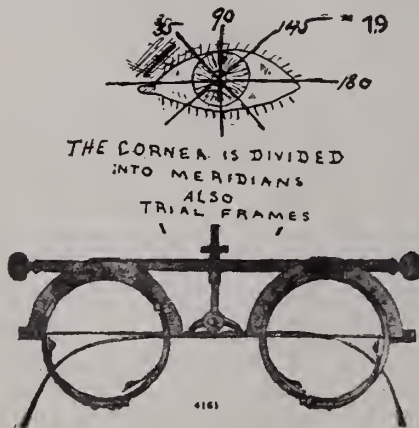


Fig. 19.

simple conditions, it is best for you to know your limitations. The ophthalmologist can handle these difficult cases to your own and the patient's greater satisfaction.

## DISCUSSION.

**Dr. Larose:** I wish to state that Dr. Dimitry and I have been fitting glasses for eight months. We measure the patient for the frame and send the prescription to a wholesale optician, who sends the frame back to us. We believe we can do better work fitting a frame to a patient, we have studied, than can an optician. A little mechanical knowledge and dexterity with pliers is all that is required. We, who are most concerned in the proper adjustment of glasses, naturally take greater pains, whereas the optician often chafes under adverse criticism. Our undertaking has been entirely satisfactory to our patients and ourselves.

**Dr. Henry Dickson Bruns:** I think the object of Dr. Dimitry's paper was this: that the little knowledge the opticians have leads them to think that they can fit any or all eyes. It seems to me that Dr. Dimitry desires to emphasize the point that physicians with a knowledge of anatomy, etc., can do this better than opticians. The accommodation of the eye is the main thing in the way of overcoming defects and we can paralyze it by a cycloplegic, but there are conditions in some eyes which would be made dangerously worse by a cycloplegic; hence it is unwise to tell the average medical man to employ such drugs. The general medical man should confine his work to cases not requiring cycloplegics. It would be a good thing for men with the necessary time to do some of this work. They could handle the simpler cases much more safely than the opticians; but those of us who have been practicing many years are of the opinion that these men should not try to fit the complicated cases or those requiring cylindroid lenses. In other words, the general medical man can handle simple cases of old or near or far-sightedness, but beyond this he should not go. The dangers I have hinted at are why we who are practicing this specialty object to optometry bills; they give to opticians a standing and a license they should not have. In regard to the fitting of frames, I do think that the oculist can employ his time better, but he should always check up the work of the optician. The polyclinics are doing a great deal of good in training men along these lines.

**Dr. Dempsey:** It seems to me that the fitting and supplying of glasses and frames by oculists is similar to the carrying of drugs by physicians. We can do this, but we are not accustomed to do it nor are we supposed to do it in the city.

**Dr. H. N. Blum:** I think the members of the medical profession who have knowledge of drugs, mechanics and anatomy should be able to do simple refraction and by not so doing they foster the development of a trade or profession whose members are not qualified to practice medicine. A set of qualified practitioners already exists. These men, by virtue of their education, are prepared to practice ophthalmology, and the so-called "optometrists" are endeavoring to have a bill passed which would legalize them and entitle them to practice disease of the eye. It is not right, so to degrade the practice of medicine, after all the work done to elevate the profession. The passage of such a law would substitute, in a measure, a poorly qualified trade to take the place of a profession, the members of whom have studied the science of ophthalmology and, by a previous study of general medicine, are qualified to use drugs and other measures indicated in the diseases of the eye.

It behooves the general practitioner to take more interest in ophthalmology. There is a much larger field than is generally supposed, and we owe it to ourselves as well as to our patients to take some measures to protect them against the menace of the optician.

**Dr. Dimitry** (in closing): The idea of this paper was educational, and especially for the country practitioner. The optician thinks he knows how to fit glasses, having taken a two weeks' course. The general practitioner can do it better after a little study. I agree with Dr. Bruns that the general practitioners should not use atropin in fitting glasses. I would say that one-third of the population have errors of refraction; hence the field is large. The optician is trying to be legalized to do everything the oculist does. In dispensing glasses the optician makes an enormous profit. I aim to secure the best results in every way. Some oculists receive gratuities from opticians. Some physicians claim that dispensing glasses is not ethical, but I see no reason for such an opinion.

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Dear Dr. Dimitry: I am sorry that a previously arranged for and important meeting will keep me from hearing your paper and taking part in the discussion of this most important subject you are unfolding to-night.

I beg you to express, to the Society, my hearty concurrence with you in the aim of your paper: to enlarge the sphere of usefulness of the medical profession for the ultimate benefit of the public at large.

Yours very truly,

May 25, 1914.

(Signed) DR. FEINGOLD.

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## THE PROPHYLAXIS OF TYPHOID FEVER.\*

By GRAHAM E. HENSON, M. D., Jacksonville, Fla.

It is not my intention at this time to discuss the prophylaxis of typhoid fever in a general way, but to emphasize the value of individual prophylaxis by the use of anti-typhoid vaccination. In taking up this subject for consideration we should, at the start, fully realize the many possible sources of infection the individual may be and often is subjected to. Thus it matters not how perfect the sanitation may be within a home or community, individuals from that home or community may suddenly be subjected to sources of infection practically impossible to forewarn against. The same may be said of hospital inmates; it matters not how perfect a technic is maintained in the nursing and care of typhoid cases, the inmates of that institution may, without knowledge on their part, be exposed to infection apart from their institutional life. It would seem, therefore, that, regardless of how perfect sanitary surround-

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\*Read before the Florida Medical Association, Forty-first Annual Meeting, May 13-15, 1914.

ings may be, regardless of the fact that the disease may not be prevalent, regardless of a presumptive immunity, with a means at our disposal to confer a practically absolute immunity, for at least some years, it is folly indeed to abstain from its use in all walks of life.

As far back as 1887, Chantemessee demonstrated the fact that typhoid bacilli having been grown, and excreted their soluble products on gelatin, the same medium is unfit for the further growth of typhoid bacilli. In 1892 he and Widal demonstrated the fact that animals susceptible to infection could be rendered immune by giving to them subcutaneous injections of dead typhoid bacilli. It was four years later, when Pfeiffer and Kolle, in Germany, and Wright, in England, attempted to use the killed typhoid bacilli as a preventive measure against the disease in man. Like other measures of equal importance, it has taken some years to demonstrate the solid ground on which stands this prophylactic unit, but its efficiency is well portrayed in the words of former Surgeon General Torney, of the United States Army, who says, in his annual report to the Secretary of War in 1913: "Among the sanitary achievements of the Medical Department in preventive medicine since the time of the Spanish-American war this sanitary measure for the prevention of typhoid fever should rank second in importance only to the discovery of the transmission of yellow fever." What vaccination has done for the United States Army may be summarized as follows: With a mean strength of 81,885 men and officers in 1901, there occurred 552 cases of typhoid fever, with 74 deaths. In 1912, with a mean strength of 88,478, there were twenty-seven cases, with four deaths. In 1913 the disease was practically eliminated, there being but four cases, with no deaths, in an army of over 90,000 men. The use of anti-typhoid vaccin was commenced in the United States Army in 1909, and was used for several years as a voluntary measure, but was made compulsory in 1912. While benefits accrued immediately following its introduction, it will be seen that the full benefits were not obtained until the measure was made a compulsory one. Russell<sup>1</sup> shows the relative typhoid rate among troops stationed in Jacksonville in 1898 and in San Antonio in 1911 in the following table:

**1898 SPANISH-AMERICAN WAR.**

No. Troops.	Cases Typhoid Fever Certain.	Certain and Probable.	Deaths From Typhoid.	All Deaths.
10,759	1,729	2,693	248	281

## 1911 CAMPAIGN AT SAN ANTONIO, TEXAS.

No. Troops.	Cases Typhoid Fever Certain.	Certain and Probable.	Deaths From Typhoid.	All Deaths.
12,801	2	—	—	11

It has been claimed that the deduction drawn from these figures are not altogether fair, owing to the fact that sanitation was probably much better in San Antonio in 1911 than in Jacksonville in 1908. Russell, however, very properly calls attention to the fact that immunity was not due to the lack of exposure, as during the period of encampment forty-nine cases of typhoid, with ten deaths, occurred in the civil population of San Antonio, which city was frequently and constantly visited by soldiers.

We do not lack for statistics as to what typhoid vaccination has accomplished in our own and other public services, or, in fact, in civil life, wherever vaccines have been consistently used.

Firth<sup>2</sup> gives significant figures on comparative morbidity in the inoculated and the non-inoculated. Thus, among an inoculated rank and file population of 60,635 troops in India, there developed 106 cases and six deaths, while an inoculated similar population of 8,477 developed 64 cases and eleven deaths, showing not only a much higher morbidity rate, but a case death rate of 17.1, as against 5.7. Spooner<sup>3</sup> reports his results on 1,361 inoculations among the nurses and others exposed in twenty-three hospitals in Massachusetts, showing a morbidity of 15 per cent. in the inoculated, as compared with 1.19 per cent. among those not inoculated.

There is little doubt that the fear of heavy reactions is responsible for the practitioner refraining from the general application of this measure. That, with a proper technic, this is not a factor, is well demonstrated by Russell, who, in a series of 359 inoculations in children between the ages of two years and sixteen years, classifying his reactions as (a) absent, (b) mild, with temperature of over 103°, reports in the series 73.54 per cent. as giving no reaction, 24.51 a mild reaction, 1.67 a moderate reaction, and 0.26 a severe reaction.

With the very brilliant results obtained by some investigators during the early experimental stages of inoculation, it is a matter of wonder that vaccinations against typhoid fever has not long before now become as universal as protective inoculation against variola. An imperfectly developed technic in the preparation of the vaccin was undoubtedly the chief cause of unsatisfactory results

among some of the earlier users. The degree of heat to which the bacilli are subjected appears to be the pivot on which rests the successful preparation of the vaccin. Thus, in the early work of Chantemessee, a temperature of 120° C. was used. He later reduced this to 100° C. Pfeiffer and Kolle and Wright further reduced the heating point to 60°.

Without describing in detail the technic employed in the growth of bacilli, the vaccin used in the United States Army is prepared by subjecting suspensions of bacilli to a temperature of 53° to 54° C. in a water bath for one hour. The suspension is then diluted with salt solution to the required concentration; 25 per cent. trikresol is added. Complete tests are then conducted against tetanus or other possible contaminations before the product is finally hermetically sealed. This, I believe, is about the technic used by the commercial houses manufacturing vaccin in this country.

The possible dangers of using the vaccin on persons during the incubation period of an invasion raised the question as to the advisability of its general use in the presence of an epidemic. Culliman,<sup>4</sup> as far back as 1901, vaccinated 500 individuals in an asylum at Dublin during an epidemic lasting several months. Of those inoculated, but 1.36 per cent. developed the disease, while of 114 uninoculated nurses, 14 per cent. contracted the infection. During an epidemic in Mobile in the summer of 1911, Peterson<sup>5</sup> collected the results of 779 inoculations carried on by physicians. Of this number, none had become typhoid subjects by November of that year.

Proper aseptic precautions should be observed in administering vaccin. The site of the injection, preferably over the deltoid of the left arm, should be wiped off with alcohol and pointed with 7 per cent tincture of iodine. After the injection, the excess of iodine should be wiped off and the puncture sealed with an iodoform colloid. The vaccins, as marketed, come in packages containing the required three doses in individual glass barrels, each end protected with a rubber cap, three sterile needles and a plunger. Where a large quantity of vaccin is being used, a solid glass piston hypodermic syringe is to be preferred, it being more easily sterilized. The dose consists of 5,000,000,000 killed bacilli at the first inoculation, one thousand million ten days later, this dose being again repeated at the end of another ten days. In young adults and children the relative weight of the individual, compared to a

standard of 150 pounds, is used for estimating the dosage. It is advised that the dose be rather slightly increased than decreased, when it cannot be conveniently accurately estimated. The period of immunity is at present largely undetermined. It was at first contended that it lasted but for a short time—a few months. This was assumed on the ground that immunity ceased as soon as the agglutinating bodies disappeared from the blood. It has since, however, been very properly argued that this contention is not upon any scientific basis, as it is well known that in nearly every instance one attack of typhoid fever gives immunity for life, while the agglutinating bodies can generally only be observed for a few months after convalescence. It seems to the writer reasonable to infer that the immunity may be expected to last for at least some few years and that, by repeating vaccination for typhoid fever, as we do now for smallpox, we may expect to confer a practically permanent immunity.

It cannot be too strongly emphasized that the benefits acquired by those subjecting themselves to typhoid vaccination have not been marred by a single casualty in this country. We are all familiar with the unhappy complications that have in the past accompanied vaccination against small-pox, yet there are few indeed who are not willing to advocate the continued use of this prophylactic measure, knowing, as we do, that, with experience as a guide, all reputable manufacturers of vaccins subject their products to such medical and biological tests as to now absolutely exclude the production of inert preparations or the contamination with the tetanus or other bacilli. Living in a State in which such a large percentage of our population seek, during the summer months, the mountain and sea-shore resorts, many of them with high typhoid rates, bearing in mind that many of our people live in practically typhoid-free communities, and are, therefore, especially susceptible to infection, I would especially urge that the physicians of this State do all in their power to secure, by the vaccination route, as large a number of typhoid immunes as possible.

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## TWO ATTACKS OF HERPES ZOSTER IN THE SAME INDIVIDUAL.

By DOUGLASS W. MONTGOMERY, M. D., San Francisco, California.

One of the main reasons for considering herpes zoster an infective disease is the rarity of a second attack. The first attack is supposed to secure immunity. A few days ago a patient called at the office, presenting a beautiful example of right-sided herpes zoster of the posterior cervical nerves, and gave a clear history of having had an attack of left-sided thoracic zoster over twenty years before.

HISTORY.—A well-preserved, rather stout woman of seventy years of age, and engaged as a child's nurse, called for advice June 23, 1914. She presented characteristic herpetic patches situated in erythematous areas, and distributed over the region supplied by the right posterior cervical nerves. The vesicles had clear contents, and were beautifully formed and jewel-like. None of them were hemorrhagic. One patch was situated on the outer surface of the lobe of the right ear; another large one in front of the ear; three under the body of the right side of the lower jaw; four on the right side of the neck; one over the right side of the manubrium sterni; three in the right clavicular region; and several on the back of the neck, extending down over the upper part of the scapula. None of them were situated to the left of the median line of the body.

Curiously enough, she had no neuralgia whatever, either in the affected region or otherwise, and she suffered, as far as could be ascertained, no other bodily ailment excepting an aortic valvular lesion that caused her no inconvenience.

Enlarged lymphatic nodules were sought for in the affected regions, but were not found.

On being told that she had shingles, she said she had had, twenty years before, an attack "around here," pointing to the left side of the chest, that had ached a great deal. For this she had consulted a well-known practitioner of that day, Dr. O. O. Burgess, and not being quite satisfied, had consulted independently another man, who was also well known, a Dr. Sullivan. I knew both these men as competent practitioners. The eruption of herpes zoster is so characteristic, especially when it occurs on the trunk, that a mistake in diagnosis is not at all probable. Furthermore, her description of the aching accompanying the eruption was quite vivid.

The absence of neuralgia in the present attack was notable, see-

ing that it tends to accompany zoster in elderly people, and in them is generally regarded as apt to be both severe and enduring, leading, as I have seen in some cases, to the use of morphin to assuage the pain, even to the extent of acquiring the morphin habit. Possibly the freedom from pain in this case was the effect of partial immunity. Curiously enough, however, a few days before a man seventy years of age consulted me for a well-marked zoster of the right upper dorsal nerves, and with out the least pain, so that the absence of pain in the case of this patient might have been entirely due to the manner in which the nerves were affected by the infective virus.

I believe that zoster is due to an infective virus that enters by way of the nerves at their peripheral distribution. As the sensory nerves are by far more exposed at their periphery than the motor nerves, I believe that this accounts for the almost exclusive implication of the sensory nerves in this disease. In this case, in this very regard, an interesting circumstance was related by the patient. She said that for a month or more past she had experienced an itchiness over the right shoulder blade, for which she had used "witch hazel." This may have been a symptom of bacterial invasion.

Regularly in herpes zoster there is tumefaction of the lymphatic nodules of the affected region. The nodules in this case were not demonstrably tumefied, which may have been due to the age of the patient, as the lymphatic system in elderly life is not so liable to tumefaction. It may, however, have been also a symptom of partial immunity.

Recently Gianelli, of Santiago, Chili, has reported an instance of recurrent zoster, occurring also as a family disease.

A man, thirty-five years of age, got a right thoracic zoster in March, 1913. His wife, aged twenty-eight, developed a left lumbar zoster in May, 1913, and one of their four children, nine years of age, got a left thoracic zoster in July, 1913. The man suffered another zoster attack in October, 1913, this time in the region supplied by the right posterior cervical nerves<sup>1</sup>.

This certainly is a remarkable group of cases, in the first place as occurring as a group, a circumstance I have never personally observed, and also because of the two attacks in the same individual

1. Zona familial et récidivant par M. V. C. Gianelli (de Santiago, Chili). Presented by M. Gaucher before the Société de Dermatolog. et de Syphil., December 4, 1913. *Bulletin de la Société française de Derm. et de Syph.*, 1913, p. 582.

occurring in March and October of the same year. Two views may be taken of these attacks: One, that they constitute identical infections taking place at separate times, in which case it must be admitted that the first attack was not immunizing. Another view would be that the virus that caused both attacks entered the patient at the same time, one infection taking place in the terminals of the sensory nerves in the right thoracic region, and traveling up to the posterior sensory ganglia to give rise to the attack of March, 1913, the other infection taking place coincidentally in the region supplied by the right posterior cervical nerves, but being so retarded in its journey up the sensory nerves that the zoster outburst was delayed until October of the same year.

In 1913 Anton Sunde had the opportunity of performing a post-mortem that substantiates the view that zoster is an infective disease. In the Gasserian ganglion of a man who died of arteriosclerosis three days after the appearance of a herpes frontalis, he found a large number of Gram positive cocci, mostly diplococci or in chains. The ganglion was the seat of severe hemorrhagic, purulent, inflammatory changes, and the micro-organisms were situated chiefly in and about the hemorrhages.<sup>2</sup>

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## A SEVERE CASE OF VINCENT'S ANGINA.

By E. M. DUPAQUIER, M. D.,

Professor Contagious Diseases, College of Medicine, Tulane University; Chief of Service, Contagious Ward, Charity Hospital, New Orleans.

In *La Clinique* of June 19, Dr. H. Rendu reports the case mentioned here, bringing forth two points: First, the septicemia complicating the case; second, the magical action of arseno-benzol in this septic case, as well as in the uncomplicated cases, already published.

This case was observed in the contagious service of Dr. Rendu in St. Joseph's Hospital, Paris, whereto it had been referred by a physician, with the diagnosis of *diphtheritic sore throat*.

In the Charity Hospital's contagious service, in New Orleans, we often have had the occasion of observing and recording similar occurrences. We have had to deal with very severe cases, which yielded but slowly to various antiseptic applications. We are pre-

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2. Herpes frontalis mit Bakterienbefund im Ganglion Gasseri. Norsk Magazin for Lægevidenskaben, 1913, No. 3, p. 339-342 and Duet. med. Woch., 1913, No. 18, Abst. in Arch. f. Derm. u. Syph., January, 1914, p. 671 (Referate).

pared now to apply arsenobenzol, and we are anxious to see for ourselves what it does.

Too much publicity cannot be given to the fact that the great majority of practitioners know Vincent's angina only by name, and that no pains are taken in town to differentiate it from true diphtheria.

It is worth while mentioning here, as a lesson, the enormous blunder made recently by some—a bunch of them. A case was sent to the Charity Hospital contagious wards with the history of the most obstinate case of diphtheria ever seen by throat men. One hundred thousand units of antitoxin had been administered, to no purpose (*sic.*). Diagnosis at the Charity Hospital showed that the child had a sarcoma of the right tonsil, and, grafted upon this, Vincent's angina; no diphtheria. Dr. Dupuy tracheotomized the patient to relieve the difficult respiration caused by the rapid growth of the tumor, the Vincent's angina was bettered at once, with iodized phenol (N. F.) applications, from twenty minims, the minimum dose, to sixty minims, the maximum, to the ounce of glycerin, forming a mixture, which is applied three times a day over the whole area. When nitrate of silver in 75 per cent solution is used in diphtheria carriers, the same iodized phenol mixture is also used on alternating days, and a culture is made every third day.

It is certainly *not* a pleasant task to report errors of that kind; but it is a duty to perform the task, in view of preventing a repetition of such errors. There is no harshness in the criticism; there is a well-intended purpose. Now, here is the detailed history of Dr. Rendu's case, which is selected as a type of its class.

On February 7, 1914, Georges M....., employe in a commercial firm, was admitted to the contagious service of Saint Joseph Hospital. Since a week he was suffering from sore throat, and he was referred to the hospital by his physician, who had made the diagnosis of **diphtheritic angina.**

Twenty years old, normally developed, though frail in appearance, he suffered from repeated bronchitis during his childhood; his health being unsettled up to the age of ten years. He remembered having been treated, then, in the Trousseau Hospital, during two months, for a case of albuminuria, which had never reappeared. Since that time he always enjoyed good health and stood, easily, the rather hard work he had selected.

On December 15, 1913, he was taken sick, and a zona showed on the left shoulder and arm. Very painful at the onset, the case terminated without complication after a period of three weeks. He then resumed his occupation, but, a few days later, on January 28, 1914, he suddenly experienced articular pains, which were subacute, fleeting and

accompanied with a feeling of general fatigue. On the following day, in dressing up, he noticed on his trunk and limbs a multitude of purplish-red maculæ. It was purpura. At the same time, he began to have a very acute pain in the throat with a pronounced dysphagia. For a week he struggled along in his work, feeling more and more tired, until he suffered so much from his throat, that he made up his mind to consult the physician, who sent him to the hospital.

On admission, February 7, 1914, the patient complained, yet, of diffused pains, mainly articular. The maculæ of the purpura are still very apparent, chiefly on the lower extremities, and the cicatrices of the zona were quite distinct on the left shoulder and arm.

Examination of the throat showed both tonsils entirely covered with a continuous false membrane of a dirty greenish color, thick and very consistent. A similar false membrane, but not so exuberant, covered the posterior surface and right border of the throat-flap. A foul smell came from the mouth.

On both sides the cervical glands were enlarged, isolated from one another, slightly painful. In trying to remove the false membrane from the tonsils, by means of a swab, it was found to be adherent, the ulceration beneath bleeding readily.

Temperature was 38° C. (100.4° F.); heart rapid, rather soft, 128 beats, first sound slightly blowing at the apex. Patient coughing since a few days; signs of pleuro-pulmonary congestion at the base. No albumin in urine.

Adding up the symptoms, the clinical diagnosis was made of bilateral Vincent's angina, with sloughing tendencies, accompanied by phenomena of generalized infection.

Smears from swab-rubs on false membranes confirmed the diagnosis, showing a large number of absolutely characteristic spirilli and fusiform bacilli, associated as in the typical picture of Vincent's angina smears. Cultures gave numerous colonies of streptococci.

Temperature oscillates from 38° C. (100.4° F.) in the a. m., to 39° C. (102.2° F.). Patient looked depressed; dysphagia still very sharp. Applications of permanganate, followed by same of methylene blue, brought no change whatsoever. On the contrary, the sloughing process increased, spreading to the lateral surfaces of the pharynx; the false membranes, still very thick and adherent, the ulcers growing deeper and deeper, still bleeding readily upon the least exploration. The throat-flap was partly sloughed covered by false membranes. The general condition was still very bad. Fever and depression persist.

On February 16, melenic stools. Abdomen negative. Calcium chlorid administered and ice bags applied to abdomen. Blood-picture negative.

On February 17, melenic stools again. Then applications were begun morning and night of **salvarsan in oil suspension**, using the preparation bearing the trade name of Olarsol. The very next day improvement was noticed. Dysphagia diminished, the false membranes beginning to thin off and desintegrate; being expectorated in fragments now and then.

Two days later all traces of false membrane on the right side had disappeared, and three days after the applications were discontinued the angina was cured.

The damage done could be plainly seen, then. All of the throat-flap

and left posterior pillar had sloughed away. The ulcerations in the tonsils rapidly filled.

As the angina disappeared, the general condition improved; the temperature dropped and the intestinal hemorrhages stopped. One month from the day of admission to the hospital the patient was discharged as cured.

This case of Vincent's angina is interesting for several reasons. The sloughing of the throat-flap and left posterior pillar is only a peculiarly marked feature of the characteristic sloughing tendency of the disease, but what is worth noting is the severe septic condition presented by the case, not so much the transient disturbances which affected the lungs and heart, but, indeed, the tendency to hemorrhages, viz., pupura and enterorrhagia, an altogether rare instance. In this and in the other cases reported by Simonin, as also in the experiments of Niclot and Marotte, it seems that the streptococcus was the cause of the septicemic accidents. Indeed, cultures from the membranes had grown copious colonies of the microbe. The action of salvarsan was simply wonderful: in no time, so to say, both the local and general conditions were improved.

Achard and Flandrin, whose credit it is to have treated Vincent's angina with salvarsan for the first time, employed the powder itself by blowing it on the tonsils. (Achard et Flandrin, *Société Médicale des Hôpitaux*, 28 Avril, 1911, p. 504.)

Renou was the first one to employ salvarsan in oil suspension, as he thought it easier to apply in this form. Excepting a metallic taste, which lasts but a few minutes, the drug seems to present no inconvenience whatsoever. Either way the action is rapid.

Additional remarks on the local use of arsenobenzol in Vincent's angina and stomatitis of the fuso-spirillary symbiosis type are taken here from the *Lyon Medical*, May 24, 1914, and the *Biologie Médicale*, May 1914. The six personal cases reported by Niclot and Levy quite recently, namely, four anginas, one angina with concomitant stomatitis, and one mercurial stomatitis, all laboratory positive fuso-spirillusa symbiosis, in which arsenobenzol, applied in powder, showed a remarkable efficacy, bring, up to now, the number of cases treated with arsenobenzol to twenty-two Vincent's anginas, three ulcero-membranous stomatitis and one mercurial stomatitis, the two latter of the fuso-spirillum type.

Daily bacteriologic examinations showed that the arseno attacks the spirillum with extreme swiftness, and does away with it quite often in less than twenty-four hours. The fusiform bacillus is

slowly affected, and before disappearing shows a number of variations; it becomes shorter and more stocky, and it is present in large groups at the time evident amelioration is started. Yet its persistence does delay the transformation of the lesions. The main factor is the spirillum, however; on its disappearance depends the cure.

A fact repeatedly observed is that the *restitutio ad integrum* depends on the nature of the initial process, viz., should the angina or the stomatitis be due to a *pure fuso-spirillum* symbiosis, recovery is rapid; but should the microbic combination become grafted upon a pre-existing lesion, such as teeth tartar, gingivitis, mercurial stomatitis, then, while the treatment is still undoubtedly and evidently efficacious, the final recovery is somewhat delayed.

Relapse after a few days has been reported, after all acute clinical symptoms had disappeared, is accounted for by a *misapplication*. The case referred to was an ulcer of the tonsil, quite hard to reach, hidden by the pillar, tortuous in outline, growing on a diseased tonsil, which had been cauterized many times before. The powder, therefore, could not be thoroughly applied all over the area, and the smears were made from swab-rubs on untouched spots. Faulty technic explains the relapse. Drs. Niclot and Levy prefer to use the arsenobenzol in powder rather than in water or glycerin solution, first dipping the cotton swab in glycerin and rolling it in the powder. It seems that that technic is acceptable for cases of ulcers easily reached. But for cases hard to get at Flandin's technic is certainly a better one, namely, the blowing of the arseno, by means of a large medicine-dropper with no fine point (ordinary large pipette would answer the purpose) and a rubber bulb, or a direct gust from the operator's breath.

CONFERENCE OF REPRESENTATIVES OF HEALTH AND  
EDUCATION BOARDS OF SOUTHERN STATES  
FOR THE BETTERMENT OF HEALTH  
CONDITIONS AMONG NEGROES.  
Friday, April 24, 1914.

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(Continued from August Journal.)

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THE CHAIRMAN: We are fortunate in having with us a man who was once in charge of one of the largest educational institutions of the State—and, I can add, with great success—and who is now engaged in the promotion of industrial schools for negroes throughout the South; a man who is in a position to speak upon the educational outlook. I am going to ask MR. B. C. CALDWELL to give us the benefit of his wide experience.

MR. CALDWELL: I came here as a layman to sit at the feet of these doctors and learn; not to attempt to suggest. I have been profoundly interested in this discussion, and greatly pleased with the tenor of the talks from beginning to end. Especially was I struck with the keynote sounded by Dr. Ledbetter at the very beginning of the meeting, in placing the responsibility for the unfortunate health condition of the negro where it belongs, with the white people. I was interested to note how cordially that was endorsed by Dr. O'Reilly and all of the other speakers, possibly with a slight exception from the representative of South Carolina. I think that was the only incidental, however, because I am sure he feels, as we all feel, that it is not only a question of giving the negro the housing he deserves, but of giving the white man the health he desires. That is embraced in it; we cannot be healthy ourselves unless we protect the negroes in our community.

I was in Atlanta not long ago when a case of diphtheria developed in the home of the Mayor; and upon investigation it was found that this case of diphtheria was carried into the family by a cook. There had been a case of diphtheria in the home of this cook for a week; she had been coming and cooking in the home of the Mayor. But it was nobody's business to look after that child; it was just a little negro child, this little granddaughter of the cook. Without knowing it herself, she brought that case of diphtheria into this home where she worked.



I saw an instance similar to this in Natchitoches. A waiter in the dining room had been absent from his work about a week; he reported he was sick. The day he came back he was scaling off with smallpox. Nobody had reported it. There he was in the dining room, handling plates and carrying food, when he was actually scaling off with smallpox.

When we come to study this question of the negro's health, we are not only interested in the altruistic part of it. That is true, as the physicians have said here this morning; it is the duty of the strong to teach the weak. But along that line we are concerned with protecting ourselves from invasion of disease from contact with the poorer class of the colored people.

You may be interested to know of an effort that is being made in Virginia in this direction. Last year on the 20th of April they had a Health Day in every negro school in the State. They had prepared and sent out a hundred thousand circulars. It was admirably prepared. Did you see it, Dr. Dowling? (Dr. Dowling answered in the affirmative.) It was excellent. These were distributed by the county superintendents to the various schools. Then the white people in every community took a very large degree of responsibility. So on April 20 last year in Virginia every negro school in the State was actually engaged in teaching the fundamental principles of health, and from the public point of view. In carrying that out they had two or three representatives of the State Board of Health—negro representatives, who are, I think, employed all year.

While in North Carolina, in the County of Guilford, I had some business with the County Superintendent. I encountered him out in the country with the County Superintendent of Health. They were working along together. In a number of the counties the County Superintendent of Education is accompanied by the County Superintendent of Health. On the occasion I met the County Superintendents of Guilford, they told me the trip had occupied more than a month—six weeks, I think—studying conditions of every negro school in that county.

I am glad to report that in other States, too, where I see something of the negro schools, I might say that, from Maryland to Texas, the white people are showing some interest. I represent two of the funds that make appropriations to the County Superintendents of Education for the industrial training of negro children.

In visiting them to check up the expenditures of the Slater and Jeanes funds, I go with these superintendents and see the work out in the county, and also see a great deal of the homes and schools. And it is gratifying that I am able to report to you in almost the whole Southern territory we find, in keeping with the stand taken by Dr. Ledbetter, that the white man feels that he is responsible for conditions, and the white man owes it to himself, to his children, and to his community, to do a better part by the negro.

THE CHAIRMAN: Again we are going to impose on our friend, Dr. William C. Woodward, Health Commissioner of Washington, and ask him to tell us what he thinks about this subject. Dr. Woodward has done good service in stimulating interest in health affairs, not only among the negroes, but the white people also. As head of the Health Department of Washington, he comes in contact with more "tony" negroes than any other man, and, I expect, he sees much of them as a class. I take pleasure in introducing DR. WOODWARD to the gentlemen who have not met him before.

DR. WM. C. WOODWARD, Health Officer, Washington, D. C.: Mr. Chairman and Gentlemen: I am not going to say that I know nothing concerning the health of the negro and their death rate; that, I think, would be undue modesty on my part; but I am willing to say it is a subject about which I am hardly prepared to talk.

In the City of Washington we have now about 28 per cent of our population negroes. Since I have been in charge of the Health Department, and that will have been twenty years on the first day of next August, the negro population has varied from 28 to 30 per cent, representing a total of 100,000 persons. I have made a very diligent study of the death rate of the negro as compared with that of the white people, and have arrived at some conclusions similar to those expressed by other gentlemen here, but have arrived at them in a somewhat different way.

Since the year 1872 separate mortality records have been kept. While they still show deplorable conditions among the negroes, at the same time they show that great progress has been made. The average annual death rate from 1875-1879 was, for the white people, 19.35; for the colored, 39.76. Since then they show a steady decrease both for white and colored, until, for the year 1913, when our white death rate was 13.98, and the colored 24.84. The white death rate has fallen from 19.35 to 13.98, and the negro death rate from 39.76 to 24.84. So it shows that, however bad conditions are now, we have made wonderful progress.

Attention has been brought recently by Dr. Chandler to the injustice, or apparent injustice, done by general death rates; that is, white and colored combined. There is, however, a feature in connection with the study of the general death rate that has to be considered before we can determine just how much injustice is done. In every community there is necessarily a considerable number of persons who are engaged in manual work, work in the field, and in the kitchen, drivers and ordinary laborers. That class commonly represents those who are least educated and least well off in this world's goods, and when there are negroes in large numbers it is largely made up from that race.

I was troubled for a long while to find a way to determine just what the death rate of the colored people would be if compared with the white people who represent the same position that they do in the social scale. I was inclined to believe, if we would take cities like New York, Boston or Chicago—and I might say, some Southern cities, too—and study there groups of white persons representing the same position in the social scale, we would probably find death rates as high as those of the colored people. I know of no really satisfactory study that has been made along that line, and that is one reason why I said I am not prepared to discuss intelligently the matter of negro death rates as compared with those for the whites.

In my own home, the District of Columbia, a careful study has been made. Our city, for the District of Columbia and the City of Washington are regarded as identical, is divided into what we term "vital statistics divisions," and death rates for white and colored are kept separately for each, so we have in the end, not merely the statistics for a large district, but also for small subdivisions of it, some representing the more wealthy, some the middle class, and so on down until we come to the poorest class. The figures for these subdivisions have failed to show anything to indicate that the poorest, the most ignorant and hardest worked white laboring man has a death rate as high as the negro similarly situated. I carried that comparison to the extreme. I took the population year after year for our alleys, which compare with what is generally known as the slum districts in other cities. The white man who lives in the alleys is indeed a poor white man. And yet I found that the death rate for the whites who live in our alleys is very much lower than the negroes similarly situated. As a result, so far as my studies

have permitted me to go, it seems to me that it is something more than ignorance, hard labor and poverty on the part of the colored man that is responsible for his high death rate. It arises, probably, from the fact that he has not yet adapted himself to modern life, that is, to civilization of the type that prevails in this country.

Study of the death rate in detail has led to the same conclusion. The high death rate of the negro is spread over a wide range of diseases. In 1913, in the District of Columbia the negro death rate from tuberculosis of the lungs was 3.0 times as great as that for the whites. From acute bronchitis, the death rate of the negro was 5.0 times as great. Fatal cases of infantile convulsions were 3.33 times as frequent among negro children as among white children. Fatal marasmus was 1.75 times as frequent; deaths from acute nephritis, 3.0 times; from lobar pneumonia, 3.5 times; from valvular disease of the heart, 1.6 times; from whooping cough, 4.0 times as great; from hereditary syphilis, 5.44 times, and so on. In three conditions there was a marked difference in favor of the negro. The negro does not commit suicide as often as his white brother. He commits it more now than he used to, but his death rate from suicide is still low. In the tabulation for 1913, representing the white death rate from suicide as 1, that for negroes was .032. There are two other conditions which may surprise some of you where negroes have the advantage—acute alcoholism and cirrhosis of the liver. Year after year fewer negroes, in proportion to the whites, die from acute alcoholism and from cirrhosis of the liver than whites.

Where there is a relatively high death rate, we may expect a comparatively lessened span of life. The average life of the negro who died in Washington in 1913 was 34 years, 9 months and 13 days. The average life of the whites was 47 years, 9 months and 9 days.

The high negro death rate and his relatively short life are, in my judgment, due largely to inherent racial conditions. I made that statement not long ago where an intelligent, wide-awake negro minister was present, and he said: "That is the most discouraging statement I ever heard; if we die young because of inherent racial conditions, we might as well give up." My answer was that his logic was bad, and that the very fact that his race was more prone to disease and death than was the white race was the very reason why he should strive for even higher sanitary ideals than his white brothers.

Housing conditions are fundamental. Fundamental not merely with respect to physical health, but also to moral health. In the District of Columbia, in every five negro children born whose births are reported, one is illegitimate. The corresponding number for whites is about one in forty-one. That I do not attribute altogether to housing conditions; but when you huddle boys and girls and men and women together, where they must live and grow up without restraint or sufficient training, it is but natural that their moral standards become lax. We must teach them not merely about housing, and food, and clothes, but also with respect to their general conduct of life and habits of living.

Before any education is undertaken, however, it should be decided as to what kind of education is to be given; we must determine what we mean by education. Some of our colored brethren think it should be one kind, and some another. What strikes me as fundamental in the matter of education is one thing that seems to me is commonly overlooked, and I make this statement with all due respect to the educators working in this field, and that is, training for self-control. I am not so much interested in whether you teach a man to read Latin or Greek, or teach him the geography, or to do a good job in plumbing; but I am interested in his education from the standpoint of self-control and the development of his moral life—both in whites and colored. Our present education does not tend that way. Our present method is to make all things easy. We must teach reading, writing, geography, and so on, in such an easy way the child will not know he is working. We must take everything difficult out of his way. I have an idea that we should inject into the educational course a little work, real hard work, possibly even just work for work's sake, to discipline the will as well as the body and mind, if we would give a good education. I think when we have cut out the hard things we lose sight of the fact that the best training is that which gives a man the power of self-control, for it is self-control that distinguishes man from brute. Let us agree, then, as to what education means, before we go forth to educate.

THE CHAIRMAN: We have with us a representative from the last State to have organized within its borders a health department. DR. GARRISON, won't you tell us about health affairs in Arkansas?

DR. C. W. GARRISON, Little Rock, Arkansas: MR. CHAIRMAN: I am very glad indeed to learn that the negroes have been invited

to participate in this meeting with us. Last fall at the meeting of the Southern Medical Association, in Kentucky, we were discussing public health problems that pertain to the negroes and a few negroes had been invited by one of the white resident physicians of Lexington, to be present. Among them was a very intelligent colored doctor who had the respect of the white as well as the colored citizenship of Lexington and one who had worked long among his people. He, arbitrarily, was given the privilege of the floor and made some vital remarks; remarks that were of benefit to every one present. Some member of the Association rose up in his indignation and moved that the remarks of the negro physician be expunged from the records and that no negro be given the privilege of the floor.

Now, if we as health officers are going to handle the negro problem we have got to do it by contact; we have got to have them with us. Of course, that does not mean social equality or anything like that. But it does mean, however, the establishment of sanitary equality. We have got to put them on the same sanitary basis as it were.

Now, Arkansas, as you probably know, never had an organized board of health with an appropriation until last spring. It was the last State in the Union to be given an appropriation or have a health bill; consequently, little has been done in advancing health conditions and certainly very little pertaining to this problem. However, that law now gives to the State all the authority necessary to enforce any regulations that are deemed necessary by the board.

I did not come prepared, either, to discuss this question, but it has occurred to me that this problem will be worked out eventually just as the Hookworm Commission expects to solve its problem. We have all agreed a long time ago that it is a question of education; the question arises now as to the kind of education and manner in which it is to be applied, etc. The Hookworm Commission, I believe, will be recognized as having been quite a factor in moulding a sentiment for better sanitation and general education along those lines, but we of the Commission have come to realize that our work has been educational to a general degree only; and we realize, too, that our sanitary index is too meagre. It is not sufficiently tangible; consequently, an intensive plan is being adopted. These other methods are good; they are educational

from certain standpoints. Public lectures, public meetings, showing pictures—all that is necessary; all boards do it, but that is not sufficient. Our returns are too meager, as I said. This intensive plan of the Commission is to have the men go out into the rural district and examine every one in it and treat every one infected—white and black; see that every single residence and school, church or other public building has a sanitary closet installed and every house properly screened.

This same plan can be applied to the cities, including proper ventillation, lighting, etc., and in this way it seems to me will be the ultimate solution of this problem.

As has been brought out, the colored race is not the race to lead in this work. In his remarks, Dr. Richardson, the colored physician to whom I referred in Lexington, said that the colored race is an imitative race and in his extensive practice he had noticed that when he walked into the home of one of his people he could tell the character of white families that the negro had been working for. That is a lesson in itself. When we can get the people as a whole to recognize this proposition as it is and work along these lines, I believe we will begin to get definite results.

DR. MAYER NEWHAUSER, New Orleans: It is my desire to make a plea for greater democracy in the treatment of negroes when making sanitary inspections. If possible, they should be made to feel it is only for their good; only by such means can we get the best results. The average sanitarian is apt to stand aloof with an air of bravado, which attitude the negro naturally resents, and I hope this simple plea will be received in all earnestness.

THE CHAIRMAN: We would like to hear from (the youngest man) in the audience, a man who has been for many years active in health work, DR. JOS. HOLT, of New Orleans.

DR. HOLT: MR. CHAIRMAN AND GENTLEMEN: I am unprepared to make a talk, to talk on the wing, but there is one point to which I desire to direct your special attention. I was very much impressed, very much pleased with all that I have seen and heard in this convocation beginning last Monday up to so far to-day, but there is one point that it is important to accentuate. I was raised in the country and, knowing my people well, I consider it very important to have them understood. I am willing to admit they have pardonable faults, but they are an independent people, a highly honorable people. One of the most essential things in

dealing with a people, white or black, in this work is to bring one's self into adjustment with them.

Now, gentlemen, I say it would be unfortunate to pursue a course while among the people that would cause a feeling of estrangement such as would follow any appearance of suggesting inferiority, reflecting upon that old Scotch-Irish and Anglo-Saxon race that brooks nothing even from the Almighty. Mild persuasion convincing the intelligent is always effective with these people. A man has to come with a feeling of sympathy and must have the proper disposition in order to win the confidence and respect and affection of this Southern people, and he will get it if he tries. He can carry on good work when he understands them and adjusts himself to them. Now, gentlemen, I think this an excellent point to be taken under consideration.

THE CHAIRMAN: Gentlemen, before adjourning for lunch, I want you to hear from a representative of the colored race, DR. JONES, editor of one of the local papers for the colored.

REV. R. E. JONES, Editor: MR. CHAIRMAN: Since I am to have the privilege of saying something this afternoon, I will not take your time at this late hour. I must say, however, that I have been greatly pleased at what I have heard this morning. It is a great encouragement to us in what we are trying to do for our own people. I want to say further, Mr. Chairman and Gentlemen, that whatever you undertake along the line of sanitation or any other line for better health conditions, we appreciate and you will find our people willing to co-operate. I want to thank you, gentlemen, for this move; it is just the thing we need. It is impossible for us to lift ourselves up by our boot straps, but I want to say we are not hopeless. You will find, if you send men to help and teach us, that we are ready to receive it. Mor my people I want to thank you, and I assure you that your efforts are appreciated by all.

THE CHAIRMAN: We also want to hear from another representative of the colored race. He belongs to the profession known as "butchers"—not of people, but of meat, W. P. NICHOLSON.

W. P. NICHOLSON: MR. CHAIRMAN, GENTLEMEN: I feel very much encouraged by the sentiments I have heard here this morning in regard to taking care of the South's health by improving the condition of the people of my race. The interest here shown in the race to which I belong is most appreciated. I want to say



there are one or two important points raised that cannot be too much advocated and one was that brought out by the doctor from Washington, that if we want to do good work we must teach our people self-control, and the other point was the one Dr. Holt talked on. If we want to get the most from people we must let them feel we are with them. Those, I think, are the most important means to bring to completion what you gentlemen are aiming at. We thank you.

**Dr. Dowling:** If there is no further business we will stand adjourned until 2:30 p. m.

#### AFTERNOON SESSION—2:30.

**THE CHAIRMAN:** Gentlemen, we will now resume the program. I am very sorry that all these representatives of the colored race were not here this morning to hear the discussions. They understood they would be invited to-morrow after we had worked out our plans. In inviting representative negroes to be here we wrote Booker T. Washington, and I am just in receipt of a telegram of regret from him from Chicago.

**THE CHAIRMAN: DR. GLADDEN:** You have worked among the negroes for a long time and have had experience with them and we shall be glad to hear from you.

**DR. A. H. GLADDEN, Monroe, La.:** I can say but little that will add to what has been said here this morning for the uplift of the colored people.

We have admitted that the white people are largely responsible for their present sanitary condition.

Now, I believe in education on all lines; I believe in educating the farmer, the merchant, the doctor or anybody else, and especially on lines of sanitation. For we are bound to admit that is the only way we can have healthy communities, which is the greatest asset that we can have.

In my experience as Parish Health Officer and from my practice in the rural districts, I have come in contact with the negro population extensively and I believe the colored people are largely responsible for a good many of their troubles, and I will explain in this way. As health officer, I have often been called to investigate, or try to investigate, some contagious or infectious disease. I have gone into a neighborhood where I supposed such troubles

existed, and I have asked colored people who lived in an adjoining room where such trouble existed, if they could tell me where such and such party lived, and they would positively deny that they knew anything about them, when, at the same time, they did know that the person lived in the same house with them, and was sick with some contagious disease. Now, they knew they ought to have promptly aided me to find such person so as to prevent further spread of the trouble. Another thing that colored people do in the rural districts that they should not do, is to crowd themselves into one room to sleep. No matter if they have several rooms they will all live in one room. Another practice of the colored man in the rural district, when he moves into a new house or home on a plantation, is to build a big fire in his room at night, shut all the doors and windows, and then go on the outside, and see if he can detect any light, and if he can, he immediately gets something to stop up the cracks.

Colored people in the country do not want to live on a public road. They much prefer to live on the back of the plantation where they cannot see anybody; they want to live in seclusion. They ought to be taught to sleep with their windows open so that they may get the fresh air. White people who own tenement houses in cities give to the colored people poorer houses than they have in the country. Farmers are rapidly realizing that when they keep their colored people well they can get much better service out of them and they are furnishing them with artesian wells, screening their houses, etc.

I hardly know of anything else that I might suggest relative to this matter. However, I will say one thing about vaccination. I believe in compulsory vaccination of all children when entering the public schools. We have a State law now that gives us the right to vaccinate only in instances where we have an outbreak of the disease. I believe the law should be so that no child should enter a public school without showing a certificate of having been successfully vaccinated. Some years ago in Ouachita Parish, while connected with the Parish Board of Health, I had 6,000 certificates printed for such purpose. I spoke to the superintendents about having each child to bring one of these certificates properly signed by the family physician showing successful vaccination; they declined to enforce such a regulation, and as we had no way of compelling them to do so, the blank certificates are still lying in my office.

Small-pox is one of the diseases that we know that we can eradicate from our country. I have no sympathy for an adult who has such disease. I believe it would be better not to enforce quarantine in cases of outbreak, as all who had been successfully vaccinated would be perfectly safe against it, and those who would not be could suffer the consequences.

**Dr. Ledbetter:** Mr. Chairman: In just one point I differ with Dr. Gladden, and that is in regard to concealment of disease. This is not only true among the colored, but the white as well. Concealment of disease is not confined to the colored race any more than to the white race, in proportion to the ignorance of the two races. The colored people conceal disease because they are ignorant.

[*To be Concluded in October JOURNAL.*]

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## Proceedings Orleans Parish Medical Society.

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MEETING OF JULY 27, 1914.

DISCUSSION ON PAPERS ON PLAGUE BY DRs. STARING AND WADE.

**DR. C. W. DUVAL:** I wish to discuss the comparative value of the various vaccins; as mentioned by Dr. Wade we have two, namely, the Haffkine or broth culture, and the agar washed vaccin. The former is a six to eight weeks' growth in bouillon, and contains the bodies of the bacteria and the proteid substances derived from them. It is very toxic and even the immunizing agent is altered. The toxons and toxoids in this vaccin do not give the same degree of immunity as do the toxins, unchanged. On the other hand, in the agar washed vaccin we get no toxons or toxoids, but we get the unchanged product of the bacteria; hence the agar washed vaccin is better. The Haffkine vaccin gives very marked local and general reaction, due chiefly to the toxic proteid substances and not to the immunizing substances. I do not think the vaccin is

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\*DRs. CHASSAIGNAC AND DYER, Editors,  
New Orleans Medical and Surgical Journal,  
City.

GENTLEMEN: I send you herewith the discussion on the papers by Drs. Wade and Staring, published in the August JOURNAL. The paper was in press when it was read before the Society, hence the discussion could not be printed at the same time.

Yours very truly,  
(Signed) E. L. KING, M. D., Secretary.  
per  
GEO. AUGUSTIN, Assistant Secretary.

[N. B.—Received for publication August 11, 1914.—Eds.]

of any value in the early stage of a developing case of plague, but it is of value in immunizing and I believe that every citizen should be vaccinated. The vaccin protects for from three to eighteen months, perhaps longer, and I think it has the same significance as the typhoid vaccin. The *B. Pestis* produces an endotoxin, not a soluble toxin, as does the diphtheria bacillus. I would say that the broth culture vaccin should not be used, as the material needed to produce antibodies may be destroyed by the prolonged growth. The Haffkine vaccin is being used in town by some, but it is the experience of workers with the plague that the agar washed vaccin is better.

DR. L. J. GENELLA: The two aspects of the plague which interest us most is its presence in a community and its spread as an epidemic. The greatest fallacy of the plague situation is that false security the profession has fallen into in believing that plague cases are easily differentiated from other allied conditions. Such unfortunately is not the case. Let me cite a case: Three days ago I was asked to see a case in consultation with a physician in the surrounding country from New Orleans. History of case: The child had been ailing in an ambulatory form for about two weeks with fever and malaise. Some six days before I saw him he had visited a plague infected spot in New Orleans and soon after became much worse and remained in bed, with his temperature gradually becoming continuously high and semi-coma intervening. Physical examination of the child revealed to my clinical methods the following: A small emaciated negro boy, with temperature 102°, pulse 150, respiration 23; left and right cervical glands enlarged; also left and right inguinal glands enlarged, none of which were massed together, but were more of a separate swollen mass, easily movable under the skin, but yet acutely inflamed. Aspiration of the glands in my hands revealed a few scattered bipolar organisms. From a blood-smear no malarial organisms were found by me. No spinal puncture was made, as the case, to my mind, was positively one of infection with *B. Pestis*, and I so reported it to the authorities as one of a markedly suspicious type. After a very complete examination, they were not inclined to class it as one of plague, as the inoculated pig did not succumb to the puncture to date and because of the detection of a blood-smear that showed a suspicion of malarial organisms. Such, then, is going to be your experience; cases of infection with *Bacillus aërogenes capsulatus*, streptococci and other

organisms are going to come to you that will look clinically like plague and have many of its hall-marks and yet not be classed as such after a more careful examination. I may add that the boy died July 27; no post-mortem made.

DR. W. H. HARRIS: I have given the vaccin in about fifty cases, mostly nurses. A few have had slight reaction, chiefly local. Some had temperature of 99° to 101°, but the majority had no fever, slight malaise, and a few had headache; none of them were incapacitated for work. I used the same vaccin as Dr. Wade. In puncturing glands I have been using a little ethyl chlorid and I macerate the gland with the point of the needle as suggested by Dr. Wade. I make a culture on semisolid and also in milk. Thus, I have found to my relief that some organisms which I thought to be *B. pestis* produce gas in semisolid, which *B. pestis* does not do.

DR. GEORGE S. BEL: Dr. Genella's experience is similar to my own. I wish to report the case of a young lady sick for three days with chills, fever, headache and vomiting. Twenty-four hours after the onset, she had temperature 102° and 103°, vomiting blood and matter and passing bloody stools. I saw one of these stools, which contained about a pint of red blood. There were subcutaneous hemorrhages on the back, back of leg and on the thigh; rapid pulse, rapid respiration, delirium, prostration and stammering speech. Found no enlarged glands. Diagnosis of hemorrhagic septicemia, possibly plague. I suggested a blood count and examination of the stools. Some one else suggested perforating ulcer, because the abdomen was tender and retracted. Post-mortem showed hemorrhage into the muscles everywhere, also in the viscera. It looked like the hemorrhagic type of plague. Cultures were taken; organisms examined by the pathologist and bacteriologist of the health service. They made a diagnosis negative for plague in about ten minutes, but for a long time they did not make a positive diagnosis. It finally proved to be a case of gas bacillus infection, without emphysema. This case shows the great difficulty in diagnosing some cases, clinically and bacteriologically. I have seen many deaths from gas bacillus infection, but always, before this case, found emphysema. I thought of charbon, but found none.

I have taken the vaccin and could say that I was not at all worried over the matter. The next morning I felt ill and my reaction lasted three days. I had headache, hot flushes and sweats. A slight reaction after the second dose; none after the third dose.

DR. J. G. STULB: The variety of plague we have here is not contagious, but is infectious; the pneumonic type is contagious. Physicians should not hesitate to deal with plague cases. They are safe if they avoid touching the bed as we have no assurance that the bed is free from bed-bugs. If bitten by a bed-bug which has sucked the blood of any infected patient, you will be infected readily as from a plague-flea bite. There was a negro boy who died of plague and whose body was brought to the morgue, where an autopsy was held by the authorities. He had one gland involved, the left femoral. The patient gave a history of headache and temperature and the case was not considered plague until proved by autopsy. Profound hemorrhagic condition, as mentioned by Dr. Wade, and also the typical induration of the tissues. I believe that every death here has been a case of the septicemic type.

DR. C. C. BASS: I would not advocate any special form of vaccin, but would call attention to the known facts of immunity. If the *B. pestis* is inoculated directly into another animal, it kills in a definite period of time and is thus called virulent. If, however, it is isolated and cultivated in the laboratory for a few generations on artificial media, it rapidly loses its virulence after three or four days. After seven or eight days the organism has lost its virulence to a greater extent and large numbers of the bacilli can be injected without giving rise to plague. But if grown in the presence of blood or serum the organisms do not lose their virulence and if the blood is from an animal of the same species, we will get the highest degree of virulence; hence, we think it preferable to immunize patients against the *B. pestis* grown in rat's blood.

The flea transmits blood and this same bacillus from the rat. As long as a flea can get blood from another animal, say a human being, he keeps up infecting from the organisms in the proventriculus; hence, we desire to vaccinate against this blood-grown organism, which is at least fifteen times as toxic as the agar grown bacillus. I think Dr. Duval is in error in comparing plague vaccin to typhoid vaccin; the typhoid bacillus is a milk-borne or water-borne organism; the bacillus of plague is only a blood-grown organism. In regard to the reaction it is influenced largely by the dose, to some extent also by the individual peculiarities. Any vaccin may produce a reaction, dependent upon the dose. The dose of vaccin is based on the amount that can be given without producing an unbearable reaction. We use this as a criterion in vaccinating against typhoid and the same should hold true in the

use of plague vaccin. Those who have been vaccinated and have experienced a reaction from a fairly small number of dead plague organisms can appreciate the toxic effect of large numbers of living organisms in the case of patients with plague. There may be as much as a pint of these organisms in a given patient. Therefore, the treatment of a hypodermic injection of a few hundred thousand of the dead organism is futile.

DR. F. R. GOMILA: I took both vaccins. The Haffkine gave me a very severe and unpleasant reaction, due probably to the toxins present. I also took the vaccin made by the Louisiana State Board of Health, with only a local reaction and a slight systemic reaction after the third dose.

DR. W. M. PERKINS: I have had two doses of the vaccin. I had a headache the day after the first dose; no fever and only slight local reaction. I had no trouble after the second dose.

PROF. GEORGE E. BEYER: I have heard nothing said about the transmitter, the flea. I do not want to appear as an alarmist, but I wish to call attention to a few facts in the life history of the flea, differing from other insect transmitters of disease. It is more difficult to study the life history of the flea than that of the mosquito, first, on account of its elusiveness; second, on account of its lesser size; third, because it is hard to confine it for study. It takes thirty to forty days to develop. The mosquito has a capacity of laying from 200 to 300 eggs, rarely more; but this does not represent the reproductive capacity of the ovaries. In the flea the capacity is said to be from twelve to fifteen eggs; hence, we may err and say that the flea is not as reproductive as the mosquito; but the mosquito takes the blood contaminated by the sexual cycle of the malarial organism at one meal, and this quantity of blood can ripen two to three hundred eggs from the ovaries. After laying these eggs the insect usually dies from exhaustion. On the other hand, it has been experimentally proven that, if the mosquito gets only half a meal of blood, she only lays eighty to a hundred eggs; after another half meal, sixty to eighty eggs. In this way we can keep up, by this interrupted feeding, the consecutive maturatism of the germinal eggs which otherwise would not have occurred. The flea's stomach is small in comparison to that of the mosquito, and will hold only enough blood to mature twelve to fifteen eggs; but each ovary can produce from three to four hundred eggs. The blood is essential for the ripening and hatching of the eggs. In

the case of an infected flea, the rat's blood is a favorable food for plague organisms, which multiply in the insect's stomach and decrease the capacity of the stomach. Hence, the flea is constantly hungry and always biting, and therefore such an infected flea will lay more eggs than one not infected. The number of generations of fleas is about four. The fleas do hibernate, and in mild winters the larvæ can also. We get the greatest number of fleas in the fourth generation; hence, September is the flea month.

DR. C. W. DUVAL: In answer to Dr. Bass, I will say that the degree of infectiveness of an organism does not parallel its suitability for use in making a vaccin. An organism that has lost its infective power has not necessarily lost its immunizing power. This is shown especially by the work on the tubercle bacillus, also in producing immunity with the typhoid bacillus.

DR. GEORGE S. BEL: Question, to Prof. Beyer: Is the difficulty to study the flea due to its agility? It has been asserted that a flea can only jump four inches in height. Do you find this statement correct?

PROF. BEYER (in answer): No; the difficulty is chiefly due to the difficulty of studying the flea. In regards to immunity against transmission of disease to animals only four inches from the flea, I would say that a flea could jump a great deal further than this distance. A flea jumps about 600 times its own length, or about one meter; to reach that distance it would require a higher elevation than four inches, for the impetus of its hind legs is vertical, and not horizontal.

DR. C. C. BASS: I forgot to say anything about the duration of immunity after the vaccin. Rats can be immunized by one dose of a killed culture for fourteen weeks. Then the immunity begins to decline slowly. Of course, this cannot be compared directly to man, but the same law applies.

DR. H. E. MÈNAGE: Question to Prof. Beyer: I wish to ask Dr. Beyer about the transmission of plague by the bedbug?

PROF. BEYER (in answer): The function of the flea is distinctly a mechanical one; hence, we may say that any blood-sucking insect may become a transmitter of plague, but not to the extent that the flea is. The bacilli may adhere to the mouth parts and may thus be transmitted, but this occurs very seldom. Let us confine ourselves to the rat and rat fleas in our fight against ignorance and incredulity, for, if we take care of the rat, we also resist the flea and the bedbug.



# N. O. Medical and Surgical Journal

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## Editorial Department.

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CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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### WAR IS HELL.

When the Russian and Japanese war came to its swift close, the world breathed of peace. That war came and passed as a great thunderstorm with its master strokes of genius, illuminating experience in every field of warfare.

The protagonists of peace put on their mantles of office and spread the gospel of peace to all quarters of the globe. Embryo peace societies developed into large bodies with resolution to go on. Great nations met in congress to further the cause and in most of the modern countries of the world the propaganda has spread. To what purpose, no one can say. The calm of such effort has given way to a storm of inglorious fanaticism, evidently directed by a megalomania greater than the world has yet seen. No dispassionate

student may say where the blame lies and he can only, at this time, array the facts and, as they accumulate, he may try to set his conclusions in order.

Humanitarian purposes are presently overlooked, and the torch of war has set aflame every cellar and garret of the establishment of Mars, gone out of action for many years.

Both prophet and philosopher have foretold these clashes of human force and both have had reason. Malthusian theory is very near fact when such crises come. The socialism of a fermenting public opinion cannot stay down; the outbreak involves the future direction of human effort.

It is awful to contemplate the path of devastation, horror, and of aftermath which war carries, and such a war! Christian practice repeats itself—the schisms of historic importance have broken down in war and the peace which has followed has associated itself with the calm of religious advance; but while the honor of nations is at stake, no other sentiment has place than patriotism and the eyes of the soldier sees red and his arm may not be stayed until his cause is won or until he succumbs in losing.

What have we to do with war—peaceful in our occupation of ministering to the ill? Everything, is our reply.

What is worth while, if human lives are pawns in a great game of power and if thousands are sacrificed for a country's selfish ambitions?

The physician, who sits over night with his full strength and effort to save one soul and life, must look on at the hellish cauldron of war and wonder if life itself is worth while. His philosophy carries him into the speculation of the purposes of life itself; for the highest of which he constantly strives—the preservation of species, of the human kind.

Are we to be forced to the acceptance of the ultimate truth that war is necessary for the survival of the fittest and that every few decades there must be a clearing house for the destruction of unnecessary human lives? The shadow of the picture appalls us in the contemplation: the mothers, sisters, wives and babes—struggling in the new existence and caused by a sacrifice which seems so useless and so unnecessary among really human beings.

War is indeed hell and in the construction of human events, if plan was ever made, war has constantly checked the gospel of higher ideals and of saner living, for in its every feature it is

appallingly brutal, cruel and unreasonable, except to acknowledge an obligation to the animal side of human nature which demands sacrifice, no matter what the cost.

Goodbye to eugenics, child welfare, world sanitation in altruistic lines, until a saner temper finds the world balanced and not overweighted with contesting ambitions, caused by long lines of entrained ideas of power and of divine sovereignty.

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### THE CITIZENS' HEALTH COMMITTEE OF NEW ORLEANS.

In one of the recent issues of *Harper's Weekly* occurs a friendly review of the plague situation in New Orleans, indicating co-operation and loyalty among the various elements of the city. It is gratifying to have these words of praise, but to such friendly attitude let us say that the New Orleans citizenship has been long tried and tested in organization. Assistant Surgeon General Rucker has declared that the New Orleans people have met the plague situation with a set of ordinances which are the best antiplague ordinances in existence in any city in the world; those ordinances are being enforced.

There has been no sensational organization in New Orleans, but under the earnest direction of the mayor of the City of New Orleans, some fifty citizens of all classes are constituted as a Citizens Health Committee, having the situation in charge. In this group are to be found business men, bankers, lawyers, priests and preachers, doctors and press representatives, each with his task. Politics have been submerged and there is no class or faction.

One group of representatives in this Committee has charge of the publicity campaign, engaged in educating the people through mass meetings in various districts and through systematic educational propaganda in the press and otherwise. The health authorities of the State and city are in another group, co-operating with the Public Health Service in the practical work of rat extermination and in caring for the sick; this division also looks after the maritime and freight problems and directs the careful survey and control of the infected areas, whether rodent or human.

The city is divided into ward organizations for cleanliness and health, and each ward is represented by a qualified delegate to the Citizens Health Committee. These organizations are operating by

distributing the ward so that each square is systematically stimulated by a group of workers so that each house is encouraged to become a sanitary unit.

The medical profession is further combined in an inspection force, checking up the work of the citizens and by systematically scoring every residence with its grounds on a basis of sanitary principles, especially directed at rat prevention and rat proofing.

The educational and sanitary precautions are in full control by the Federal Health Service and under the orders of its officers. The harmonious co-operation so far has accomplished the direct results of complete system of maritime pratique; the perfect deratization of outgoing freight; the prompt report of all suspicious sick; the careful mapping of rodent infection; the hospitalization of human cases and their proper care (17 cases so far, with three deaths among the early cases); a thorough clean up plan for the whole city with women and men engaged, with the highest degree of civic pride, and with city authorities co-operating so as to make the volunteer efforts effective.

It will take time, but the outlook is good and the apprehensiveness of New Orleans itself and of other Southern cities has passed into a certain sense of security from extended danger, through a sure sanitary campaign, in which all the people are engaged, under a representative Citizens Health Committee. Traffic has not been interfered with, nor should it be. There is no more direct danger than there would be in a similar outbreak of smallpox and we have always the assurance that proper precautionary prevention is the surest way to stop any further spread of what is now known to be a controllable and preventable disease.

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### HOLIER THAN THOU.

To the members of the Louisiana State Medical Society who have the opportunity of reading the *Pan-American Surgical and Medical Journal*, the journal selected as the official organ of the Society at the last meeting, we respectfully call attention to the editorial in the June number declaring the policy of that *Journal* in its advertising.

The contractual obligation of the official organ, protected by bond, provides that it will accept no advertising not passed by the

Council of the A. M. A., by whose decisions the advertising shall be governed. If the members of the Society will observe the July issue (which, by the way, is published as Volume XIX, No. 7, though it is actually Volume I, No. 2), they will find, in the advertising pages, no less than thirteen (unlucky number!) advertisements to which objections have been made and published by the A. M. A. Council, and most of which appear as condemned in the "Propaganda for Reform," published by the A. M. A.

This JOURNAL has not yet assumed a "holier than thou" attitude in its advertising pages, but it is open to reform and proposes to revise its advertising as soon as present contracts expire, but we are anxious to know the attitude of the Council and of the officers of the Louisiana State Medical Society towards the official organ, which in its second issue, openly and flagrantly violates the contract made and, moreover, with all its pretensions of immaculate advertising, flaunts the A. M. A. Council on Pharmacy and invites the State Medical Society to dispute its right to print the sort of advertising, the printing of which leads the Secretary of the A. M. A. to say: "Of course, if they carry these, there is no reason why they should not take in anything and everything that is offered."

We took occasion to remark in our May issue that the State Society had been exploited by a new venture; if the State Society takes no action in the matter of this July advertising, we shall feel that our opinion is more than borne out by facts—for

**"Conscia mens recti famae mendacia risit."**

*Cicero.*

which translated (with apologies to the intelligence of our readers):

The mind conscious of innocence despises false reports.

We may not have virtue enough to accuse others, but we may point the way towards those who first accused us and say first:

**"Non soles respicere te, cum dicas injuste alteri?"**

*Plautus.*

which translated (again, with apology):

Do you ever look at yourself when you abuse another?

And while we are quoting:

**"Nec lex est aequior ulla,  
Quam necis artificem arte perire sua."**

*Ovid.*

and this we are inclined to leave to the intelligence of our readers, that "he who runs may read."

## THE MEDICAL PRACTICE ACT.

The new Medical Practice Act has been promulgated and is now law. We reproduce the Act in another part of the JOURNAL and beg our readers to peruse it carefully so as to comprehend its contents.

Until now the law has been broad enough, but its punitive provisions have been difficult to enforce. The present law amply covers the process and the procedure necessary to carry out the intentions of the Act.

We note especially the license allowed the Board of Examiners in the regulation of educational standards; the matter is practically in their hands. With the growing advance in standards of medical education State Boards have to meet these and while Louisiana may not be ready to demand two years of college work prior to the study of medicine, it must soon arrive when one year will be demanded. More than this, the hospital intern year will soon be a prerequisite to practise in most States and this condition must be considered.

The highest gratification in all of the thing, however, is the intelligent acceptance of the revised act and the passage by the Legislature, without the usual objections and difficulties which usually surround any medical project. The officers and committees of the State Medical Society and those of the State Board of Examiners are also deserving of the thanks and praise of the profession for their zealous work in preparing the bill for passage and for seeing it through.

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## THE WILLIAM H. WELCH ENDOWMENT FOR CLINICAL EDUCATION AND RESEARCH.

The General Education Board has announced the gift of \$1,500,-000 as a foundation for the establishment of all time clinical teachers, who shall be paid salaries sufficiently large to compensate for the loss of fees from the practise of medicine, etc. The entire income from the fund is to be utilized for the support of research and teaching in medicine, surgery and pediatrics. The teachers are to become officials in the University and when their services are in demand by persons able to pay, such persons will pay the fee to the University.

The first professors selected under the new plan are: In medicine, Dr. Theodore C. Janeway, from Columbia University; in surgery,

Dr. William S. Halstead, of Johns Hopkins University, and in pediatrics, Dr. John Harland, from Washington University.

In the language of the authorized statement of the Education Board:

“The full-time scheme is a plan to ensure to hospital work and medical teaching the undivided energy of eminent scientists whose efforts might otherwise be distracted by the conflicting demands of private practise and clinical teaching. The full-time scheme is an appeal to the scientific interest and devotion of the clinician, and it is significant that the first three full-time posts created have been filled by men of conspicuous professional standing, all of whom have made great sacrifice in order that they might enjoy ideal conditions for clinical teaching and investigation.

“It should become of increasing consequence to the public that the training of those studying to become doctors should be in charge of the most competent men obtainable devoting their entire time to this work. Greatly increased efficiency and thoroughness should result, to the alleviation of suffering and the care of disease.”

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## THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION.

Florida has a State *Journal* with Dr. Graham E. Henson, of Jacksonville, as editor. The initial number made its appearance under date of July 18 and it is creditable to the editor and to the association.

The size and style of the *Journal* are becomingly modest, double column reading matter, with clear text, with white cover and simple display of title and matter.

The number contains the president's address at the late annual meeting on “Organized Medicine and Legislation,” by Dr. J. Harris Pierpont, of Pensacola; a paper on “The Karrett Kur,” by Dr. Thomas Fruelsen, of Tampa; a paper on the “Diagnosis and Treatment of Venereal Ulcer,” by Dr. Walter P. Dey, of Jacksonville, and a paper on “Sand-Spur in the Larynx,” by Dr. C. D. Christ, of Orlando. All of these papers are of good standard and worthy of publication.

A free account of the State Association Proceedings follows, with a group of editorials of announcement and current interest.

The editor of the *Journal* is well known among Southern investigators in scientific medicine, particularly in malaria, and his discernment is here noted in his selection of his collaborators, who may be named as prominent in Florida medical circles—Drs. R. H. McGinnis, A. B. Freeman, Raymond C. Truck, Thomas Fruelsen,

G. R. Holder, James D. Love, J. L. Kirby-Smith and Henry Hanson.

The Florida Medical Association is to be congratulated upon its undertaking and upon its choice of editor. We extend our best wishes for a long and successful future and for the need of usefulness which such a beginning should augur.

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## Department of Obstetrics and Gynecology.

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In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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PLACENTA PREVIA AND ITS TREATMENT.—Prof: W. Nagel, in a paper read on this subject at the seventeenth International Congress of Medicine, London, 1913, published in July number, 1914, of *Surgery, Gynecology and Obstetrics*, says that, “as far as Cesarean section is concerned, the brilliant results of some operators are only apparently so.” He claims that the practitioner must have at his command a method that can be employed at the home of the patient, and the best, that of Braxton-Hicks, will meet this requirement in most cases. Of fifty cases of placenta previa so treated he had a maternal mortality of only two; sixteen children were born alive, twenty-three immature. He performed bipolar version as early as possible, when only one or two fingers could be admitted, and brought down one foot; then, placing a loop around the ankle, left the case to nature. With the amniotic fluid not all removed and the fetus movable, he found the operation by no means difficult. Too much haste must not be used to bring down the breech when the os is not well dilated, as severe cervical laceration and hemorrhage would occur, which would be blamed upon the method. When the os is only partially dilated the leg must not be drawn further than the knee, which, he says, will be sufficient to check bleeding. Should any bleeding now occur when the os has become more dilated, the foot may be drawn slowly until plugging again is complete. Nagel mentions that Hofmeier had but one maternal death in thirty-seven cases; Behn none in thirty-five cases. According to Doderlein’s table, the average maternity mortality following this method is 7.8 per cent., and the infant, 73.7 per cent. He, Nagel,



grants that by tamponing the vagina and waiting for dilation, the infant mortality is less (54.12 per cent.). It is unjust to attribute the high infant mortality to the treatment used, as in most cases of placenta previa we have to deal with immature children, whose vitality has been lowered by disturbances of the fetal circulation during labor as a result of the placental separation. While fetal mortality is less with vaginal packing, the maternal morbidity is greater from infection and continued oozing. The vaginal colpeurynter he considers safer, though slower. As regards abdominal Cesarean section, he quotes Doderlein as its having an average maternal mortality of 8.9 per cent. and a fetal of 33 per cent. As contra indications he quotes Doderlein as giving seven: (1) Infection from the patient herself; (2) fever; (3) examinations made by physicians and midwives before admission to the hospital; (4) tamponade; (5) excessive hemorrhages; (6) marginal insertion of the placenta, because in this case the patient can be confined in a simple manner; (7) in cases where fetus is either dead or not viable, amounting to about 50 per cent. of hospital cases. After eliminating these cases, very few remain for Cesarean section. In desperate cases where the os is not dilatable this method is the only one available. He does not recommend extra-peritoneal Cesarean section, because the incision is made through the maternal portion of the placenta, with its enormous sinuses. He contradicts Hofmeier, who contends that the vascularity at this point is no greater than at any other part of the uterus. In support of this contradiction he advanced anatomical facts, showing at the International Congress at London that Hofmeier's view has been obtained through examination of poorly injected specimens.

Vaginal Cesarean section and accouchement forcé are dangerous, because the attack is made through the placental site, thereby opening large maternal vessels; the extraction must be rapid to save the child; in consequence, the incision is enlarged by tearing, with enormous hemorrhage following. Quick removal of the placenta is necessary, then, so that the wound may be sewed without loss of time. The suturing is difficult, during which there will be more loss of blood. The results have been so bad that he and Bumm and Kronig (former advocates) now warn against it. It is significant that even Dührssen, the one who originated the method, has modified it in cases of placenta previa, and extends the cervical incisions only so far that the metreuntyer can be introduced into the cavity

of the uterus. The uterus also must not be pulled down, Dührssen says, but should simply be fixed to prevent separation of the placenta. But in contrast to this gloomy view are Doderlein's results, thirty-four cases, with one death. While he seems to concede that with metreuryesis there is a lower infant mortality and nearly an equal maternal one, he claims it will not supplant the Braxton-Hicks method, which, he states, is not difficult and not more tedious than the introduction of the bag.

Vaginal kolpeuryesis, with its minimum of sepsis danger, he admits has again come in favor, and is recommended by Zweifel, Hammerschloz and Taupper. He considers such method as applicable only as a temporary measure, and in the first stage of labor with a cephalic presentation existing. At the completion of dilation the membrane must be ruptured.

MICHINARD.

THE VALUE OF ABDERHALDEN'S REACTION.—A referendum has lately been taken by the Medizinische Klinik of Vienna, which has addressed a series of questions to numerous authorities whether Abderhalden's reaction is reliable. The answers, published in its issue of March 15, show an almost unanimous belief in the importance of this reaction in the hands of experts. Zweifel (Leipzig) has found the diagnosis of pregnancy by this reaction very reliable, and during the last six months he has tested it in ninety cases, in many of which it was the only sign of pregnancy. He also found a negative reaction of great value in the exclusion of pregnancy in doubtful cases. Veit (Halle) has found the reaction give uniform results in the hands of experts. It was invariably positive in forty-five cases of advanced pregnancy, and in fifteen cases of pregnancy in the first month it was only once negative. He calculates that the reaction is misleading only in 5 per cent. of all cases. In sixty cases of cancer the reaction was only twice negative, all the others giving a positive reaction to carcinomatous tissue. The report from Prof. Bumm's hospital in Berlin states that the reaction is reliable in uncomplicated cases, and that the optical method is the most accurate. During the past six months 120 cases were investigated. Of these sixty-nine cases of pregnancy gave a positive reaction, and in twenty cases in which pregnancy did not exist the reaction was negative. It was doubtful in three cases, and in twenty-eight cases it was misleading. The reaction was considered non-specific, and was therefore unreliable in the differential diagnosis of pregnancy and tumors. In 48 per cent. of cases of tumor the reaction to pla-

cental tissue was positive, although pregnancy could be excluded. Opitz (Giessen), who has employed the dialysis method only, has almost invariably found the reaction agree with clinical evidence. It was, however, observed that the reaction is not invariably uniform when repeated on the same serum, and a single test in each case may therefore be misleading. Though the practical value of the reaction is great, its general utility is much limited by difficulties of technic. Stoeckel (Kiel) considers the dialysis method unreliable, but he admits that his unsatisfactory results may be traced to faulty technic, although the greatest care was taken. The report from Prof. Herff's hospital in Basel is most laudatory. During the last six months from eighty to 100 cases have been investigated, and in clinically doubtful cases of pregnancy a diagnosis based on the reaction invariably proved correct. Only in one case was it misleading, and this was due to a fault in the dialyser. The report from Prof. Hofmeier's hospital in Wurzburg states that the results were first misleading, but when the technic was revised they became almost invariably reliable. Particularly in the diagnosis of extrauterine pregnancy was the reaction found useful. Kroemer (Greifswald) has employed the dialysis method only, and finds the reaction misleading only in 2 per cent. of all cases. He has investigated over 100 cases during the last six months, and once observed a positive reaction in a case of myoma of the uterus, and once a negative reaction in an old case of placental polypus. Kustner (Breslau) considers the reaction reliable on the whole, but faulty results still occur occasionally, in spite of improvements in technic. He considers it so complicated that it should be confined at present to experts. Winter (Konigsberg) considers the reaction specific, and has worked with the dialysis method only. During the last six months he has investigated forty-two cases, in seven of which the differential diagnosis between early or extrauterine pregnancy and inflammation of the uterine appendages could not be made clinically. In these cases the reaction was invariably correct. In his opinion, also, the technic of the reaction is too complicated for general use. Zangemeister (Marburg) regards the dialysis method as thoroughly reliable in expert hands. It was negative in one case, in which the differential diagnosis between extrauterine pregnancy and disease of the uterine appendages could not be clinically established. An operation showed a tumor of the uterine appendages. Sellheim (Tubingen) has worked with the dialysis method only,

and finds it very satisfactory. In ninety-four cases of pregnancy the reaction was negative only in four cases, and in three of these pregnancy was complicated by severe anemia or vomiting. Menge (Heidelberg) finds the reaction misleading in 7 per cent. of all cases. He regards a negative reaction as strong evidence against pregnancy, the existence of which cannot, however, be irrefutably established by a positive reaction.—*British Medical Journal*, May 23, 1914. MILLER.

TREATMENT OF RETAINED FETAL MEMBRANES AT TERM.—P. Guildal (*Ugeskrift for Læger*, March 12, 1914) has investigated the material in the maternity wing of the Rigshospital in Copenhagen for the ten-year period 1903 to 1912, with a view to ascertaining the significance of retention of the membranes at term. He points out that, while retention of part of the whole of the placenta is unanimously regarded as an indication for interference, there are conflicting views as to the treatment of retained membranes. Even the frequency with which the accident occurs is estimated at widely divergent values, ranging from 1 to 20 per cent. of all confinements. This divergence is mainly due to the different conceptions of what constitutes retention of membranes, and the author therefore finds it necessary to define this point. At the Rigshospital uniformity of record is insured by the notes being almost exclusively made by the same person—the senior physician. Every abnormality, such as laceration of the membranes, is noted; and the author has included in his statistics only those cases in which partial or complete retention of the membranes was definitely recorded. Of 14,078 cases, 346, or 2.5 per cent., showed partial or complete retention of the membranes. The routine adopted at the hospital after the birth of a child consists of close observation of the uterus, its distention with blood and hemorrhage per vaginam being guarded against. If neither occurs, the contraction of the uterus and its expulsion of the placenta into the lower uterine segment are awaited, and are assisted by the abdominal contractions of the patient, and by light pressure on the fundus. If, however, hemorrhage occurs, or the placenta is not detached within half an hour to an hour of birth, Crede's method is practiced. If this fails and there is hemorrhage or risk of sepsis from delay, Crede's method is aided by general anesthesia, and if this also fails, manual removal of the placenta is resorted to. When the placenta is detached, but the membranes are adherent, the placenta is rotated so

as to twist the membranes into a cord. If light traction on this failed to bring away less than half of the membranes, it was the practise till 1911 to introduce a couple of fingers into the uterus and pull on the rest of the membranes. This maneuver was abandoned, as it seldom affected the removal of more than a few shreds of membrane. The puerperal morbidity among the patients with retention of membranes treated in this manner was 35.8 per cent. During 1911 and 1912, when the treatment was expectant, the puerperal morbidity was 34 per cent. There is, therefore, in this respect no evidence to support the removal of retained membranes; and as the manual removal in the first series of cases was undertaken in a hospital where antiseptic precautions were scrupulously carried out, it is evident the results in general practice must be even less satisfactory. Crede's method has often been held responsible for retention of membranes, and it was practiced in five cases out of the author's 346 cases. This is equivalent to an incidence of 1.4 per cent., as compared with an incidence of 0.7 per cent. for the total of births. The influence of abnormalities of the placenta on the retention of membranes is considerable; it occurred in 42 per cent. of the cases of retained membranes, whereas it occurred in only 20 per cent. of all births. The author is not convinced that retention of membranes disposes to hemorrhage, which he observed in twenty-three cases, or 7 per cent. Only in one of these cases was the hemorrhage violent. The incidence of hemorrhage is, therefore, scarcely greater than when the membranes are removed. Retention of membranes, whether actively treated or not, certainly increases the puerperal morbidity, and in 119 cases, or 34.4 per cent., the rectal temperature was 100.4° F. or more in the puerperium. Judged by the same standard, the puerperal morbidity among all the births during the same period was 20.2 per cent. In sixty-nine cases, or 20 per cent. of all the cases of retention of membranes, the spontaneous discharge of fragments of membrane was observed, the period at which this occurred being most between the fourth and eighth days of the puerperium. The question whether retention of the membranes disposes to metritis or endometritis has often been raised, but the author has observed only one case of such a coincidence. He does not, therefore, attempt to answer this question.—*British Medical Journal*, May 16, 1914.

## Department of Therapeutics and Pharmacology.

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In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

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ON THE EFFECT OF SCARLET RED IN THE TREATMENT OF GASTRIC AND DUODENAL ULCER.—Fridenwald and Leitz (Monthly Cyclopedia) note that Davis has suggested the use of scarlet red in the treatment of ulcer of the stomach, having proved its usefulness experimentally in animals. The powder is reddish-brown in color, giving scarlet red in oil solutions. It is tasteless, neutral to litmus, in 1 per cent. oil solution, insoluble in water and urine, even after boiling. It is soluble in alcohol, ether and chloroform, olive oil, fats, fatty oils, turpentine, warmed petrolatum, and paraffin. One gramme of finely divided powder, heated gradually in 100Cc. of olive oil to 200, remained in solution for two days or more at ordinary room temperature. Approximately a 2 per cent. solution can be made, but the scarlet red does not stay in solution for any length of time, and tends to precipitate at once on cooling. Gastric juice, experimentally, has no effect on the scarlet red. Agar and bouillon cultures give abundant growths with staphylococcus and colon bacillus, despite the addition of 1 per cent. solution of scarlet red. When given by the mouth it is a fat-selecting vital stain. In the course of months the stain is gradually eliminated. Subcutaneous and intraperitoneal injections stain only the fat in actual contact with the scarlet red solution.

Scarlet red may be administered in doses of 15 to 20 grains three or four times daily without the slightest toxic effect, provided a pure preparation be employed. It is best given in  $7\frac{1}{2}$ -grain kou-seals, two of which may be taken three or four times daily before meals. It may, however, be administered in much larger doses, and only after very large continuous doses can the odor of camphor be detected in the urine. There was not the faintest toxic symptom during its employment in over 100 patients. Of thirty-seven cases treated by the scarlet red, these being instances in which the result of the rest cure was unsatisfactory, or ambulatory cases which remained unbenefited by the usual treatment, the great majority were cured. The dosage per diem varied from 40 to 60 grains. While it is held that the drug cannot replace the usual forms of treatment,

it is urged that when it is administered in conjunction with them it frequently renders the cure more effective. Its use need not interfere in any way with the administration of other remedies, such as the alkalies or belladonna, when indicated, and, in fact, the effect of the combination is at times most beneficial.—*The Therapeutic Gazette*. J. A. S.

FEW PRACTICAL OBSERVATIONS THE RESULT OF 8,000 EXAMINATIONS OF URINE.—“In spite, however, of our careful instructions, we find that even our best examiners will fail to detect sugar in urine containing less than one-half per cent., and the difficulty arises from imperfect technic and the confidence that most examiners have that the operation is too simple to admit of mistakes. It must be confessed that the detection of small amounts of sugar varying from  $\frac{1}{10}$  to  $\frac{1}{4}$  per cent. is not easy, especially since concentrated normal urine, sugar free, will at times show a reduction of Fehling's, equivalent to  $\frac{1}{4}$  per cent. of sugar. We have practically discarded the phenyl hydrazin test as a check against our Fehling's. For some reason or other—and this observation is not at all original—phenyl hydrazin will occasionally fail to precipitate the typical osazone crystals, even where pathological amounts of sugar are present. In our experience, the osazone compound is probably formed, but fails to crystalize and the absence of the typical crystal leaves one in doubt. Instead, we are using the fermentation test. It, too, has its shortcomings, inasmuch as the degree of acidity of the urine and the presence of sugar in the yeast itself slightly influence the findings. But we have found that it is sufficiently delicate—less than  $\frac{1}{10}$  per cent. can readily be detected thereby.”—(W. Muhlberg, *Medical Record*.) J. A. S.

ADRENALIN IN WHOOPING-COUGH.—Storck Lord, in the *British Medical Journal*, says that during a recent epidemic of whooping-cough in his neighborhood he found that the usual remedies completely failed in one instance—that of a delicate child of seven years, whose case was complicated by attacks of bronchitis. She had been ill for about six weeks, the paroxysms still continuing to occur, on the average, every three or four hours, and the bronchitis becoming more and more serious, when he happened to read Dr. G. V. Fletcher's account of his adrenalin treatment of whooping-cough in the *British Medical Journal* of December 28, 1912, and determined to try it.

He began with three minims of the 1-in-1000 solution by the mouth every four hours, and almost immediately noticed a marked diminution in the severity and frequency of the paroxysms. He was soon able to limit the administration of adrenalin to three times a day, and continued it thus for three weeks, at the end of which time the child had completely recovered from the cough, and the bronchial symptoms, and had steadily improved in every other way, there being a total disappearance of the anemia and wasting which had been produced by the persistent vomiting.

As this case occurred toward the end of the epidemic, Lord has had no opportunity of trying the treatment in any others, but this one instance seems to him to be so significant as to be worthy of mention.—*The Therapeutic Gazette.* J. A. S.

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## Department of the Ear, Nose and Throat.

In Charge of DRs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

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SYMPOSIUM ON STENOSIS OF THE ESOPHAGUS.—(Meeting of The American Laryngological, Rhinological and Otological Society, Twentieth Meeting, June 19-20, 1914.)—Dr. H. P. Mosher, of Boston, discussed in detail the anatomy, variations, instruments and technic. The abdominal portion of the esophagus with the peculiar formation of the sub-diaphragmatic opening seemed most important factors in preventing regurgitation of food.

The author laid special stress on his ballooning method for the differential diagnosis of stricture and diverticula, and of the facility with which the opening through the esophagus could be determined by this means; also the value of outlining the extent of involvement in cases of epithelioma. A forcep with ingenious light attachment was shown, for the removal of foreign bodies lodged high up.

Children bear esophagoscopy rather worse than adults, and attention was called to the possibilities of shock in esophageal manipulations. Technic was discussed, Mosher preferring anesthesia for greater part of his work.

Suspension laryngoscopy was also discussed. While of great value in work high up, it is not suited to tube work in the lower portions of the esophagus. The methods of dilatation, of picking strictures



open, and the use of Mosher's esophageal dilator were dealt with at length.

Jackson discussed, in his usual, thorough way, the symptoms, diagnosis and treatment. Collection of fluid in the pyriform sinuses was looked upon as diagnostic of strictures lower down. An ingenious method of dealing with cervical diverticula was described by Jackson. The tube introduced through the natural passage allowed the surgeon to better locate the diverticula and then served as a guide in its proper repair. New instruments for dilatation were shown, which will facilitate the location and dilatation.

Use of radium in carcinoma was dealt with at length; its use being advised. Lastly, esophagectomy was touched upon with the hopes of its further development to become practical.

The use of the scope acting as a lever to break up adhesions of tube to bony wall was brought out in discussion by Yankauer.

Retrograde and esophageal transillumination, with the use of the cautery to cut through web, was reported by Iglauer and Murphy.

Jno. E. Sheppard (N. Y.), discussing the clinical significance of bacteremia, said that he never saw bacteremia in simple mastoiditis, but it is distinctly evident in sinus thrombosis.

Dr. Kopetzky read a supplemental report on cisterna magna drainage for meningitis, realizing the present apparent uselessness of the procedure, though the work has surely advanced our knowledge of meningitis.

Dr. E. P. Fowler used disks to which straws were attached—placing the disk over the closed lid over the region of the cornea. Nystagmus would be detected by movement of straw and tracings could be made.

The morning session of July 20 opened with symposium on aural complications of the exanthemata, by C. R. C. Borden, Boston, and S. A. Freidberg, Chicago. Ears are to be examined regularly three times a day in all cases suffering from the exanthemata. A nipple perforation is significant of mastoiditis in these cases. Mastoid tenderness was not depended on for diagnosis of mastoiditis. In institutional cases, where ears were examined regularly and systematically, practically all cases left institution with dry ear and healed drum. Increase in time of quarantine among cases of discharging ears was discussed, and plea made to interest general practitioner in necessity of watching these ears most closely. Early mastoidectomy was deemed best, and early diagnosis was essential to future welfare of case.

Dr. Grayson displayed his hand burr and discussed method of opening sphenoid cavity without sacrificing middle turbinate.

Dr. Lynch described new technic for removal of intrinsic growths of larynx, removing growths by dissection rather than tearing or pulling with forceps. New instruments for dissecting, stitching, doing plastic work were shown. Author claimed distinction of being first to put stitch in larynx, through mouth, and of removing intrinsic laryngeal epithelioma in one mass through mouth, without external opening. Modifications to suspension apparatus, new table top suction apparatus and instruments were shown.

Dr. Beck gave lantern slide demonstration of pathological histology of nose, showing many beautiful sections and slides.

Dr. Robert Levy discussed the advantages of suspension in children; it being the best method of all for use in inspecting the larynx, esophagus and hypo-pharynx; children being especially adapted to the method because of the flexibility of the neck.

Candidates Theses: Tuberculosis of Middle Ear, by H. H. Briggs, Ashville, N. C.

Contribution to the anatomy of the anatomy of the tympanic cavity, by Ralph Butler, Philadelphia, Pa.

Corrective Rhinoplasty, by Lee M. Cohen, Baltimore, Maryland.

The Efficacy of Vaccines in the Treatment of Chr. Diphtheria Carriers, by Arthur I. Weil, New Orleans.

These were read by title and deserved special mention by the Society.

LYNCH.

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## Miscellany.

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AN EXPERIMENTAL STUDY OF INTESTINAL OBSTRUCTION.—(John A. Hartwell, J. P. Hoguet and Fenwick Beekman, *Archives of Internal Medicine*, May, 1914, vol. 13, No. 5, p. 701.)—The results of a large number of experiments on etherized dogs, in which duodenal obstruction was produced, both by section and suture of the gut and by occlusion with a specially devised clamp to prevent trauma, are reported. The theory of Whipple, Stone and Bernheim that a specific toxin elaborated by the duodenal mucosa is the cause of death in high intestinal obstruction is vigorously attacked. Hartwell, Hoguet and Beekman conclude that there are

two factors at work in producing the symptoms and causing death in this condition. First, the loss of water from the tissues, due to the excessive drain into the bowel in response to the irritation set up by the retained secretions in the duodenum. This water may be replaced by subcutaneous injection of physiological saline solution and the symptoms caused are thus entirely controlled with a saving of life. Second, that the entrance into the circulation of poisonous materials occurs only when the mucosa of the bowel is damaged. This damage results largely from the trauma inflicted by the overdistension acting on the circulation, but possibly also, by the chemical action of the digestive ferments stagnated above the obstruction. Such a damage having resulted, there occurs a bacterial invasion into the bowel wall with a death of tissue cells (which is invariably demonstrable by microscopical examination), and in this process the poisonous substances are elaborated. The action of these poisons is apparently not influenced by the administration of saline subcutaneously. The absorption of a poison from any source whatsoever, so long as the mucosa remains intact, is not a factor. They also conclude that the development of a bacteriemia as a cause of death is excluded. Clinical application of their experiments is drawn and they advocate continuous subcutaneous injections of saline solution through small needles in all cases of acute intestinal obstruction, as well as prompt enterostomy in preference to drainage of the bowel through the normal path after relieving the obstruction, when the contents of the occluded bowel is blood tinged, which they conclude is evidence of injury to the mucosa.

ALLAN EUSTIS.

ON CHRONIC CONSTIPATION AND ITS TREATMENT.—(Über Chronische Stuhlverstopfung und ihre Behandlung: Max Einhorn, *Zeitschr. f. Physikalische u. Diätetische Therapie*, May, 1914, Vol. 18, No. 5, p. 257.)—Einhorn mentions the symptoms of intestinal stasis as being languid feeling, loss of appetite, bad taste in the mouth, vertigo, headache, inability to concentrate thought and in the severer cases marked melancholia and mental depression. As a causative factor, he believes that many cases have a deranged nervous system, but more common as a cause is habit and improper diet, with the drinking of very little water. Many cases are also due to anatomical defects, such as ptosis, Lane kink and adhesions, and he mentions cases due entirely to hyperchloridia relieved of their constipation by the simple administration of alkalis. He does not

mention whether magnesia or soda was used as the alkali. Simply failure of the bowels to act will not cause the symptoms, as is noted when patients are given opium and bowels kept at rest for four or five days, and he believes there is some other factor than simple absorption from the intestinal canal. Hemorrhoids should also be considered as a cause. Einhorn advocates a diet with much cellulose and organic acids in abundance, such as fruits and salads, so as to stimulate peristalsis normally; and the drinking of large quantities of water. As a laxative he prefers agar-agar, containing three per cent. phenol-phthallein, in teaspoonful doses three times daily. He also advocates massage and electricity and thinks that operation should be resorted to only when all else fails. He has obtained good results by such means, with encouragement of the patient and by taking his mind off of his condition. He considers it a mistake to forcibly impress upon patients the great necessity of a daily evacuation of the bowels, as in the event of a failure of the bowels to move their depression is increased.

A. E.

SOME CASES WITH A HYPERTENSION WITH A DEFINITE SYMPTOMATOLOGY.—(Edward H. Goodman, *American Journal Medical Sciences*, April, 1914, Vol. 147, No. 4, p. 501.)—Goodman points out the scant attention paid to hypertension, and reports several cases with a definite symptomatology characterized by headaches, vertigo, a feeling of lassitude, and with a systolic blood-pressure under 100 mm. Constipation was present in two of the five cases reported, but he does not mention what was the content of indican in the urine of any of the cases. He concludes from the fact that the patients all improved on exercise and large doses of *tr. nux vomica* (as high as 75 minims t. i. d. in one case), that intestinal toxemia is not an etiological factor. The author also lays stress upon the importance of determining the diastolic pressure in all cases which often is more important than the systolic. This can only be done by the auscultation method, and by this method the diastolic blood-pressure is as easily determined as the systolic, taking the disappearance of the thumb as the diastolic reading. He also describes a portable mercury monometer, devised by himself, which is easily carried in the pocket, and which, he claims, is both accurate and easily manipulated.

A. E.

POISONING BY MALE-FERN.—An unusual case of fatal poisoning by the administration of male-fern as a vermifuge is reported by M. C. Hall, Washington, D. C. (*Journal A. M. A.*, July 18, 1914). The patient was a young man who suffered from constant hunger and feverishness at night and was prescribed for by a so-called "Quaker doctor" or Indian doctor of Joplin, Mo. He died in convulsions and with tetanic symptoms after taking a large quantity of what seems to have been extract of male-fern. The striking features of the case are, first, that there was no evidence that the patient had tape-worm, and, secondly, that a doctor should send a poison as strong as oleoresin of male-fern in excess of the usual dose to be given to a person in another state and followed up by castor oil, which increases the absorbability and toxicity of the drug. There was always the possibility that consulting by letter an advertising "Indian or Quaker doctor" may cause a patient's death.—*Ed.*

AN ORIGINAL REMEDY.—The spittle of the sperm-whale—spare yourself the trouble of looking it up in European pharmacopœias; you will not find it. It is in the far East, principally in Tonquin, under the name of *Long-Duyen-Huong*, that this spittle is used, mainly as a remedy in asthma. We gather this from a recent article by M. Charles LeClère, consulting physician at Montdore.

When a whale is stranded or killed, he says, the natives carefully collect the salivary secretion. This air-dried saliva is a gray viscid substance of slight elasticity. The taste is said to be somewhat bitter, and it is taken in doses of from fifteen to thirty grains a day. Cut into bits it is administered in any decoction or in water flavored with lemon. Mr. LeClère cites the case of a missionary priest, who, having formerly taken potassium iodid for his asthmatic attacks, made a trial of *Long-Duyen-Huong*. He took fifteen grains a day and obtained the same relief in four days that a course of iodid had taken fifteen days to give.

The author of this curious paper tried the remedy in the case of a peasant and secured a remarkable result without, in the least, disturbing the patient's extremely sensitive stomach. Later, the remedy growing scarce, he was obliged again to put his patient on the iodid; but the stomach became disturbed, the appetite was lost and the results proved much less satisfactory. It seems, therefore, that *Long-Duyen-Huong* is a valuable succedaneum to the iodids, and M. LeClère gives us the reason. In all species of

animals the saliva is an important excretion. It is evident that the whale, immersed in a medium like the sea, containing large amounts of potassium and of iodine, must absorb a considerable quantity of these substances. The saliva becomes charged with them, and those who take this dried spittle are, in fact, absorbing iodide of potassium. The activity of the medicament must be ascribed to the large proportion of the iodide it contains. Doubtless, there are other active constituents; for this natural substance is probably of a highly complex composition. The iodides are, however, almost certainly the important constituents, and the efficacy of the drug in relieving asthma, in which the iodides are almost our sole resource, tends to strengthen this logical conclusion. Besides its therapeutic value, *Long-Duyen-Huong* possesses another remarkable virtue in its perfect tolerance by the human organism. Its superiority in this regard to the metallic salts is readily understood. In the whale's saliva we have every reason to believe the iodides to be in organic combinations. The mineral salts are much less readily assimilable than our foreign organic remedy and therefore act less happily in the animal economy.—*Le Monde Médical*.

H. D. B.

**BORAX PREVENTS THE TYPHOID FLY.**—The Department of Agriculture has discovered a method for preventing flies from breeding in horse manure by the use of borax. As a result of experiments, the specialists of the Department of Agriculture have discovered that a small amount of ordinary borax, sprinkled daily on manure, will effectively prevent the breeding of the typhoid or house fly. Similarly, the same substance applied to garbage, refuse, open toilets, damp floors and crevices in stables, cellars or markets, will prevent fly eggs from hatching. Borax will not kill the adult fly nor prevent it from laying eggs, but its thorough use will prevent any further breeding.

The investigation, which included experiments with many substances, was undertaken to discover some means of preventing the breeding of flies in horse manure without lessening the value of this manure as a fertilizer for use by the farmer. It was felt that if some means of preventing the breeding of flies near a human habitation could be devised, the diseases spread by these filthy germ carriers could be greatly reduced. While the "Swat-the-fly campaign," traps and other devices for reducing the number of typhoid-carrying flies are of value, they are of less importance than the

prevention of the breeding. It was realized, however, that no measure for preventing the breeding of flies would come into common use unless it was such that the farmer could use it on his manure pile without destroying its usefulness for growing plants, and without introducing into the soil any substance that would interfere with his crops.

As a result of experiments carried on at the Arlington Farm, in Virginia, and New Orleans, La., the investigators found that 0.62 of a pound of borax, or 0.75 of a pound of calcined colemanite (crude calcium borate) would kill the maggots and prevent practically all of the flies ordinarily breeding in eight bushels of horse manure from developing. This was proved by placing manure in cages and comparing the results from piles treated with borax and from untreated piles. The borax, it was found, killed the fly eggs and maggots in the manure and prevented their growth into flies.

In the case of garbage cans or refuse piles, two ounces of borax or calcined colemanite, costing from five cents a pound upward, according to the quantity which is purchased, will effectually prevent flies from breeding.

While it can be safely stated that no injurious action has followed the application of manure treated with borax at the rate of 0.62 pounds for eight bushels or even larger amounts in the case of some plants, nevertheless borax-treated manure has not been studied in connection with the growth of all crops, nor has its cumulative effect been determined. It is therefore recommended that not more than fifteen tons of the borax-treated manure should be applied per acre to the field. As truck growers use considerably more than this amount, it is suggested that all cars containing borax-treated manure be so marked, and that public health officials stipulate in their directions for this treatment that *not over .62 (62/100) of a pound for eight bushels of manure be used*, as it has been shown that larger amounts of borax will injure most plants. It is also recommended that all public health officials and others in recommending borax treatment for killing fly eggs and maggots in manure warn the public against the injurious effects of large amounts of borax on the growth of plants. Purchasers of manure produced in cities during the fly-breeding season should insist that the dealers from whom they purchase give them a certified statement as to whether or not the manure in the particular car or lot involved in the purchase has been treated with borax.

In feeding to hogs garbage that contains borax, care is also recommended, especially when the animals are being fattened for market. Borax is not a very poisonous substance and the feeding of garbage that contains it to hogs, is not likely to be a serious matter. On the other hand, borax in large quantities does produce gastric disturbances and for this reason a certain amount of care is advisable.

The method for using this substance in the case of stables is to sprinkle the borax or colemanite in the quantities given above, by means of a flour sifter or other fine sieve, around the outer edges of the pile of horse manure. The manure should then be sprinkled immediately with two or three gallons of water to eight bushels of manure. It is essential, however, to sprinkle a little of the borax on the manure as it is added daily to the pile, instead of waiting until a full pile is obtained, because this will prevent the eggs which the flies lay on fresh manure from hatching. As the fly maggots congregate at the outer edge of the manure pile, most of the borax should be sprinkled there.

Borax costs five or six cents per pound in 100-pound lots, in Washington, and it is estimated that at this rate it would cost only one cent per horse per day to prevent all breeding of flies in city stables. If calcined colemanite is purchased in large shipments, this cost should be considerably less. At the same time, if the borax is used on the manure only in the proportions stated, its value for use in the garden or for sale to farmers will not be lessened.

In view of this discovery, there now seems little excuse for any horse owner or resident of a city allowing typhoid flies to breed in his stable or garbage can.

It is believed that this information will greatly help the health authorities in their campaign against the typhoid fly. The health authorities have long tried to prevent the breeding of flies in city stables through the use of iron sulphate as a larvacide. In the case of iron sulphate, however, a large amount is required, and other insecticides, such as paris green or potassium cyanide, while effective in killing the flies, are very expensive or extremely poisonous. Borax, which is used freely in most households, and is available in all parts of the country, has the advantage of being comparatively non-poisonous and non-inflammable, readily soluble in water and easy to handle. It can be purchased at retail for ten



cents a pound, and a single pound used as directed in a garbage pail or open toilet may prevent the breeding of hundreds of dangerous flies.

[The details of the experiments with borax and other larvacides will be found in U. S. Department of Agriculture Bulletin No. 118.]

## THE MEDICAL PRACTICE ACT.

NEW MEDICAL PRACTICE ACT FOR LOUISIANA, passed at the last session of the Legislature.:

### ACT NO. 56.

House Bill No. 268, by Mr. Butler.

#### AN ACT.

To regulate the practice of medicine, surgery and midwifery, in the State of Louisiana; to create State Boards of Medical Examiners and provide for the method of appointment of members thereof and to regulate the fees and emoluments thereof; to prevent the practice of medicine, surgery and midwifery by unauthorized persons; to provide for the trial and punishment of violators of the provisions of this act by fine and imprisonment, or both; to provide for the enforcement of this act by civil process, through injunction and by penalties; to regulate examinations to be held under this act and to authorize State Boards in certain cases to waive said examinations; to provide for the registry of certificates issued under the provisions of this act and for publication of the list of registered physicians of this State and regulating the effect thereof; to authorize said Boards to grant certain powers to the members thereof; to regulate the expenditures and revenues of said Boards; to authorize said Boards to take proceedings for the revocation of the permit to practice medicine or midwifery and to enumerate the grounds on which such proceedings may be instituted: to define the practice of medicine in this State; to provide for exemptions from the operation of this act; and to provide that prosecutions pending under existing laws on the subject matter of the same shall not be affected by the passage of this act.

Section 1. Be it enacted by the General Assembly of the State of Louisiana, That from and after the promulgation of this act, no person excepting those already engaged under existing laws in the practice of medicine, surgery, midwifery, osteopathy, and dentistry, shall practice medicine in any of its departments within the State of Louisiana, unless such person shall possess all the qualifications required by this act.

Sec. 2. Be it further enacted, etc., That after the promulgation of this act, any person before entering upon the practice of medicine in any of its branches, dentists and osteopaths excepted, shall present to one of the Boards of Medical Examiners, as hereinafter constituted, a diploma from a college in good standing, of any sect teaching medicine or the healing art, and shall stand a satisfactory examination before the

Board upon the following branches, to-wit: Anatomy, Physiology, Chemistry, Obstetrics, Gynecology, Physical Diagnosis, Surgery, Pathology, Materia Medica, Theory and Practice of Medicine, and Hygiene, provided that any person not using internal medication in his or her practice shall be exempt from examination in Materia Medica. The person shall also satisfy the Board that he or she is twenty-one years of age, of good moral character, and possesses a fair education. If said diploma and examination are satisfactory to said Board, they shall issue to such person a certificate in accordance with the facts. Said board, however, is authorized, at its discretion, to waive said examination in favor of any applicant who shall present to the Board a satisfactory certificate of examinations from a Board of Medical Examiners of another State; provided, however, that said Board created under this act shall have found a standard of requirements satisfactory to the said Board created under this act; the said board created under this act to be the sole judge as to the sufficiency of the standard required of the certificates issued by said Board of another State.

Sec. 3. Be it further enacted, etc., That the medical examiners herein provided for shall consist of two boards—one of physicians and surgeons recommended by the Louisiana State Medical Society, which Board shall be known as the Louisiana State Board of Medical Examiners, and one of physicians and surgeons recommended by the Hahnemann Medical Association of Louisiana, which shall be known as the Louisiana Homeopathic State Board of Medical Examiners. There shall be five members of each board, any three of whom shall constitute a quorum for all purposes, including holding of examinations and granting certificates. All the members of both boards shall be graduate physicians and practitioners.

The Board, composed of physicians and surgeons recommended by the Louisiana State Medical Society, shall examine all applicants who propose to practice any other than the homeopathic system of medicine, and the board composed of physicians and surgeons recommended by the Hahnemann Medical Association of Louisiana shall examine all applicants who propose to practice the homeopathic system of medicine. The certificate of either Board shall be conclusive proof of the efficiency of the applicant examined by said Board. All examinations held by the board and the answers of the applicants shall be in writing, and shall be kept as records for a period of two years. All members of said Board shall be appointed by the Governor of the State from lists of names presented by the Louisiana State Medical Society and the Hahnemann Medical Association of Louisiana, respectively, and the Governor shall have the right to remove any or all of the members thereof for inefficiency or neglect of duty, and to fill all vacancies occurring in these Boards from names recommended by their respective societies, provided that the present members of each of the State Boards shall continue in office until the end of their present respective terms and until their successors shall have been appointed.

Sec. 4. Be it further enacted, etc., That at the expiration of the respective terms of the present members of the Boards of Medical Examiners under existing laws and thereafter, each member of the Board of Medical Examiners shall be appointed by the Governor for the term of six years.

Sec. 5. Be it further enacted, etc., That all persons beginning the practice of midwifery in this State after the passage of this act shall appear before one of the State Boards of Examiners and submit to such examination in midwifery as the Board shall require, and shall pay the Board for such examination, the sum of \$10.00. If such examination is satisfactory, the Board shall issue a certificate the same as provided for midwives in practice at the time of the passage of this act, which certificate shall be registered as in the manner provided for midwives in practice at the time of the passage of this act; but for such registration with the Secretary of the State Board of Health, or with the Clerk of the District Court, the holder of said certificates shall be required to pay a fee of fifty cents only. This section does not apply to the so-called midwife of rural districts and plantation practice, who in the sense of this act, are not considered as practicing midwifery as a profession, neither shall it apply to persons practicing midwifery legally in accordance with now existing laws.

Sec. 6. Be it further enacted, etc., That each Board of Medical Examiners is authorized to select such officers and frame and adopt such rules and by-laws as may be necessary for the efficient operation of such board. Each board may provide that the examination required in Section 5 of said act, as a prerequisite to the practice of midwifery, may be conducted by one member of said Board of Examiners, and the certificates of satisfactory examination issued by such member shall entitle the holder to be authorized by the president and secretary of said board to practice midwifery in this State; and may also provide that any member of said board may make any affidavit necessary to the issuance of any injunction or other legal process authorized under this act. Each board shall have its seal and the president and secretary of the respective boards shall be empowered to administer oaths in the taking of testimony upon any matter appertaining to the duties of said board.

Sec. 7. Be it further enacted, etc., That the regular meeting of the boards shall be held at least twice in each year in the City of New Orleans, but a special meeting of either board may be called by the president thereof, anywhere in the State whenever a majority of such board, or its president, may deem it expedient: the call to be issued by the secretary.

Sec. 8. Be it further enacted, etc., That to prevent delay and inconvenience, one member of a Board of Medical Examiners may grant a permit to any applicant after a satisfactory examination, and shall report thereon to the boards at the next regular meeting; such temporary permit shall not continue in force longer than until the next regular meeting of the boards, but such temporary permit shall in no case be granted within six months after the applicant has been refused a certificate by the boards.

Sec. 9. Be it further enacted, etc., That the certificates issued in accordance with Section 2 of this act shall be recorded in the office of the clerk of the District Court of the parish in which he or she resides, who shall make this recordation in a book to be kept for that purpose only, and also certify to such recordation by an indorsement of the original certificate, which the holder thereof shall transmit or deliver to the State Board of Health; and the clerk recording the same shall be entitled to a fee of one dollar. Such certificate transmitted or

delivered to the State Board of Health shall entitle the holder to be placed on the list of registered physicians and surgeons, the publications of which is hereafter provided for. Said Board of Health shall preserve such certificates, and a copy thereof, signed by its secretary, shall be received as evidence in the courts of this State, and for such copy a fee of fifty cents shall be paid. Until such recordation is made, the holder of such certificate shall not exercise any of the rights or privileges therein conferred to practice medicine.

Sec. 10. Be it further enacted, etc., That it shall be the duty of the State Board of Health to publish annually in the official journal of the State (and if there is no such journal, in one of the daily newspapers published in the City of New Orleans) a list of the registered physicians and surgeons in the State and their residences, and such published list shall be received in evidence by the courts of this State as proof that the physicians and surgeons therein named are duly registered as required by law, and the said State Board of Health is hereby required to strike from said list the name of any person whose certificate may have been revoked by the State Boards of Medical Examiners, as herein provided for.

Sec. 11. Be it further enacted, etc., That the members of said Boards of Medical Examiners shall receive, as a compensation for their services, ten (\$10.00) dollars per day during their session and, in addition thereto, their hotel and traveling expenses by the most direct route to and from their respective places of residence, to be paid out of any moneys in the treasury of the boards upon the certificates of the president and secretary. The boards are empowered to demand a fee of one (\$1.00) dollar for the issuing of each certificate. The fee for examination shall be twenty-five dollars (\$25.00). If the applicant passes a satisfactory examination no other fees shall be charged against him for the issuance of the certificate provided for in Section 2 of this act. The fee for temporary permits shall be ten dollars (\$10.00), to be paid into the treasury of the boards, said fee to be credited to the applicant when he applies to the boards for a permanent certificate.

Sec. 12. Be it further enacted, etc., That any itinerant vendor of any drug, nostrum, ointment or application of any kind, intended for the treatment of disease or injury, or who may, by writing, print or other methods, profess to cure or treat disease or deformity by any drug, nostrum, manipulation, or other expedient in this State, shall, if found guilty, be fined in any sum not less than twenty (\$20.00) dollars and not exceeding one hundred (\$100.00) dollars for each offense, to be recovered in any action of debt, before any court of competent jurisdiction, or shall be imprisoned for a term of not less than ten (10) days or more than thirty (30) days, or be both fined and imprisoned.

Sec. 13. Be it further enacted, etc., That any person shall be regarded as practicing medicine within the meaning of this act who shall append the letters M. D. or M. B. to his or her name, or shall prescribe, direct, or apply, or shall profess or publicly advertise that he prescribes, directs or applies for the alleged purpose of treating, curing or relieving any bodily or mental disease, infirmity, deformity, defect, ailment or injury in any person other than himself, any drug, instrument, or force, whether physical or psychic, or of whatever nature, or any other agency or means, or who shall examine any such person for such purpose; whether such drugs, instrument, force or other agency or

means is to be applied or used by the patient or by any other person; and whether such prescribing, directing, or applying, be for compensation of any kind or be gratuitous; and any officer or agent or employee or member of any corporation, association or partnership which does or professes or publicly advertises that it does examine for, cure, treat, or relieve such diseases, ailment, deformities, defects, injuries or infirmities, in any of the modes mentioned in this section shall be regarded as practicing medicine under the provisions of this act.

This provision shall not apply to farmers or planters when treating without compensation their families, employees, or tenants exclusively, or to attendants and plantation midwives; or to opticians fitting glasses, or testing eyes in their own establishments, or to water-cure establishments. Nothing in this act, however, shall be construed to prohibit the practice of Christian Science or the religious tenets of any church whatsoever.

Sec. 14. Be it further enacted, etc., That said Louisiana State Board of Medical Examiners, through its proper officer, may cause to issue in any competent court a writ of injunction forbidding and enjoining any person from practicing medicine in any of its departments in this State, until he shall have first obtained the certificate or permit herein provided for and under the provisions of this act; and said injunction shall not be subject to being released upon bond.

In the same suit in which said injunction may be applied for, the said board, through its president aforesaid, may sue for and demand of the defendant a penalty not to exceed one hundred dollars, and in addition thereto attorney's fees not to exceed fifty dollars, besides the costs of court; judgment for which penalty, attorney's fees, and costs may be rendered in the same judgment in which the injunction may be made absolute.

The trial of said proceeding by injunction shall be summary, and be tried by the judge without intervention of a jury.

Sec. 15. Be it further enacted, etc., That any person practicing medicine or midwifery in any of its departments in this State without first having obtained the certificates or permit herein provided for or contrary to the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$50.00 or more than \$100.00, or by imprisonment in the parish jail for a period of not less than ten days, or more than ninety days, or by both fine and imprisonment for each offense. It shall be the duty of the respective district attorneys to prosecute violators of the provisions of this act, before any court of competent jurisdiction. The said fine shall be divided equally between the public school fund of the parish in which said offense may have been prosecuted, and the State Board of Medical Examiners.

Sec. 16. Be it further enacted, etc., That if any person legally practicing medicine or midwifery in this State shall be convicted of a crime or shall commit any act of gross unprofessional misconduct, either of the State Boards shall have the power to institute proceedings for the purpose of having the certificate or permit held by such person revoked, and if it shall be shown that such physician or midwife has been convicted of a crime or has done an act of gross unprofessional misconduct, the court shall have the power to revoke the certificate or permit held by such person.

Sec. 17. Be it further enacted, etc., That any practitioner of medicine, in any of its departments, failing to comply with the requirements of this act, shall not be exempt from jury or military duty, nor be permitted to collect any fees or charges for services rendered, nor be allowed to testify as a medical or surgical expert in any court in this State, nor to hold any medical office, nor to be recognized by the State or parish or municipal corporation as a physician or surgeon; nor shall he be entitled to enjoy any of the privileges, rights or exemptions granted to physicians or surgeons by the laws of this State.

Sec. 18. Be it further enacted, etc., That this act shall not apply to any commissioned surgeon of the United States Army, Navy or Public Health Service, practicing in the discharge of his official duty as such; to physicians or surgeons of other States or territories in actual consultation with a registered physician of this State; or to any physician actually practicing in this State, before the passage of this act and in accordance with then existing laws.

Sec. 19. Be it further enacted, etc., That the said boards shall report to the prosecuting officer of the State of Louisiana all persons violating the provisions of this act. They shall report, annually, to the Governor of this State upon the condition of the practice of medicine in the State, its recommendations for the improvement of the practice, as well as a record of the proceedings of the board during the year, together with the names of all physicians or surgeons to whom the said board shall have issued certificates during the year, in accordance with the provisions of Section 2 of this act.

Sec. 20. Be it further enacted, etc., That it shall not be lawful for the said Boards of Medical Examiners or any member thereof, in any manner whatever or for any purpose, to charge or obligate the State of Louisiana for the payment of any money except as provided for in Act 44 of the Acts of 1882, relative to the publication of registered physicians, etc., and the said boards shall look alone to the revenue derived from the operation of this act for the compensation designated in Section 11 of this act. And if said revenue is not sufficient to pay each member in full, as per Section 11, then the amount thus received shall be prorated among the members. But if at the end of the year there should be a greater revenue derived than sufficient to defray the expenses of the boards at all their sessions for the year, as provided in Section 7, such surplus may be used by said boards in such other expenditures as they may deem necessary. The said Boards of Medical Examiners shall have the right to employ counsel to carry out the provisions of this act, and that the fees of such counsel and the cost for all proceedings taken under the provisions of this act, except the criminal prosecutions, shall be payable exclusively out of the revenues, including penalties under the provisions of this act.

Sec. 21. Be it further enacted, etc., That nothing in this act shall be construed as applying to the practice of Osteopathy or Dentistry, or as affecting, or changing existing laws on these subjects.

Sec. 22. Be it further enacted, etc., That no acts or parts of acts shall be considered repealed by this act unless same are contrary to or in conflict with this act.

Sec. 23. Be it further enacted, etc., That this act shall not apply to offenses committed prior to the adoption hereof, but all such offenses shall be prosecuted and punished as is now provided by such laws.

Sec. 24. Be it further enacted, etc., That in the event that any provision or part of this act shall be questioned in any court and shall be held to be invalid, the remainder of this act shall not be invalid, but shall remain in full force and effect.

Sec. 25. Be it further enacted, etc., That this act will take effect from and after the dates of its passage.

L. E. THOMAS,  
Speaker of the House of Representatives.

THOMAS C. BARRET,  
Lieutenant Governor and President of the Senate.

Approved: July 1, 1914.

L. E. HALL,  
Governor of the State of Louisiana.

A true copy:

ALVIN E. HEBERT,  
Secretary of State.

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## Medical News Items.

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SOUTHERN MEDICAL ASSOCIATION MEETING.—The annual meeting of the Southern Medical Association will be held in Richmond, Va., November 9-11, under the presidency of Dr. Stuart McGuire, Richmond.

RAILWAY SURGEONS TO MEET.—The eighteenth annual meeting of the Minnesota, St. Paul and Sault Ste. Marie Railway Surgical Association will be held in Ashland, Wis., September 9 and 10.

CONGRESS FOR SEXUAL RESEARCH.—The First International Congress for Sexual Research is scheduled to be held in Berlin, October 31-November 2. The Congress will consider all questions regarding sexual research. Sanitatsrath Albert Moll, Berlin, W. 15 Kurfürstendamm, 45, is chairman of the committee on arrangements.

CARNIVAL OF SAFETY MEETING.—The General Carnival Committee of the Carnival of Safety will be held in Philadelphia, September 21-29. It is planned to exhibit a reconstructed Fourth of July, showing the reasons for the discontinuance of all methods of celebrating Independence Day which are dangerous to life.

PREVENTION OF INFANT MORTALITY MEETING.—The American Association for the Study of Prevention of Infant Mortality will

hold its annual meeting in Boston, November 12-24. The first general meeting will be held jointly with the Massachusetts State Conference of Charities.

**SCHOOL OF PUBLIC HEALTH.**—A school of public health is proposed for the University of Minnesota. The instruction is to be given by the present teaching staff of the University, and the consideration of the subject will be taken from a medical as well as from a modern engineering standpoint.

**THE AMERICAN SCHOOL HYGIENE ASSOCIATION AND THE FOURTH INTERNATIONAL CONGRESS ON HOME EDUCATION** will meet in Philadelphia, September 22-27, 1914. A very interesting program is promised by both the Association and the Congress. The price of membership in the American School Hygiene Association is three dollars per year and will entitle the holder to joint membership in the Fourth International Congress on Home Education. For particulars relative to membership in the American School Hygiene Association, address Thomas A. Storey, College of the City of New York, New York City.

**THE AMERICAN PROCTOLOGIC SOCIETY** held its sixteenth annual meeting at Atlantic City, N. J., June 22 and 23, 1914, under the presidency of Dr. Jos. M. Mathews, Louisville, Ky., and Dr. Jas. A. MacMillan, Detroit, Mich., vice-president. The following officers were elected for the ensuing year: Dr. Louis J. Krouse, Cincinnati, president; Dr. Collier F. Martin, Philadelphia, vice-president; Dr. Alfred J. Zobel, San Francisco, secretary-treasurer. Executive council: Dr. Jas. A. MacMillan, Detroit, chairman; Dr. Louis J. Krouse, Cincinnati; Lewis H. Adler, Jr., Philadelphia, and Alfred J. Zobel, San Francisco. The next place of meeting will be San Francisco for 1915, the exact date and headquarters to be announced later.

**THE MEDICAL CLINIC OF HOTEL DIEU, PARIS,** has sent out a prospectus of its vacation course and reviews for 1914-15, under Professor M. A. Gilbert.

**AN INTERNATIONAL CONGRESS ON SCHOOL HYGIENE** will be held in Brussels in 1915.

**THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOTHERAPY** will be held in St. Petersburg, September 15, 1916.



THE AMERICAN OSTEOPATHIC ASSOCIATION met in Philadelphia on August 3. Over 2,000 osteopaths were in attendance. A resolution was adopted asking co-operation of every school of practice in having State laws passed to make it compulsory to report all cases of social diseases to established State bureaus.

WAR ON HOOKWORM.—An active campaign for the eradication of hookworm is being waged in Tangipahoa Parish, through the combined efforts of the police jury, the school board and the State Board of Health. The work is under the direction of Dr. G. C. McKinney, assisted by Superintendent A. C. Lewis, of the Parish School Board. Illustrated lectures are being given in the public schools throughout the parish.

BILOXI PROVES HEALTHY.—According to reports, Biloxi, Miss., is said to have had the most favorable bill of health of any city of its size in the United States for the month of July. There were only nine deaths, four of whom were non-residents; the others died between the ages of sixty and ninety-six years.

NO YELLOW FEVER IN HONDURAS.—The existence of yellow fever in Honduras was denied by the Assistant Colonial Surgeon stationed at Corozal, British Honduras.

MEDICAL SCHOOL INCREASES FUND.—The General Educational Board has recently appropriated a fund of \$50,000 for the development of the Hunterian laboratories of the John Hopkins University Medical School, Baltimore. This is an addition to the general fund of \$1,500,000 recently given to the school.

COMMON DRINKING CUPS ABOLISHED.—The Pennsylvania railroad has issued an order requiring the abolishment of all common drinking cups. On locomotives, where firemen and engineers used the same cup, they will in future be required to have separate cups. The order is also applicable to the cabooses or wherever the train crews are concerned.

CHANGE NAME OF HOSPITAL.—The change of name of the Holy Innocents Hospital, Birmingham, to that of the Children's Hospital of Birmingham, has been announced by the trustees of the institution. Announcement was also made that the hospital would in future be free for the care of children from infancy to the age of fourteen.

CONSERVATION PROGRAM OFFERED.—Free physical examination, chemical tests and health reports to policy-holders, whose insurance has been in force for three years or longer, has been offered by the Equitable Life Assurance Society, dating from July 1. The society's salaried examiners will make the examinations and tests. It is agreed that the average health of the members will be improved and the average length of life will be prolonged if any large proportion of the policy-holders get the habit of having periodical examinations or health reports made, either through the Equitable service or through their own physicians.

LEPROSY IN CLEVELAND.—The third case of leprosy has been discovered in Cleveland, Ohio. The patient, a man of 28, has been isolated from the other patients and placed in the contagious ward of the hospital.

MANILLA'S DEATH RATE.—According to reports, the death rate among the residents of Manila was 18.97 per thousand for March. This is the lowest rate reached since the Americans have occupied the city, and is probably much lower than any previous date during the past century.

MONEY FOR RESEARCH WORK.—In order that the University of Toronto may be able to engage in research work, several citizens of Toronto have agreed to contribute various sums amounting to \$15,000.

TOXINS AND VACCINS SUPPLIED BY STATE.—The State Board of Health of Mississippi will in future distribute to the public at cost vaccins and toxins, including diphtheria and typhoid toxins and vaccins.

A LEPER HOME.—By the will of the late Lord Strathcona, London is to have a leper home. Lord Strathcona left \$25,000 to Mr. John Burns, president of the Board of Trade of London, for the provision of a home and the maintenance of fifty lepers.

PROTEST AGAINST PRESIDENTIAL PARDON.—Resolutions were introduced, at a special meeting of the Washington (D. C.) Medical Society on July 23, severely criticizing President Wilson for commuting the sentence of a physician, son-in-law to a Democratic Senator, who was convicted recently of misuse of mails by sending information as to where an abortion could be performed. The

physician was a practitioner of Washington and sentenced to two years' imprisonment and fined \$500. President Wilson commuted his sentence to the payment of a fine.

**ILLINOIS CENTRAL RAILROAD HOSPITAL.**—A hospital is to be built by the Illinois Central Railroad on Stony Island avenue, Chicago, the erection and equipment of which is to cost more than \$400,000. The building is intended principally for the benefit of the railroad's employees and passengers injured on the railroad.

**AMERICAN MEDICINE GOLD MEDAL AWARD FOR 1914** has been conferred upon Dr. George Crile, of Cleveland, Ohio, as the American physician who has performed the most conspicuous and noteworthy service in medicine and surgery during the past year.

**TUBERCULOSIS SANATORIA OR HOSPITALS NO MENACE TO HEALTH.**—The National Association for the Study and Prevention of Tuberculosis has issued a pamphlet showing convincing proof that tuberculosis sanatoria or hospitals are not a menace to health nor a detriment to the property of those living near such institutions. The pamphlet is entitled "The Effect of Tuberculosis Institutions on the Value and Desirability of Surrounding Property," and reviews all the studies made on the subject. Nearly 150 institutions are studied, and not one case could be found to assert that a tuberculosis sanatorium had spread disease or injured property. In a number of instances the presence of a sanatorium or hospital had promoted outdoor living, tending to lower the death rate and increased the market for produce and labor, thereby benefitting the community.

**NO PLAGUE IN HAVANA.**—According to official report, Havana was declared, on July 21, to be free from bubonic plague. No new cases have been reported for several weeks and no infected rats have been found for a long time.

**THE NEW YORK SKIN AND CANCER HOSPITAL** has recently purchased the four-story dwelling at 336 Second avenue, adjoining the hospital property, to be used for the extension of the dispensary work of the hospital.

**HEALTH CONSERVATION AT PANAMA-PACIFIC EXPOSITION.**—There will be held in San Francisco, during the Panama-Pacific Exposition, a series of national and international congresses and

conventions on all subjects. The subject which will engage the attention of scores of these great gatherings will be health—physical, moral and mental. It is expected that the great welfare, civic and health exhibits from the Urban Exposition, Lyons, France, and the British exhibits which were shown at Ghent last year, will be brought over in their entirety and exhibited at the Panama-Pacific Exposition.

NEW YORK'S PIED PIPER OF HAMELIN.—New York can boast of one of the greatest rat-catching establishments in the country. It is conducted by a young woman, who is the daughter of the famous modern successor of the Pied Piper of Hamelin. Upon his death she fell heir to all his arts, and conducts with all his success the business which he taught her. The duty of this woman is to direct the operations of a crew which visits the piers of New York every day in the year. She is the only official rat-catcher of her sex in the world.

TOURO WILL BUILD MATERNITY HOSPITAL.—Mrs. Henry Newman has donated the sum of \$25,000, with which to build a maternity hospital at the Touro Infirmary. This building is to be known as the Henry Newman Maternity Hospital and is to stand as a memorial to the late Henry Newman, the husband of the donor.

PERSONALS.—The honorary degree of M. D. was recently conferred on Dr. A. Richard Bliss, Jr., professor of chemistry and pharmacology of the University of Alabama.

Dr. F. W. Parham has resigned from the Board of Administrators of the Tulane University of Louisiana in order to accept the Chair of Surgery in the New Orleans Polyclinic for the coming session.

Dr. Thomas E. Wright, of Monroe, La., has returned from Baltimore, after a three months' stay in that city.

Dr. W. D. Phillips and wife have returned from Lenox, Mass., where they were visiting Mrs. Phillips' parents.

Dr. and Mrs. E. J. Huhner visited Central America during the month.

Dr. George S. Bel left about the 15th of July for a vacation in the North.

Dr. M. C. Woodruff, chief diagnostician of the Board of Health of St. Louis, visited New Orleans during July. The doctor's visit

was to ascertain and to report to his board the exact situation in regard to the plague in New Orleans.

The doctors who visited the city during the month of July to study the plague situation were: Dr. B. G. Tucker and Dr. W. E. Hibbett, of Nashville; Dr. Mallory Kennedy, of Pensacola; Dr. Bell, of Chattahoochie; Dr. W. G. Diggett, of Tallahassee; Dr. C. M. Jackson, of Miami, Florida.

Dr. F. L. Watkins, of Jackson, Miss., was a visitor at the State Board of Health office, New Orleans, during the month.

Dr. Oscar Dowling has been invited by the State Medical Association of Minneapolis to deliver an address at St. Paul, October 2. Dr. Dowling has accepted and has chosen for his subject, "A Health Officer's Daily Mail."

Dr. Leonard P. Chamberlain has returned to the city from his vacation.

Dr. W. H. Dalrymple, veterinarian, Louisiana State University, delivered a lecture at Welsh, La., on charbon.

Dr. T. O. Hunter, of Biloxi, visited the city during August.

REMOVALS.—Dr. C. E. Wright, from Cathedral Apartments, Baltimore, to Monroe, La.

Dr. C. A. M. Dorrestein has removed to 7400 St. Charles avenue and 822-24 Audubon Building.

Dr. W. D. Noble, from Natchez, Miss., to Ashwood, La.

Dr. McG. Stewart, from Laurel Hill, La., to 133 University Place, New Orleans.

Dr. C. P. Vines, from 711 Hobson avenue, to New Thompson Building, Hot Springs, Ark.

The Medical Council Company, from Forty-second and Chestnut streets, to Commercial Union Building, Philadelphia, Pa.

THE SURGICAL PUBLISHING COMPANY, of Chicago, publishers of *Surgery, Gynecology and Obstetrics*, with the *International Abstract of Surgery*, announce their removal to No. 30 North Michigan Avenue, Chicago.

DIED.—On July 29, 1914, at Paris, Prof. Paul Reclus, the noted French surgeon and member of the Academy of Medicine, died, at the age of sixty-seven.

On Sunday, August 16, 1914, Dr. Gustave F. Walker, of New Orleans, aged 73 years.

## Book Reviews and Notices.

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

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**Dental Electro-Therapeutics**, by Ernest Sturridge, L. D. S. Eng., D. D. S. Lea & Febiger, Philadelphia and New York, 1914.

This is a very thorough work on a new branch of dental practice. It was called forth by numerous inquiries from members of the dental profession; and it presents, in a concise, well-adjusted form, the fundamentals of electrical phenomena and their practical application in dentistry. We quote from the author's preface: "This work is especially intended to bring forward the value of ionic medication in the treatment of periodontal disease, and everything pertaining to ions and their use in dental treatment has been carefully detailed, with the hope of exciting the interest which the subject warrants.

"It is only necessary fully to understand the efficacy of this method of treatment to appreciate the value of ionic medication to the dental profession in these days when the medical profession looks first to the dentist to deal with oval sepsis to which is attributed alimentary, toxæmia with its many serious consequences."

Dr. Sturridge goes extensively into the use of X-rays in their application to dentistry. Indeed, no phase of the subject is overlooked, and directions for practical work are complete. McSHANE.

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**The Labyrinth: An Aid to the Study of Inflammations of the Internal Ear**, by Alfred Braum, M. D., and Isadore Friesner, M. D. Reiman Co., New York.

Nothing could be more timely than the appearance of the labyrinth, by authors so specially fitted to compile, deduct and publish this volume.

One can now study carefully the anatomy, pathology, examination, diagnosis and treatment of the labyrinth in a thorough, systematic manner and secure such a solid foundation that the super-structure will be easily added to.

From the beginning to end the work is clear, properly briefed, excellently illustrated with drawings and plates, headings distinctly emphasized, the whole giving one a mental picture sufficiently impressive to be lasting.

One cannot but welcome such a work, gathering in the mass of published material, condensing it and selecting wisely that which is of importance, and combining it in so readable a manner, the work should be seriously studied; the result can only add to the improvement of the reader. LYNCH.

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**Manual of Otology**, by Sorkam Bacon, A. B., M. D. Sixth edition, revised and enlarged. Lea & Febiger, Philadelphia.

This manual, intended primarily for busy practitioners and students of medicine, will serve its purpose very well. It is unusually well

written, judiciously condensed, yet covering its selected field thoroughly. The author has revised the former edition and the one before us can be considered up to date. The labyrinth tonsils, otosclerosis and vaccine therapy are especially among the divisions which the author has revised or rewritten completely. The general appearance of the work is quite creditable to the publishers.

LYNCH.

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**The Practice of Pediatrics**, by Charles Gilmore Kerley, M. D. W. B. Saunders & Co., Philadelphia and London, 1914.

The appearance of Dr. Kerley's "Practice of Pediatrics," a large volume of 878 pages, with numerous illustrations and a complete index, will be welcomed by the medical profession at large. His previous book, on the "Treatment of Diseases of Children," is so familiar to most physicians that the bare announcement of a more pretentious work on the same subject is a guarantee of its success. Dr. Kerley seems, indeed, to have accomplished most creditably the difficult task he set himself; namely, that of presenting "as clear and detailed a description of the management of the illnesses of infancy and childhood as space would permit, with a view to a better understanding of pediatric therapeutics." While the author has not failed to pay due attention to such topics as etiology, pathology, symptoms and diagnosis, he has taken pains to give minute and careful directions with regard to treatment of the various diseases under discussion. Most of our eminent writers have contented themselves with an exhaustive and careful analysis of the former factors, dwelling upon treatment with relative brevity. This characteristic in itself might well place Dr. Kerley's book in the foremost ranks of pediatric work.

In connection with treatment the general practitioner will find especially helpful chapter XXII, which contains a comprehensive list of drugs and drug doses, both for internal and external use. Again, on the difficult subject of feeding, Dr. Kerley's experience of more than a quarter of a century lends tremendous weight to his observations. While he does not dwell largely upon percentage calculations, a phase intentionally omitted in this work, he has given many examples with full explanations from which one might easily juggle feeding mixtures satisfactorily. He also dwells largely upon certain cereal, gruel, and proprietary mixtures, giving details as to their indications, analysis, caloric values, and directions for preparing each. That these mixtures are of unquestionable value is proven by Dr. Kerley's vast experience with them. "Scientific infant feeding," says Dr. Kerley, "consists in supplying a balanced ration of fat, proteid, carbohydrate and mineral salts in an assimilable form upon which the infant makes normal development."

When it comes to the classification of intestinal diseases, a subject upon which so many writers lay particular stress, Dr. Kerley shows his practical good judgment by taking the common sense view. "Until we possess demonstrable facts, it is best, in teaching, not to go into vague chemical and metabolic theories which no one understands." His broad classification may be summed up into first, those cases with acute symptoms without demonstrable lesions, that is, those cases occurring before pathological processes have had time to form, and, second, those cases occurring with demonstrable lesions, that is, cases persisting until pathological processes have formed. This latter class is the one, as we know, which is most obstinate in responding to treatment.

Throughout the book we must note Dr. Kerley's vigorous common sense and independent attitude. On his description of the ideal nursery, he does not hesitate to affirm, with kindly humor, that "the old-fashioned cradle in which generations have been rocked may be an interesting heirloom, but under no circumstances should it be removed from its place in the garret." Yet again, it would be well if every physician would heed the warning and suggestions given so clearly, especially under handling of contagious diseases and the treatment of typhoid fever.

His book possesses the rare quality of sequence and logical arrangement which makes it available and convenient as a reference. That the book is scientific, up to date, and full of pointed suggestions, goes without saying; that it is likewise written in a direct and convincing style will add not a little to its worth in the eyes of many physicians.

We can cordially recommend the "Practice of Pediatrics" to the profession.

DANDRIDGE P. WEST.

**A Text-Book of the Practice of Medicine**, by James M. Anders, M. D., Ph. D., LL. D. Illustrated. Eleventh edition, thoroughly revised. W. B. Saunders Co., Philadelphia and London.

This is one of the best single volume texts by an American author. When we say this is the eleventh edition that in itself is sufficient recommendation of its reliability and popularity. We feel that if there are defects they are infinitesimal, and do not need to be commented upon.

We have favorably reviewed several previous editions of this excellent work, and continue to give it our approval.

STORCK.

**Progressive Medicine**. Edited by Hobart Amory Hare, assisted by Leighton P. Applebaum. Volume XVI, No. 2, June 1, 1914. Lea & Febiger, Philadelphia and New York.

Such contributors as Coley, Gerster and John G. Clark in surgery and Stengel in medicine fill most of the pages of this number, while Edward Jackson writes the review in Ophthalmology. Each group is full of interest and argues the value of this quarterly collection of indispensable commentaries on current medicine and surgery.

DYER.

**Ready Reference Handbook on Diseases of the Skin**, by George Thomas Jackson, M. D. Seventh edition, thoroughly revised. Lea & Febiger, New York and Philadelphia, 1914.

For twelve years Jackson has been a by-word in dermatological texts and the appearance of a seventh edition argues the continued popularity of this book. There are several new articles in the current edition and evidence of considerable revision, except in the plates, which would stand revision, even more than the book now shows.

The cyclopedic character of Jackson's book will always make it useful for "ready reference," the chief purpose for which the author intended it.

DYER.



**The Clinical History in Outline**, by Paul G. Woolley, S. B., M. D. C. V. Mosby Co., St. Louis, 1914.

The student of twenty-five years back was facilitated in his reading of medicine by many little booklets by men of the time. We recall especially Fothergill's little book on diagnosis and Playfair's monograph on obstetrics. They were full of merit and so readable that they surprised the student. Woolley presents a concise guide, interspersed with commentary, which reminds us of the older contributions—only Woolley's book is "up to date." It saves the time of the student at the expense of author's viewpoint. Practically the whole field of diagnosis is covered so far as the subjects treated are concerned and these are largely limited to the practice of the internist. A final chapter covers the conduct of an autopsy and the book is interleaved so that the user may expand the ideas presented. There is a large amount of detail covered in the half-hundred pages of this book. DYER.

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## Publications Received.

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**LEA & FEBIGER**, Philadelphia and New York, 1914.

**Diseases of the Rectum and Colon and Their Surgical Treatment**, by Jerome M. Lynch, M. D.

**Modern Medicine**, edited by Sir William Osler, M. D., F. R. S., and Thomas McCrae, M. D.

**J. B. LIPPINCOTT COMPANY**, Philadelphia and London, 1914.

**International Clinics**. Volume II, 24th Series, 1914. By leading members of the medical profession throughout the world.

**F. A. DAVIS COMPANY**, Philadelphia, 1914.

**Diseases of Infancy and Childhood**, by Louis Fischer, M. D. Fifth edition.

**REBMAN COMPANY**, New York, 1914.

**Diseases of the Labyrinth**, by Dr. Erich Ruttin, with a foreword by Dr. Victor Urbants Chitsch. Authorized translation by Horace Newhart, A. B., M. D.

**Local Anesthesia**, by Dr. Arthur Schlesinger, translated by F. S. Arnold, B. A., M. B., B. Ch.

**Ambidexterity and Mental Culture**, by H. MacNaughton-Jones, M. D., M. Ch., Q. U. I., M. A. O. R. U. I., F. R. C. S.

**On Dreams**, by Prof. Dr. Sigmund Freud. Only authorized English translation by M. D. Elder, with an introduction by W. Leslie MacKenzie, M. A., M. D., LL. D.

**THE GOODHUE COMPANY**, New York, 1914.

**The Question of Alcohol**, by Edward Huntington Williams, M. D.

### MISCELLANEOUS.

**Medical and Surgical Reports of the Episcopal Hospital**, Philadelphia. (Press of Wm. J. Dornan, Philadelphia, 1914.)

**Public Health Reports**. Volume 29, Nos. 27, 28, 29, 30, 31, 32.

**Atmospheric Air in Relation to Tuberculosis**, by Guy Hinsdale, A. M., M. D. (Published by the Smithsonian Institute, Washington, D. C., 1914.)

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for July, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	3	1	4
Intermittent Fever (Malarial Cachexia).....	4	2	6
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....			
Diphtheria and Croup.....	1	1	2
Influenza.....	1		1
Cholera Nostras.....		1	1
Plague.....	1	2	3
Pyemia and Septicemia.....	4		4
Tuberculosis.....	46	47	93
Syphilis.....	10	2	12
Cancer.....	23	2	25
Rheumatism and Gout.....			
Diabetes.....	2	2	4
Alcoholism.....	2		2
Encephalitis and Meningitis.....	1		1
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	10	8	18
Paralysis.....	2	1	3
Convulsions of Infancy.....	2		2
Other Diseases of Infancy.....	17	7	24
Tetanus.....	1		1
Other Nervous Diseases.....	4	2	6
Heart Diseases.....	59	41	100
Bronchitis.....	1	2	3
Pneumonia and Broncho Pneumonia.....	13	9	22
Other Respiratory Diseases.....	2	5	7
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	3	1	4
Diarrhea, Dysentery and Enteritis.....	9	13	22
Hernia, Intestinal Obstruction.....	3	1	4
Cirrhosis of Liver.....	5	3	8
Other Diseases of the Liver.....	3	1	4
Simple Peritonitis.....	1		1
Appendicitis.....	2	4	6
Bright's Disease.....	15	21	36
Other Genito-Urinary Diseases.....		5	5
Puerperal Diseases.....	8	3	11
Senile Debility.....	5	1	6
Suicide.....	4	2	6
Injuries.....	20	12	32
All Other Causes.....	21	16	37
<b>TOTAL.....</b>	<b>308</b>	<b>218</b>	<b>526</b>

Still-born Children—White, 22; colored, 23. Total, 45.

Population of city (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 per Month for Month—White, 13.58; colored, 25.90. Total, 16.92.

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

Mean atmospheric pressure. . . . . 30.01

# New Orleans Medical and Surgical Journal.

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VOL. LXVII.

OCTOBER, 1914.

No. 4

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## Original Articles.

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

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### SOME UNSOLVED AND DEBATABLE PROBLEMS IN TUBERCULOSIS.\*

By EDWARD O. OTIS, M. D.,  
Professor of Pulmonary Diseases and Climatology, Tuft Medical School, Boston.

“Die Tuberculose hat uns lange Zeiten hindurch immer wieder Rätsel zu lösen gegeben,” says a recent writer. And it is to some of these problems upon which there exists conflicting and perhaps erroneous opinions, or for which we have, as yet, found no satisfactory solution that I wish to call your attention for a few moments and invite discussion.

*First:* I wish to refer to the undue emphasis placed upon the detection of physical signs in the early diagnosis propaganda. The general practitioner has now for many years been lectured in season and out of season upon the supreme importance of the early diagnosis of tuberculosis, and he has been unmercifully berated for his dereliction in neglecting to do this: many times justly and sometimes, I believe, unjustly. He has become so sensitive under the censure that in my experience I find him making a diagnosis of

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\* Read before the Thirty-first Annual Meeting of the American Climatological and Clinical Association, Atlantic City, June 19, 1914.

clinical tuberculosis, not infrequently, upon definite physical signs, without giving due weight to the more important evidence of clinical symptoms. It seems to him more direct and scientific to base the diagnosis upon the physical findings rather than upon a painstaking investigation of the history and general symptoms, or at least the former occupies the foreground, while the latter is relegated to the second place. The distinction between clinical active tuberculosis and local infiltration without symptoms does not seem to be always clearly comprehended—not even perhaps by the tuberculosis dispensary physician himself—or even the teacher. The presence of certain physical signs, definite or indefinite, with no symptoms of bacterial toxemia are interpreted to mean active tuberculosis and the patient exhibiting such signs is accordingly removed from his family and employment and consigned to a sanitarium, where there is at least some risk that he may receive a new and active infection. Whereas the individual was in no way ill, and probably never would have developed any active clinical tuberculosis.

“If a patient feels perfectly fit and well,” says Patterson, “and his breathing capacity only is impaired, we could hardly say that he is *ill* with consumption. What really matters to the patient are the products of the bacteria entering into the general circulation. Drs. Gelien and Hamman<sup>1</sup> have, it seems to me, very justly estimated the relation between the physical signs and symptoms in making the early diagnosis, when they say that “the early diagnosis of pulmonary tuberculosis is more a matter of clinical experience and judgment than of unusual skill in eliciting slight abnormalities in pulmonary physical signs.” “It seems to us,” they continue, “that in attempting to improve the diagnostic acumen of the general practitioner towards pulmonary tuberculosis, more emphasis should be laid upon the observation of symptoms than upon the pulmonary examination. To carry out the former is within the reach of all, while to do well the latter will be a goal unattained by most of them.” Has not the tendency been to insist too strenuously upon the detection of physical signs, often slight and indefinite, to the neglect of a careful observation and interpretation of symptoms and thereby, on the one hand causing unnecessary anxiety and the disturbance of social and business relations by instituting uncalled for treatment; and on the other hand neglecting treatment because

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(1) “The Subsequent History of One Thousand Patients Who Received Tuberculin Tests” *Johns Hopkins Hosp. Bulletin*, Vol. XXIV, No. 268, June, 1913.

the physical examination was negative, although the symptoms of active tuberculosis were obvious?

Since writing the above a very suggestive article upon "The Responsibility for the Failure to Diagnose Tuberculosis in its Early Stages" has appeared in the *Journal of the American Medical Assn.* for April 18, 1914, by the late Dr. Ralph S. Lavenson, which seems to confirm my contention that undue emphasis is placed upon the detection of physical signs in the early diagnosis of tuberculosis. Dr. Lavenson investigated 54 instances in which the diagnosis had been made by the general practitioner "only after from three months to as long as five years after the patient had first sought a physician presenting symptoms suggestive of, and undoubtedly referable to, a tuberculous pulmonary infection." In 52.7 per cent. of the cases a physical examination *alone* was made, and depending upon the result, *alone* of this physical examination, the diagnosis was not made, although tuberculosis existed as subsequent events proved.

*Second: Marriage and Tuberculosis.*—Under what conditions, if any, shall a man or woman who is tuberculous (one or the other), or who has suffered from tuberculosis, marry and have children? To state the question in detail: Shall a man or a woman with arrested tuberculosis marry and have children, both as regards danger to themselves and a predisposition to tuberculosis in their offspring? Shall a man who is tuberculous, but whose disease is in a quiescent state, and who still maintains good resistance and retains his working ability, marry and have children, provided his wife is healthy? Shall a woman who has only evidence of anatomical tuberculosis with no symptoms marry and have children?

Various and conflicting answers have been made to these questions. You are doubtless familiar with the oft-asserted asseveration that a tuberculous husband and wife should be taught "not to procreate a race predisposed to tuberculosis." It seems to me that this is too sweeping a statement without modifications. How do we know that the children will be predisposed to tuberculosis? The recently published experiment of Brooks<sup>2</sup> would appear to offer substantial proof to the contrary, reasoning from analogy. In this experiment tuberculous cows were bred to tuberculous bulls, and at birth the calves were immediately taken from their mothers

(2) "An Experimental Study of Heredity in Bovine Tuberculosis," *Proc. Soc. Exper. Biol. and Med.*, 1914, XI, 50.

and fed upon modified pasteurized milk. Of more than 200 calves thus born not one became tuberculous, and there was some evidence which seemed to indicate that animals thus born were rather more resistant to tuberculosis than animals born of non-tuberculous parents. Why should we not expect that children born under similar conditions and treated in the same way would show the same results?

Why should not a tuberculous husband, if his disease is quiescent and the balance between the infection and the resistance is evenly maintained, have children if his wife is healthy? And still more so if his disease is arrested? And yet I recall a pathetic instance of the latter case when the wife, though healthy, refrained from bearing children for fear of the possible inherited predisposition on the side of the husband. Our American Anglo-Saxon race is so rapidly diminishing at the present time that one should be extremely cautious. It seems to me, in advising further race-suicide (the unpardonable sin for which there is no atonement, says Col. Roosevelt) unless from very definite and clearly determined reasons. I would even go further and say that it were better to take some risks with so much to gain in the preservation of a valuable family. For example, some married people, I am sure, would be willing to shorten their own lives if, by so doing, they could continue their name and family. I do not suppose there is much difference of opinion as to sanctioning the marriage and child-bearing of a woman who has obtained and maintained an arrest of her disease for a number of years, or of opposing the marriage of a woman who is still actively tuberculous or who has only an apparent arrest. When the husband is actively tuberculous, but not in the advanced stage and his wife is healthy, it seems to me it is a question for him alone to decide whether he should have children; and if the child is at once removed from the father I do not believe the predisposition bugaboo need cause anxiety.

*Third: The Question of Rest and Exercise.*—After the acute symptoms have subsided—for everybody agrees that absolute rest should be maintained during the fever period—when and how much exercise, if any, should be advised? Here opinions and practice vary somewhat. Dettweiler and Pratt seem to have proved pretty conclusively that continued rest during the whole period of treatment produces excellent results. Can we show better results and fewer relapses from exercise, however carefully graduated and

supervised? Again, is there any definite proof that so-called "breathing gymnastics" are, at least, of any material benefit in the "Cure," and is there not an element of danger in their employment? E. Kuhn, of Berlin, has recently published a long and elaborate argument in favor of breathing exercise by means of his lungensangmaske and adduces much theoretical and experimental evidence of its value. He considers that autoinoculation is produced not by general bodily exercise, as held by Wright and Paterson, but by the increased lung movement induced by the "Körperberneigung," and hence his conclusion is that breathing gymnastics is the essential element in the production of autoinoculation. On the other hand, we are familiar with the not-infrequent brilliant results attained by the complete immobilization of the lung through artificial pneumothorax, and in laryngeal tuberculosis from long-continued absolute rest. It is fair, however, to state that Kuhn also advises artificial pneumothorax, even in cases not far advanced or with cavities, where mobilization of the lung cannot be practiced without risk of temperature. Paterson's method of graduated exercises has become very popular and been widely adopted, not always, however, with the same discrimination that he exercised. One must bear in mind that Paterson's cases were in the first place carefully selected for him at the Brompton Hospital before being sent to Frimley; and further that either Paterson himself or a trained superintendent constantly supervised the work. "Uncontrolled doses" (of exercise), says Paterson, "are in the last degree dangerous." "Treatment by means of exercise," he continues, "is not of universal application; it can only be used in the case of a patient who fulfills two rather onerous conditions. In the first place, he must be afebrile and quite free from all constitutional symptoms; and, secondly, he must have attained the position of an ordinary person in the house, by being able to remain up all day fully dressed, and to walk up and down stairs." Upon how definite a scientific basis Paterson's theory of autoinoculation stands seems still to be somewhat uncertain. At all events it is well to remember that continued rest has and does produce excellent results, and exercise at any stage of the game has its dangers, particularly when lacking the Paterson skill in application and supervision. I recognize, however, that there are psychic conditions in the course of the treatment which may warrant a recourse to exercise even if some risk is incurred.

*Fourth:* Have we been over doing, or applying without proper discrimination, the open-air exposure in the treatment of tuberculosis?

It would seem to be rank heresy even to suggest such a thing: but do we always sufficiently individualize our patients in the application of extreme open-air methods? I refer more particularly to the more Northern latitudes. Take, in the first place, the far-advanced incurable cases, for even they have, not infrequently, been subjected to this treatment. What is gained by doing this and rendering their last days more wretched, when a warm ward or room—well ventilated, of course—would render their existence more comfortable? “I have seen a good many of them,” said a patient in our Municipal Consumptive Hospital to me not long ago, “put out-of-doors, but they all go below (to the dead house) just the same.”

With regard to the earlier, so-called “curable” cases, not all, it seems to me, are suitable for the rigorous out-door system in our Northern climate. Some never become accustomed to the life, and suffer genuine distress under the constant exposure to the cold; and it is, at least, a debatable question whether the excessive demands made upon the heat-producing forces of the body do not lower the resistance more than the open-air exposure raises it. They are like old people in their sluggishness of repose. Is it not conceivable that with some individuals we would produce better results by less strenuous insistence upon out-door exposure, provided, of course, we furnished pure air in well-ventilated wards or rooms?

Or again: Are all patients equally adapted to the open-air treatment in our cold Northern latitudes? Would not some do better in warmer climates, where the heat demands upon the organism are less, and where the out-door life could be enjoyed, not endured? A considerable number of persons, as we know, have a real antipathy to cold. Winter weather is to them a time of discomfort, if not of suffering. They dread cold as others do heat. They never can grow so accustomed to cold exposure as to render it anything more than a very uncomfortable experience. Even if their heat-producing centers did more or less adequately finally respond to the demands made upon them by the cold, the process would be long and painful. If, after trial, this was found to be the case, could we not obtain quicker and better results or, at least,



equally good results under more agreeable conditions if we sent our patients, with this idiosyncrasy as regards cold, to a warmer climate for the open-air treatment, when a choice of climates was permissible from other considerations?—to such a climate, for example, as that of New Mexico, Southern California, or the Pine Belt of the South? We say that “tuberculosis can be cured in any climate,” and then in the same breath we say, “but a cold climate is more favorable.” But is it for every case?

*Fifth* and finally: The problem of prevention in the case of a person suffering from more or less advanced tuberculosis, but who maintains indefinitely an equilibrium between his infection and his resistance, and who, in consequence, is able to be active in the community and perform his business and social duties. He maintains his normal weight and for the most part his strength, but he is constantly emitting tubercle bacilli. From business or social considerations he naturally desires to conceal his condition, and hence does not exercise all the precautions which he knows, and which we prescribe for an actively tuberculous individual. If of the well-to-do class he goes into society, he dines out, he is brought into intimate association with many people in professional or business relations. Or, if of the working class, he lives with his family and is intimately associated with his fellow-workingmen in shop or factory. He, too, that he may hold his job desires to conceal his condition. I have in mind the case of a professional man in the higher ranks of society, who looks well, and is able to attend to his duties. From his love of music and acquaintance with musicians he goes more or less into society. He is suffering, however, from advanced tuberculosis and his sputum always contains tubercle bacilli. Such cases must be a menace to those with whom they are brought into intimate association. They will probably never obtain an arrest, and feeling as well as they do, or from other prohibitive circumstances, will not take the “cure” or have tried and abandoned it. What are we to do with them from the standpoint of prevention? We cannot compel isolation, and if it were possible, somebody would, in many cases, have to provide indefinitely for the support of the family. So long, however, as they remain in active life they desire to conceal their condition and hence cannot or do not take all the necessary precautions to render themselves innocuous to others. This is one of the many problems in the prevention of tuberculosis which we have not yet solved.

## EXTENSIVE CASE OF OSTEOMYELITIS, INVOLVING TWO-THIRDS OF SKULL, ORIGINATING FROM FRONTAL SINUSITIS.\*

By W. T. PATTON, M. D., New Orleans.

Infection of the diploë of the bone is caused by retention of an especially virulent secretion and traumatism (operation or otherwise), and occurs in two forms, circumscribed and diffuse.

*Circumscribed:* This begins with edema, pain, especially on pressure over a circumscribed portion of the sinus wall, and general systemic manifestations (fever, prostration, etc.). The pathological process gradually spreads by continuity until the boundaries of the ethmoidal capsule are reached, where it ceases. Thorough resection of the diseased bone will usually result in a cure.

*Diffuse:* This form knows no boundaries, but continues unabated until the entire osseous covering of the brain is affected, unless cerebral infection and death halt the progress of the disease. Operations, even though extensive, offer no bar to the progress of the infection.

*Symptoms:* Clinical manifestations appear at the very onset of the disease. The part overlying the inflammatory process becomes edematous and is exquisitely painful on the slightest pressure. The abscess soon points and ruptures, the underlying bone appearing spongy and infiltrated with pus, sometimes throwing off sequestra. Unless the process is immediately arrested new foci of infection appear above, which also suppurate until the entire cranium is involved.

These severe infections practically always terminate mortally in general septicemia, thrombo-phlebitis of one of the large intracranial veins, or meningitis.

**Mr. R. A.,** age 28. White.

**Family History.**—Father dead (dysentery). Mother dead (nephritis). One brother dead (tuberculosis). One brother and one sister living.

**Past History.**—Smokes moderately. Does not drink or chew. Typhoid fever a few years ago. Some nose trouble six years ago. Operated on for polypi, left side nose. Arthritis in hips seven months ago. Wife had one miscarriage; has one child two years old, lower extremity paralyzed (infantile paralysis).

**Present Trouble.**—About six months ago left eyelid and tissues around eye began to swell, without pain, became very edematous and swollen, in twenty-four hours could not open lid at all. Was sent to city and post-

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orbital abscess opened by oculist, later referred to writer for examination of nose. Found left ethmoids, both anterior and posterior, full of polypi and abundant pus coming down from region of frontal on left side; right, apparently normal. Operation (Mosher) on left ethmoids performed, under local anesthesia, and frontal sinus washed out. Patient improved rapidly, discharge gradually becoming more scant. Patient went home without my consent. This was about eight weeks from beginning of trouble. Only remained at home one week, when nose and orbital wound began to discharge so freely and pain so much, had to come back to city, and went to Charity Hospital. Was operated on there by one of specialists (Killian operation on frontal). Patient did not do so well and again deserted, went home, so he claims, to die, but was persuaded by relatives to come back and go to Presbyterian Hospital, where, at request of Dr. C. G. Cole, I saw him morning of December 30.

**Examination.**—Both lids edematous, cannot open either lid, left eye bathed in yellow, foul pus, both supraorbital regions swollen, red and exquisitely tender. Patient semi-comatose. Temperature 102°. Operation advised at once. Willingly consented to.

Left side opened in old supra-orbital cicatrix; bled very freely; found several large sequestra and entire anterior plate necrotic. Disease extending around and behind left external orbital angle. On following up found necrosis nearly to coronal suture, and large pocket of pus between periosteum and bone. After removing anterior plate, found dura exposed for area about one inch square, three-quarters of an inch above supraorbital ridge, near median line, covered with granulations and bulging somewhat. Left frontal had ruptured into right and all anterior plate was necrotic. First incision continued across bridge of nose outward over right eyebrow to external angle of right eye; entire flap turned back. All anterior plate removed from right sinus; part of nasal bone had to be removed, but was able to save supraorbital ridge. Dura also exposed on right side. Ethmoids now thoroughly curetted on both sides and sphenoids examined and curetted.

Now, having curetted apparently healthy bone in all directions, right side was entirely closed with interrupted silk worm gut sutures, with drain into nose. Left side only partially closed, several counter drains made and large wet saline dressing put over both eyes and head. Patient left table in pretty weak condition. Put on Murphy drip, with coffee and glucose.

December 31. Next morning was greatly surprised to find patient has passed good night and in good condition; claims has had less pain than any time since trouble began; dressing changed. Smear taken, also blood for Wassermann; urine sent to laboratory for examination. Patient put on large doses of urotropin.

January 2. Wassermann negative. Smear negative for T. B. Probably mixed infection, streptococci and staphylococci; urine showed few hyalin cast. Wound dressed and irrigated.

January 6. Wound dressed and irrigated daily. Patient very cheerful, now one eye out of bandage, temperature ranges from 98.8° to 99½°; left side healing nicely, but right continues to discharge freely, and bone, on probing, feels necrotic. Blood examination negative for plasmodia malariae. Differential count: Neutrophiles, 82; small lymphocytes, 13; large lymphocytes, 5.

January 19. Autogenous vaccin (streptococcic, chiefly), made by Dr. Harris, given.

January 20. From a freely discharging wound of yesterday, find practically no discharge, only little bloody serum. Patient had quite a reaction: nausea, pain over body, chilly sensations, slight elevations of temperature.

January 21. Wound still dry and patient feels fine and wants to go home.

January 26. Wound again discharging, and second dose vaccin given.

January 27. Only slight reaction, wound again cleaner and less discharge.

January 28. Skiagraphs, made by Dr. Henriques, show very extensive necrosis of right side, with several large sequestra; patient complaining of great deal of pain. Second operation advised, readily consented to.

Blood count: Total white, 31,080. Differential count: Neutrophiles, 94; small lymphocytes, 4; large lymphocytes, 2.

January 31. Wound opened in old cicatrix; bleeds very freely; found mass of granulations covering large mass of exposed dura in frontal region; frontal and occipital bones on right side loose and necrotic; all posterior plate necrotic, and numerous sequestra removed. Patient took anesthetic badly, and as necrosis was too extensive to remove, large drainage tubes were inserted and patient sent back to bed.

February 1. Patient rested fairly well, and claims feeling much better; confident will soon return home. Relatives advised that there was no chance of recovery.

February 2. Complaining of pain and twitching in left arm; nauseated and very nervous.

February 4. At wife's request patient allowed to be taken home in country.

February 7. Letter from patient's wife states left arm entirely paralyzed, but does not suffer any, and confident is going to get well.

February 10. Patient died without any suffering.

This is a most extensive case of osteomyelitis of skull the writer has been able to find record of. Nearly all cases of osteomyelitis, especially of streptococcic origin, are fatal germs traveling in small lymph channels in diploe of bone, gradually involving entire skull.

To me the case is very remarkable, in that with all involvement, exposure and trauma of dura, he did not have any signs of meningitis, and only at last part of illness did patient show any sign of brain irritation. Also illustrates seriousness of sinus trouble and cautions us to give early and careful treatment of all cases with suppurating sinuses.

#### DISCUSSION.

DR. ADOLPH HENRIQUES: I took the X-ray plates in this case. I was surprised at the extent of the disease. We do not often find osteomyelitis of the flat bones, but it is common in the long bones. We seldom find osteomyelitis so extensive.

DR. E. D. MARTIN: This case is most interesting. I had a

similar case resulting from a bullet wound. The ball destroyed the left eye, necrosis resulting from infection destroyed half of the frontal plate and as much of the left parietal bone, yet the woman recovered and showed no ill-effects beyond the loss of the left eye.

DR. C. G. COLE: I helped Dr. Patton at these operations. The first was very extensive. We found a great deal of what we thought was necrotic bone, not recognizing it as osteomyelitis. We curetted the bone and the patient did very well for a time. The infection began to spread and soon involved the whole skull. It was remarkable that no meningeal complications developed. At the first operation we exposed two or three inches of the dura. At the second operation we exposed more dura and it was also somewhat traumatized. There were no symptoms of meningitis until near the end. In other cases, with a mild infection and a smaller area of the dura exposed, we get meningitis. I would like to have the pathologists explain this.

DR. F. M. JOHNS: I would like to ask when the infection began. I notice the X-rays show very bad teeth. Could not the infection have spread from the teeth to the antrum, thence to the ethmoid cells?

DR. PATTON (in closing): This patient had amblyopia after the first operation. I think the osteomyelitis began just after the Killian operation. In answer to Dr. Johns, I will say that the antrum was washed out and was found to be healthy. The diploë began near the frontal sinus, so I think the infection most probably came from the sinus.

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## ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF LUNG ABSCESS.\*

By I. I. LEMANN, M. D., AND URBAN MAES, M. D., New Orleans.

There can be no debate between surgeon and physician that abscess of the lung is to be treated surgically, as are all abscesses elsewhere, that is, by incision and drainage. This general statement is to be qualified in two particulars, however. First, the abscess must be accurately located; second, the location of the abscess must be such that it is accessible for the surgical procedure. As far as

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the first qualification is concerned, we must remember that at times the physical signs are misleading and that the cavity may not be exactly in the site made out by the interpretation of these signs, but may be a little above or below, or to one side. We would quite agree, however, with Robinson,<sup>1</sup> who "has come to prefer the responsibility of finding the abscess rather than risk operation at the late stage when the patient's resistance has been lowered during prolonged observation and repeated negative exploration." Of course, in recent years fluoroscopy and skiagraphy have come to be of greatest assistance.

The second qualification is, however, much more important and in it must be found the chief field of usefulness of the method we present to-night. It has been the fortune of one of us (Lemann) to see in the last few years, four abscesses of the lung. One of these is a bronchiectasis in a fibrosed lung and is located in the lower lobe of the left lung. The other three were acute abscesses, following croupous pneumonia. The location of all three were identical, namely, in the right infra-clavicular space. Each one of these has been submitted to a different surgeon and operation has been declined by the surgeon in each instance, because of the inaccessibility of the region. We may say that the diagnosis of the location of the cavities, as made by physical diagnosis, was confirmed by skiagraphs. Under these circumstances the idea occurred to one of us (Maes) that here was presented an ideal field for the application of the artificial pneumothorax method of compressing the lung and thus causing the collapse of the abscess cavity.

While the suggestion of the use of artificial pneumothorax to compress the lung in cases of abscess or bronchiectasis has been made some years ago, the method does not seem to have met with the recognition which it deserves. A search of the literature for the past seven years has revealed only five references, several of which have not been available to us.

Fontanini (one of the originators of the pneumothorax method for the treatment of tuberculosis), in 1910,<sup>2</sup> reported a case of lung abscess occurring after croupous pneumonia and persisting for six years rebellious to all measures. It was then cured in a few months by compression and immobilization of the lung by injection of nitrogen and the cure had persisted for three years. This case, in addition to Fontanini's other experience, confirms the advantage of frequently repeated small injections so as to keep up

immobilization. G. Izar,<sup>3</sup> in 1913, reports a cure of abscess of the lung by pneumothorax. Frank and V. Jagic<sup>4</sup> also reported great improvement in a case of bronchiectasis.

A Schmidt,<sup>5</sup> on the other hand, reporting in 1908 the results of artificial pneumothorax in eight cases of bronchiectasis, says that these results were negative, the injury of lung tissue being too severe for repair by this means unless the compression is applied earlier.

Our patient is still under treatment and can be reported only as improved, not cured. We have decided to show her to you to-night and to relate her case even at this stage in order to stimulate interest in the method. So little is accomplished by the usual procedures of inhalations, tracheal instillation, posture and the like that the addition of this compression method to our armamentarium is welcome indeed in inoperable cases.

Henrietta T., colored female, 11 years old, first consulted Dr. Lemann on October 11, 1913. She was brought by her mother because she had no energy and was weak. She had been having fever since September 15, 1913. All the spring of 1913 she had had tonsilitis, and June 9, 1913, her tonsils were removed at the Charity Hospital. After that she never regained her strength. On June 29 she went out into the country, and there was taken with a pain in her right side and with fever. This attack was pronounced by the doctor pneumonia and pleurisy. She got better after she "vomited" a large amount of foul-smelling pus, about August 20. From this time she was relatively well until September 15, when she began again to have fever, and the cough and expectoration which had continued now increased.

Physical examination, October 11, showed a well-developed, fairly well-nourished child. Temperature 102°. Near the apex of the right lung, in the infravicular region, there were present the following signs of cavity: Flatness, cracked-pot sound, cavernous breathing and whispering pectoriloquy. Around the cavity was an area in which subcrepitant rales could be heard. Sputum examination, which was repeated a number of times, showed no tubercle bacilli, but many streptococci. Skiagraph confirmed the diagnosis of cavity.

From October to January the patient went through a number of cycles of fever, followed by free expectoration of foul smelling pus, which always caused the temperature to drop. The temperature was septic in type and ranged from normal to 103°. The febrile attacks would last from a couple of days to ten days or more. The intervals were equally irregular. During January she was practically afebrile. In February she was weak, had no appetite, but had very little fever. In the first half of March she had again a cycle of fever, followed by free drainage. We began the pneumo-

thorax compression in the latter half of March. At first we injected only 500 c.c., but latterly we have injected as much as 1000 c.c. of nitrogen at one sitting. Our aim has been to keep the lung constantly collapsed by injections every week or two. As a result of the injections we are able to report that she has had no febrile attack since the beginning of the treatment, that the cough is less, the expectoration greatly diminished and that the patient has greatly improved as to strength and appetite. You may see by examining her now how hyperresonant the right side of her chest is as a result of the last injection of 100 c.c. made two days ago. We also show you here the skiagraphs made at various stages of the treatment. The last one shows a complete compression of the right lung with displacement of the heart to the left.

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#### DISCUSSION.

DR. J. T. HALSEY: I wish to report a case of pneumothorax for tuberculosis injected by Dr. Maes. The patient was a young man, who failed to respond to the usual treatment and was losing ground steadily. The outlook was very favorable and we decided to try artificial pneumothorax. In one sense it was a favorable case for this treatment, as it was confined to one lung, almost the whole of the left lung being involved. This was confirmed by X-ray. We injected 450 c.c. of nitrogen; five days later injected 700 or 800. We got good compression. The expectoration diminished at once from about six ounces per day to less than one ounce. Cough almost disappeared and the temperature dropped to normal. He previously had been having temperature 101° to 103°. After the second injection he had fever for a time, then for four weeks had normal temperature. He did very well. This past week he is on the down grade again, with temperature as high as 103°. I cannot say that he will get well, but he has been improved by the treatment and now he has a chance.

DR. ADOLPH HENRIQUES: There is no doubt that the method is of great value in the treatment of selected cases of tuberculosis. The X-ray prints shown are very interesting, for I think they show involvement of the mediastinal pleura. After injection the heart



is pushed over and there is some compression shown of the left lung. I think the pressure should be regulated by the pressure in the left lung.

DR. PHILIP ASHER: I want to ask about the nitrogen that was used? Was it furnished by the Kny-Scherer Company, or made locally? If so, how was it made? I believe the bad results sometimes obtained (mentioned by Murphy, for example) may be due to the use of impure nitrogen.

DR. WALLACE J. DUREL: Brown and Bullock gave us their experience with artificial pneumothorax at the 1913 meeting of the National Association for the Study and Prevention of Tuberculosis and at the Sanatorium Society, and these experiments will tend to prevent others from becoming too enthusiastic. Some say that artificial pneumothorax should be used in incipient tuberculosis, as well as in advanced pulmonary tuberculosis; but, remember, we can get good results from other methods in incipient and moderately advanced cases. The method of lung compression is somewhat dangerous and has caused deaths. It is very rare to find unilateral pulmonary tuberculosis. We practically always have the disease in both lungs; however, I am going to try the artificial pneumothorax method at the Charity Hospital, and in some cases of tuberculous abscess in my private work. From a review of the literature, I cannot find much encouragement as to the end results. Pleurisy with effusion seems to be a sequella in 30 per cent. of cases. We get ups and downs in all tuberculous cases. I do not want to discourage the use of the method, but let us go slow, remembering the fact that the treatment has its dangers, and that the end results are not always quite satisfactory.

DR. W. H. SEEMANN: I had a case of broncho-pneumonia some years ago that ran temperature for quite a while after he should have been well. I found dullness and diagnosed empyema. The child recovered by expectorating a lot of pus. I want to learn something about the symptoms of pulmonary abscess.

I saw many cases treated by this pneumothorax method in Colorado Springs and the doctors there are not very enthusiastic about it, but they use it in some cases, such as hemorrhage, and the temporary benefit gives the patient better chance. It is not a remedy, but an aid of great value. In regard to X-ray, would say that a St. Louis physician reports that he never uses the method without the use of X-ray as a guide.

DR. C. L. ESHLEMAN: If all cases do as well under the treatment as these, it ought to be a good thing. I have some patients now upon whom I would like to try it.

DR. I. I LEMANN (in closing): I wish to say a few words about our experience in the use of the nitrogen injection in a very advanced case of tuberculosis. We attempted this not with any idea of cure, but simply to relieve the cough, if possible. When the needle was first introduced there was no movement of the manometer, then a small negative pressure developed. Suddenly, however, the patient coughed and the manometer moved up on the positive side as far as it could go, showing that the lung had been punctured. The needle was at once removed, but as a result of the lung puncture there developed an extensive subcutaneous emphysema, as well as a pneumothorax. This is one of the dangers of the method. In fact, we cannot say that the method is not without other dangers and I hesitate to agree with Dr. Maes that it should be employed in the very early cases of tuberculosis for we know that the vast majority of such cases do very well when left alone. At present I would advocate its use only in cases with persistent hemorrhage or in more advanced cases with toxemia.

In reply to Dr. Secmann's question, I will say that I think abscesses of the lung are often unrecognized and sometimes diagnosed empyema. Abscesses of the lung are not exceedingly common. We have not seen a case in the Touro Out-Patient Clinic for the last six or seven years, although we have seen about 16,000 patients in that time, and I have seen but three cases in my outside work in the last four years. The history of the usual case of lung abscess shows that the condition lasts longer than we think—often three or four years.

DR. URBAN MAES (in closing): The recent article of Voor-sanger (*Journal A. M. A.*, Vol. LXII, No. 19) covers in a brief and comprehensive way the more important facts in regard to the treatment of pulmonary tuberculosis by artificial pneumothorax. His deductions are drawn from 539 cases collected from the literature, including 14 of his own.

We must admit in face of the evidence that artificial pneumothorax has benefited many cases where a cure was impossible. Knopf suggests that only the cases that do not yield to other well recognized methods of treatment should be subjected to artificial pneumothorax. It seems more rational to suppose that the early

unilateral cases without adhesion would be most amenable to compression. Bilateral involvement is not a contraindication, however, for such patients show improvement in the uncompressed side, and the general bettering of symptoms allows the patient to better tolerate the disease in the uncompressed side. Murphy has cited cases where, after cicatrization in one side, the other side was treated with equal success.

As to the reasons for improvement we have but to remember some well established facts. It has long been a surgical law that uncomplicated tuberculous disease recovers by cicatrization and encapsulation if we can destroy function in a part. The plaster jacket, the various braces and Albee's operation cure Potts' disease. The plaster spica does the same in the tuberculous disease of the hip. Short circuiting cures intestinal tuberculosis. An artificial anus cures rectal tuberculosis and so on. The usual lesions which are not benefited by treatment are tuberculosis of the lymph nodes and kidney. We cannot limit functional activity here. The lung comes partly in this class, but by artificial pneumothorax we have a means of splinting the lung, and allowing cicatrization to take place. Other factors are possible, the driving out of venous blood and occlusion of the lymphatics, thus preventing diffusion; a better arterial blood supply to a collapsed lung, and a lessened area for the absorption of the toxins which are responsible for the marasmic condition of these patients.

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## ON THE ORIGIN OF THE BLOOD CELLS AND THE DIFFERENTIATION OF THE LEUCOCYTES.\*

By H. WINDSOR WADE, M. D., New Orleans.

The present symposium on blood was not undertaken with the idea of attempting exhaustively to cover the field of hematology, but rather to present, as briefly and clearly as possible, the facts which are of every day importance to the modern, scientific medical man. To some it will be an old story, but it is our hope that the tale is one which, even though twice-told, is still of interest.

In dealing with the origin of the blood cells, I shall not attempt to review the confusing medley of theories and contentions as to

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their histogenesis, but will, rather, try to outline the ideas most generally held in this country and taught in this community.

**ERYTHROCYTES.** In normal blood there is but one type or variety of red or hemoglobin-bearing cell. This, the erythrocyte or normocyte, is a circular disk when viewed vertically, but somewhat thimble or cup-shaped on cross section. It is composed of a cell membrane, enclosing a highly specialized hemoglobin—containing protoplasm. The membrane may be seen as a “shadow” in hypotonic media. In the fresh specimen, the cell is seen to have a greenish-yellow color, but as ordinarily stained (Wright’s stain) it is a clear, bright red. There is no nucleus demonstrable, this property making the erythrocyte an unique cell.

In size the individuals are quite uniform, averaging 7.5 microns (75/10,000 m.m.). Occasionally one encounters very small cells, microcytes, thought to be formed from normocytes by loss of fluid. Of more importance, are the large red cells, the macrocytes. These may develop from normocytes by imbibition, but usually are formed in the marrow and are indicative of disturbance of blood generation. The manner of their formation will be indicated shortly.

The place of origin of the blood cells in general and red cells in particular varies in the life of the individual. In very early embryos red cells only are seen. These are formed from the same mesoblastic cells that produce the blood vessels themselves. Later, when the embryonic liver appears, this organ becomes the source of supply of both red and white cells. The spleen generates red cells to a less extent, but that it may do so, even in adult life, by marked reversion to embryonic type, has been proven by study of numerous cases.

The bone marrow, however, is the main source of supply in the fetus and the only source in the normal adult.

The identity of the primary ancestral cell of the erythrocyte is still a matter of controversy. For diagramatic purposes, it is perhaps best represented as a shadow. From it arises the primary megaloblast (2). By division this cell produces the young erythrocytic megaloblast (3), which usually at once divides and differentiates into the young normoblast. This now ripens, a process which has to do with the disappearance of the nucleus. Occasionally, when there is an unusual drain on the blood-cell forming tissue, megaloblasts ripen directly—that is, without the formality of passing through the normoblast stage, thereby giving to the blood stream

the large red cell, the macrocyte or megalocyte. Under such conditions, there are usually found nucleated red cells or normoblasts as well, these released on account of the demand for cells. In especially severe cases the still more embryonic cell, the megaloblast itself, may be found in the blood stream.

Whether the ripening of the red cells occurs by fragmentation of the nucleus and extrusion of the debris, or by a lysis or solution of the blue-staining chromatin element of the nucleus must be left undiscussed. Probably both processes occur, influenced by changing conditions of the individual. Some hold that the latter process is the usual one and that the unbroken, but ordinarily invisible, nucleus remains as a nucleoid, later to be seen in the blood as a platelet.

Platelets are small, round or oval bodies 2 or 3 microns in diameter, seen in clumps or masses in all normal bloods, sometimes in great numbers. They are, as has been stated, held by some to be derived from red cells; that they are the extruded nucleoids of these cells. Others think them broken-off pseudopodia of ordinary leucocytes.

J. Homer Wright has quite conclusively shown them to be derived from the protoplasm of certain peculiar, large bone-marrow cells, the megalokaryocyte, and that they have some essential part to play in blood coagulation, especially in thrombus formation.

*Leucocytes:* The white blood cells, or leucocytes, are present in the blood in a ratio of but one to six hundred reds. There are, however, three distinct classes of leucocytes. These are:

I. *Granulocytes:* Neutrophilic; Eosinophilic; Basophilic.

II. *Lymphocytes:* Large; small.

III. *Large mononuclear leucocyte* or *endothelial leucocyte* (including the "transitional cell").

I. *Granulocytes:* This group is derived from bone marrow cells. According to the scheme of derivation used herewith, the embryonic cell, which gives rise to the megaloblast and so to the erythrocyte, may, on the other hand, follow a second line of differentiation and give rise to the cell from which the leucocytes are found. The cell thus produced is the myeloblast, a large, basophilic, mononucleated cell, which is not encountered outside of the marrow. Although the protoplasm of this cell does not contain granules, the cells to which it gives rise are granular. These are the myelocytes, of three types, according to the staining properties of their granules.

The most common is the neutrophilic myelocyte, having a somewhat lobulated, dimly outlined nucleus, which takes a light blue color with Wright's stain. This body is often somewhat obscured by very numerous small purplish-staining granules within the protoplasm.

The eosinophilic myelocyte is less commonly found. It differs mainly in the fact that the granules are larger and take a clear red stain.

The third type or basophilic is the rarest of the myelocytes and is characterized by large granules which stain a dark blue to black.

Myelocytes are not common to the blood stream, although a few are sometimes found in severe or long standing infections. Usually, however, they are encountered only in myelogenous leukemia.

These three myelocytes go to form the granular leucocytes: (1) The polymorphonuclear leucocyte or neutrophile leucocyte, (2) the eosinophile or acidophilic leucocyte and (3) the basophile or mast cell.

The neutrophile is by far the most common leucocyte of the blood. It usually is about one and one-half times the diameter of the red cell. This varies somewhat with the age of the individual cells, the younger being smaller and more compact, the older larger, less firm and more easily ruptured. The protoplasm is thickly dotted with very fine, light-purplish granules, upon the background of which the irregular, lobulated, dark-staining nucleus usually stands out distinctly. The eosinophile, on the other hand, has fewer but larger granules, which take a bright red stain. If, in making the smear the cell is broken, the individual granules stand out separate and distinct. The nucleus is less irregular and usually is seen to be bilobed. At times they seem to have two distinct nuclei.

The basophile is not common in the circulating blood and is ordinarily of little importance. It is characterized by its very dark-staining granules, usually obscuring the nucleus.

The neutrophile is the phagocyte of Metschnikoff, and is endowed the power of ameboid motion. It is the first cell to respond in acute infections and is found in enormous numbers in the tissues and vessels about an acutely infected area.

The eosinophile appears in certain tissues after the acute infection has somewhat subsided. It tends to collect in chronic infec-

tions of certain tissues, notably in the appendix and in the Fallopian tube. In the blood stream it is increased in a few conditions.

II. *Lymphocytes*: The second group of cells, the lymphocytes, is formed in the lymph-adenoid tissue, wherever it may be, in the lymph nodes, thymus, spleen, intestinal follicles and possibly in the bone. The primordial cell, identical with or closely related to that which initiates the erythrocyte and the granulocyte series, here develops by multiplication and differentiation into a cell which gives rise to the lymphoblast. The lymphoblast can be seen in the germinal centers of lymph follicles. This cell is, in turn, the progenitor of the lymphocyte. Those found in the circulating blood may be divided, somewhat arbitrarily, into large and small lymphocytes, according to size. This division is sometimes useful in diagnosis. The nucleus of the lymphocyte is round, occasionally kidney-shaped, and is basophilic, although usually somewhat less so than is the protoplasm.

In tissues fixed by Zenker's solution, they are seen to have a peculiar "cart-wheel" arrangement of the nuclear chromatic. In smears the protoplasm is smooth, shows at times a few fine granules of an odd type and is usually very scant, often making a narrow, clear blue rim about the nucleus. In an inflammatory lesion of sub-acute or chronic nature these cells are found together with cells which have nuclei of similar appearance, but much more abundant, basophilic protoplasm. The latter are the plasma cells, thought by some to be a different cell, but now understood to be a transformed lymphocyte. These are always found in chronic inflammatory tissues, associated with lymphocytes and are occasionally, although early seen in smears from the circulating blood.

III. *Endothelial Leucocyte*: The third type of cell, the endothelial leucocyte, is a much-named body. The term most frequently applied is "Large Mononuclear Leucocyte," and this is the name under which most of us here are familiar with it in our differential counts. Splenocyte and monocyte are words seldom used.

Endothelial leucocytes are large hyalin cells, the largest cells found in normal blood, and show a considerable variance, both in size and shape. The nucleus usually is round, but all grades between this and a distinct horse shoe may be found. Individuals of the latter shape have long been called "transitional cells," since they were thought to represent the transition stage from the round nucleated cell to the polymorphonuclear leucocyte. This idea of

the origin of the polymorphonuclear has been abandoned and the so-called "transitional cell" is no longer classed with the polys.

The nucleus of the endothelial leucocyte usually takes rather a light blue stain. The protoplasm is abundant and moderately basophilic. Its appearance has been well likened to that of ground or frosted glass. The limit of protoplasm is often indefinite, suggesting a lack of cell membrane. It may at times resemble and be confused with certain forms of the lymphocyte on the one hand, or of the polymorphonuclear on the other. Much depends upon the observer and his appreciation of the action of the stain which he has used.

The endothelial leucocyte is derived from the lining endothelium of the spleen, vessels and lymph nodes by proliferation of the endothelial lining cells. It is essentially a phagocyte and responds to such infections as tuberculosis, glanders and leprosy. It is seen about foreign bodies, carbon pigment, fatty acid crystals and similar materials. Fusion of several individuals gives rise to the foreign body giant cell and they probably form the giant cell of tuberculosis as well. They multiply in the tissues, by mitosis at times, but usually by amitotic division. In typhoid fever, they, by their massing, cause the splenic tumor and the enlargement of the abdominal lymphadenomatous tissues. Here they display the peculiar property of being very phagocytic for red blood cells and other leucocytes. Although they are increased in number in the blood stream in typhoid fever, the majority of the proliferated cells are held in the spleen and mesenteric lymph nodes.

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## THE DIFFERENTIAL LEUCOCYTE COUNT AND ITS INTERPRETATION.\*

By FOSTER M. JOHNS, M. D.,

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New Orleans.

INTRODUCTION: In a paper intended as a review upon such a well known subject as the above, I will only mention the more important facts, and attempt to point out certain common errors of technic as may vary the results appreciably. In the classification of the various white cells, I have selected a classification that appears to me to be the simplest, and that, at the same time, is compatible with practical work.

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*Technic of Making Blood Smears:* To be examined properly, blood must be spread out to form a relatively thin film upon the slide. Slides must be absolutely clean of grit or grease from fingers, else the blood will not spread evenly and staining will be interfered with. A smear must be of a proper thickness, which is impossible to describe, but is achieved by the making of one having varying thick and thin places. In determining a differential leucocyte count, it is extremely important that the distribution of the cells be not disturbed in making the smear. Leucocytes vary in size, and if a very thin smear is made the larger ones are often dragged to the end of the smear. An examination of the end of the slide used to make such a smear will also show many of the larger cells that have been actually dragged away from the smear. Slides made with a piece of cigaret paper are also often impossible of examination, due to an inability to control the thickness of the smear, and the adhering of leucocytes to the paper.

*Stain:* All slides must be stained for accurate determination of the different leucocytes. A good polychrome stain that gives three colors with their variation is by far the best. Such a stain is the ordinary Wright's blood stain. In using such a stain care must be taken not to allow a heavy purplish precipitate over the entire slide by always diluting with water within the first minute after the stain has been placed on the slide. Such a precipitate very seriously hinders the differentiation of certain cells. Again poorly stained slides always give inaccurate results. Make it a rule to only count slides in which the nuclei of the mononuclear cells are stained a bright purple and the protoplasm a distinct blue.

*Technic of Counting:* Here I wish to emphasize the importance of only counting where the leucocyte distribution has not been disturbed. In general, a film of from five to eight red blood cells thick is about the proper thickness. Fields of one red cell depth show the leucocytes flattened out and very easy of recognition for study, but dragging of the larger cells is always present in such fields, and an accurate count is never obtained. If the smear begins with a very thin place for any appreciable length, an accurate count cannot be made in any part of the slide, no matter how thick it may be. Even under the very best of conditions there must be some variation from the actual distribution of cells in the circulation, and it takes an average of no less than a three hundred cell count to give a practically correct differential count.

*The Different White Blood Cells:* These are divided into the two main classes of mononuclear and polymorphonuclear cells. The mononuclear cells consist of lymphocytes and endothelial leucocytes. The polymorphonuclear cells consist of the neutrophilic, eosinophilic and basophilic leucocytes. A brief description of these cells, and their origin, is as follows:

*Lymphocytes:* Origin, lymphatic tissue. Size, from that of red cell to about twice their size. Nucleus, round or oval. Protoplasm, relatively small in amount.

*Endothelial leucocytes:* Origin, endothelial lining of the blood vessels. Size, from the largest lymphocytes to about twice their size. Nucleus, oval or irregularly horse-shoe shaped. Protoplasm, relatively large in amount, and may contain many almost invisible granules.

*Neutrophilic leucocytes:* Origin, bone marrow. Size, about that of the larger lymphocytes. Nucleus, from an irregular horse-shoe shape to a very irregular shape. Protoplasm, filled with innumerable, small, irregular sized granules.

*Eosinophilic leucocytes:* Origin, bone marrow. Size, a trifle larger than the neutrophile. Nucleus, usually horse-shoe or of a bi-lobed appearance. Protoplasm, studded with many large, coarse granules of about the same size.

*Basophilic leucocytes:* Origin, bone marrow. Size, a trifle smaller than the neutrophile. Nucleus, roughly horse-shoe shaped, and very faintly stained. Protoplasm, free from granules. Cell wall having a few large granules, somewhat irregular in size, and giving the appearance of the granules being around the edge of the cell.

The normal adult percentage of the different cells entering into the differential count is as follows:

Lymphocytes. . . . .	20-30%
Endothelial leucocytes. . . . .	1- 8
Neutrophilic leucocytes. . . . .	60-70
Eosinophilic leucocytes. . . . .	1- 4
Basophilic leucocytes. . . . .	- 1

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*Physiological Variation:* In children there is always a greater activity of the lymphatic tissue than in adults, with a consequent

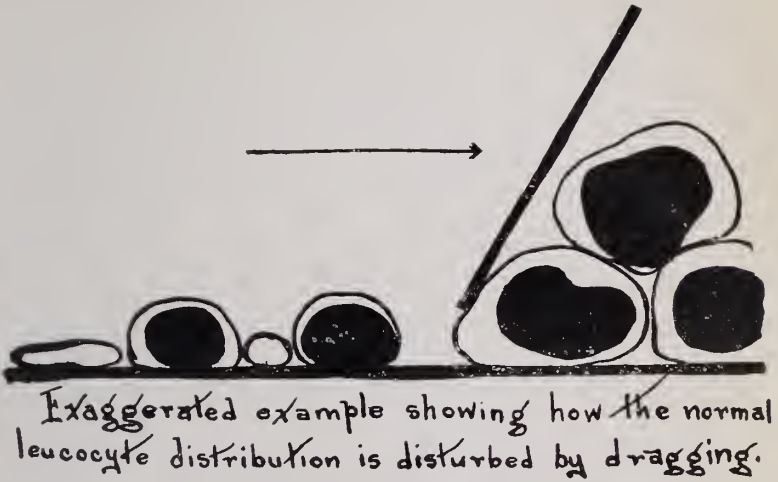


FIG. 1. DIFFERENTIAL LEUCOCYTE COUNT.—DR. JOHNS.

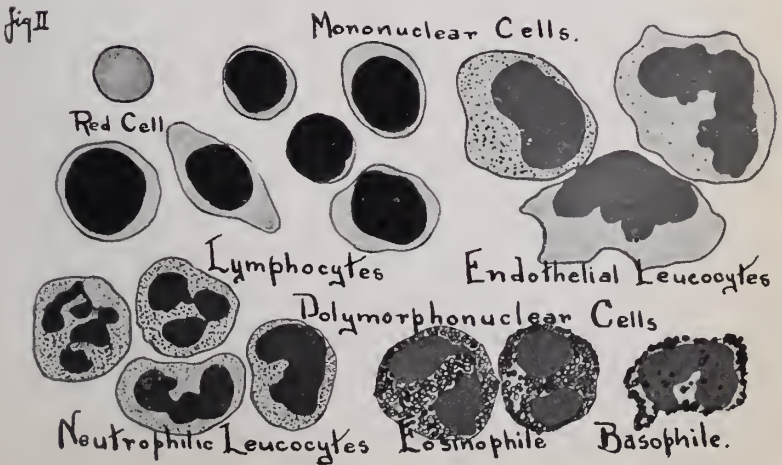
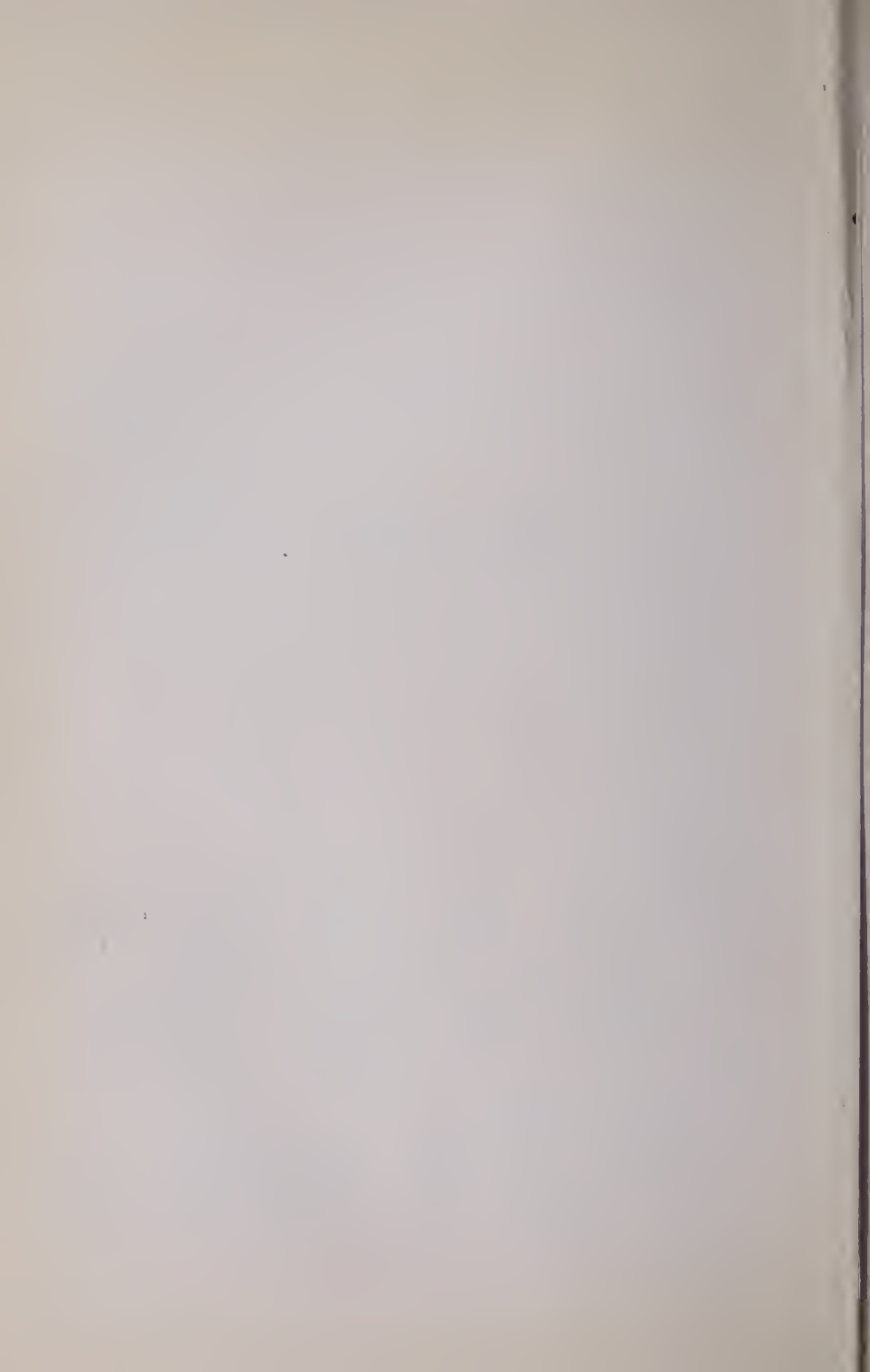


FIG. 2. DIFFERENTIAL LEUCOCYTE COUNT.—DR. JOHNS.



increase of the lymphocytes to as high as 60 per cent. This count gradually approaches the adult count as puberty is reached. Males have a slightly higher neutrophile percentage than females, which latter is usually about 60 per cent. Females have an increased endothelial leucocyte count of from 8 to 15 per cent. during pregnancy. This is explained by the changes occurring in the uterus, which is a very vascular tissue.

*Abnormal Variation:* The lymphocytes are increased in such diseases, not pyogenic in nature, as affect the lymphatic glands. Such diseases as syphilis and uncomplicated tuberculosis often give an increase in the lymphocytes of from 40 to 50 per cent., and sometimes higher.

An increase in the percentage of the endothelial leucocytes is usually found in diseases causing an increase in size of such vascular organs as the spleen or thyroid gland. Typhoid fever and malaria not only cause a relative increase of such cells by decreasing the number of neutrophilic leucocytes, but give an actual increase by the enlargement of the spleen. The percentage of these cells in these instances usually runs from 12 to 15 per cent.

The neutrophilic leucocyte is the cell that is called out of the blood stream to fight the ordinary pyogenic or pus infections. In such infections, depending upon the amount of septic absorption which stimulates their production, we may have an increase in the circulation up to 95 per cent. An increase of these cells above 85 per cent. always means a pyogenic infection with septic absorption somewhere in the body.

The eosinophilic leucocytes are always increased in any of the anaphylactic reactions from any cause whatsoever. Such diseases as asthma, hay fever, serum disease, and reactions from intestinal putrefaction with absorption of toxins. They are also increased, probably from the same reason, in the presence of some few of the intestinal parasites, such as hookworms and strongyloides.

The basophiles occur in such small number that to estimate a correct percentage many hundreds of cells would have to be counted, which is usually impracticable. At present there is no especial indication resulting from a determination of their increase or decrease.

In conclusion, I wish to emphasize the importance of this examination. It not only almost immediately places the disease as of pyogenic or non-pyogenic nature, but often points out the lymphatic

diseases, and allows, at the same time, a study of the red cells for either diseases or conditions per se of that tissue. The so-called "negative reports" presenting a practically normal count are just as valuable as one actually indicating, we will say, for example, a pyogenic infection. The differential count is also absolutely necessary to the total count. The total normal count is from 3 to 8000 leucocytes. Now 8000 leucocytes to a patient whose normal is 3000 gives an "operating" leucocytes when combined with clinical findings such as fever. Such a leucocytosis would only be shown by the total count plus a differential count, showing the neutrophiles increased to 85 to 95 per cent.

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## ON THE TOTAL RED AND WHITE CELL COUNTS AND THE HEMOGLOBIN AND COLOR INDEX ESTIMATION.\*

By JAS. C. COLE, M. D.,

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My only apology for having nothing new to say on a subject so old is to be found in that I know nothing new to offer.

We all appreciate the fact that the estimation of the total number of red and white cells, the reading of hemoglobin and the determination of color index is the work of the skilled laboratory worker, because of the time necessary to perfect the difficulties of technic, and not to be attempted by busy surgeons, specialists or general practitioners.

At the same time it might not be useless to add that before the specialist is prepared to properly interpret the findings of the skilled laboratory worker, he cannot appreciate and appropriate to advantage the information obtained from a blood picture.

In view of the fact that results obtained from total blood counts are at best only approximately correct, it follows that the work of the unskilled man is not dependable and will contribute little toward reaching a diagnosis in obscure cases daily falling into the hands of specialists and general practitioners.

On the other hand, it is not the office, I believe, of the laboratory man to suggest a diagnosis, since diagnoses are sanely made by associating laboratory and bedside findings.

Recognizing, then, the necessity of knowing the normal, the

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doctor is prepared to begin to understand abnormal conditions in his blood diagnosis

A case presents, showing a marked leucocytosis. Instead of a normal picture of about 7,500, we find 20,000 white cells per cubic millimeter. This, together with a differential white cell count, should prove at least helpful to the doctor familiar with the pathology of the disease he claims to treat. And while not conclusive, is strongly suggestive, in the hands of a doctor trained to interpret blood findings. We would certainly not suspect such a patient to be infected with the typhoid bacillus or the plasmodium of malaria, but most probably, if other findings were in keeping, some pyogenic organism.

The custom many specialists and general practitioners have adopted in attaching such great importance to a total leucocyte count with an utter disregard for a differential white cell count is pernicious. The greatest aid, then, we hold, in interpreting total leucocyte counts, is to be found in those cases in which we also have at hand a differential leucocyte count.

I have in mind a case arising in one of our nearby cities, upon whom in all probability no blood picture was made, two eminent physicians recommended surgical interference, when a mere glance at a stained specimen of blood would have given a clue to a diagnosis, and, together with a total white cell count, sufficient evidence could have been found to eliminate any possible thought of surgical interference. The case was one of myelogenous leukemia.

In like manner an estimation of total red cells, without a hemoglobin reading and determination of color index, is of comparatively little value and while the estimation of total red cells is again the work of the laboratory man, every practitioner, surgeon, as well as internist, should be provided with some apparatus for reading hemoglobin and a working knowledge of its use. The Tallquist scale is inexpensive and for practical purposes is sufficiently accurate.

The estimation of total red cells, the determination of hemoglobin and color index is of greatest significance, perhaps, to the internist in his diagnosis, prognosis and treatment of anemias, primary and secondary. But here again a total red cell count without a stained specimen is of little aid. Any variation from the accepted normal picture of 5,000,000 reds, hemoglobin of 100 per cent. and color index of one, in the normal adult individual, is

or should be significant to the modern doctor in his diagnosis and treatment of disease. By color index, to put it simply, is meant the average proportion of coloring matter, or hemoglobin, each red cell carries, accepting 5,000,000 reds and 100 per cent. as normal for hemoglobin would give a resulting color index of one, found by dividing the hemoglobin percentage by the red blood cell percentage.

To illustrate, we have 3,000,000 red cells, hemoglobin 60 per cent. The patient's reds are 60 per cent. of normal, while the hemoglobin is 60 per cent., resulting again in a color index of one. In other words, both red cells and hemoglobin are noticeably reduced, yet lowered in the same ratio, thereby each red cell still carrying its normal amount of hemoglobin.

Any very marked reduction in total reds with a corresponding normal, or slight decrease in hemoglobin, would result in each red cell showing more than its rightful portion of hemoglobin, or color index of one plus, whereas a low hemoglobin and a normal red count would mean a small amount of hemoglobin to be distributed among a normal number of reds with a color index less than one.

The general law which holds that color index of one plus is suggestive of a primary type of anemia, while less than one of a secondary anemia, is with certain limitation, most valuable in diagnosing and prognosing severe anemias. Chlorosis is a noted exception, being primary in that we are unable to ascribe a cause for the anemia, although not showing a color index of one plus.

Again we find it necessary to have a stained smear with clinical signs and symptoms before we can properly classify anemias.

It will be noticed that while I have argued that total blood work, if dependable, should be done by trained and practiced laboratory workers, I have, at the same time, discountenanced the interpretation of laboratory men, without some history and bedside notes of the case in question. What, then, are we to offer as an avenue of escape?

The great trouble, gentlemen, is that until recent years medical colleges, instead of trying to train students to be doctors, have spent four years' time in teaching men, all, to be abdominal surgeons. As a result, we can now see the classes growing from year to year, of men who have been practicing ten or fifteen years, coming back to learn modern methods with the view of measuring arms more successfully with modern doctors.



If, then, we are able to stimulate a keener interest on the part of busy doctors toward becoming more efficient in interpreting blood pictures and a higher regard for blood diagnosis, our efforts have not proved fruitless.

#### DISCUSSION ON SYMPTOMS OF BLOOD.

DR. CHAILLÉ JAMISON: Dr. Wade follows the ideas expressed in Mallory's text-book very closely. However, there are many men as distinguished as Dr. Mallory, who do not accept the theory that the platelets are formed in the spleen, and, to my mind, there is good reason to think that they are correct in this disagreement. Dr. Wade believes in the unitarian theory of the origin of the blood cells, of which, I believe, Pappenheim is the greatest exponent; there are many strong arguments against accepting the view that all of the blood cells originate from the same primordial cell.

Dr. Johns emphasizes a very important practical point when he speaks of the endothelial leucocyte. We know very little for certain regarding the significance of this cell, but its distinguishing characteristic is that it is the largest cell occurring in the normal blood; the only cell likely to be confused with it is the large lymphocyte, but this cell nearly always has acidophile granules in the protoplasm, while the granules of the endothelial leucocyte are neutrophilic. It seems to me that it is pernicious to teach that only an expert is capable of making blood examinations, and I feel sure that the students at Tulane and other first-class colleges will not find it necessary to call in anyone to do the ordinary blood examinations.

DR. W. H. HARRIS: Dr. Wade has covered the derivation of the cells very well, following Mallory's teaching. On the origin of the platelets, the work of J. H. Wright, of Harvard, is the latest and best and practically conclusive. It is shown that where the megalokaryocytes are increased the platelets are also increased. As regard the lymphoid and plasma cells, some claim that the plasma cells come from the lymphocytes and, in turn, give rise to the lymphoid cells. The staining of a cell is due to the reaction of different cells or different parts of the same cell, thus taking up different elements of the stain. In differentiating between the large mononuclear and the lymphocyte, remember that the former is delicate in texture and changes its shape readily; the latter is more resistant. Mann and Gage have worked on the eosinophiles. They experimented on the influence of feeding and found that the granules are more

plentiful and larger when the subject is well-fed, but in starvation granules are less numerous and the cells are smaller. Remember that the patient gets a leucocytosis in other conditions than surgical ones. Toxins may cause it, such as those of pneumonia; if accompanied with pain in the right iliac region, we might think of appendicitis. We also get leucocytosis after a full meal, after a bath and before and after delivery.

DR. J. D. WEIS: In Wright's Laboratory, in Boston, during his experiments on the platelets, I saw an artificial thrombus induced in a kitten's leg and had the opportunity of studying the important part played by the platelet. He found that the platelets and the megalokaryocytes increase in such cases. Remember that ten years ago the basophile was called the mast cell. At this time this term it not used here, but it is still used in other places and in the literature.

DR. DUREL: I wish to ask Dr. Johns about the neutrophiles. He says that the lobules of the nucleus are probably connected by some sort of bands, which do not always stain. In other words, these cells are polymorphonuclear. I am convinced that the neutrophile is also multinuclear. In the examination of over 10,000 blood smears, I found all the cells with one nucleus varying from 84 to 98 per cent., a distinct separation of the lobules or nuclei. It is not my experience that the lymphocytes are increased in early pulmonary tuberculosis. They are only increased after the patient has made some progress towards recovery.

DR. C. C. BASS: The variation under certain pathological influences of the cells from the normal illustrates the efforts of nature to meet demands made upon her. In a disease in which there is demanded an increased number of lymphocytes to aid in antagonizing it, such, for instance, as chronic tuberculosis or syphilis, Nature throws into the blood stream an increased number of lymphocytes. In malaria we have an increase of endothelial leucocytes, for their function is to phagocyte foreign substances, such as malaria pigment and possibly parasites, found in the blood stream. The neutrophiles are bacterial phagocytes; hence we get a leucocytosis (neutrophilic) in any disease, the causative organism of which is phagocyted by neutrophiles. The increase is so great that the total count is also increased. In some cases, due to individual peculiarities, such as long, wasting illness, Nature cannot supply the increased number of neutrophiles necessary and the percentage of

neutrophiles comes back down, though the disease progresses. The eosinophiles are increased in some conditions, such as hookworm disease and bronchial asthma. In the latter condition, the sputum contains many eosinophiles. The hookworm first injects some substance into the blood; this is antagonized by the eosinophiles and we get a local and general increase in these cells. Later in the disease Nature may get overwhelmed and be unable to supply the number of eosinophiles required. Thus most patients dying of hookworm disease die without eosinophilia. I disagree with Dr. Cole regarding the necessity of blood work being done by experts. Every graduate in medicine should be thoroughly trained along this line, as well as along other lines. Furthermore, we cannot make a diagnosis on the blood count alone, but we must consider the clinical evidence also.

DR. WADE (in closing): I am glad that Dr. Jamison spoke of the "unity" of the original cells. If we go back far enough we find the whole body, hence the different blood cells, arising from a single cell, the ovum. We must remember that the differentiation of cells occurs in the embryo, not post-mortem. Once started it continues throughout life. I am glad that other speakers agree as to the identity of the "large mononuclear" cells as endothelial cells. The splenic tumor and enlargement of the mesenteric lymph nodes in typhoid fever is largely due to the collection of these cells, proliferated on account of the toxemia. Their massing in the Peyer's patches causes necrosis with sloughing, hemorrhage, etc. As for the hemoglobin estimate, I doubt if it alone is of much value. The basophiles are thought by some to be increased before the appearance of myelogenous leukemia, indicating a reversal to more primitive cells, common in tumor processes. Leukemias are thought by some to be malignant tumors—i. e., malignant overgrowths of the cells of the fluid tissue, the blood.

DR. JOHNS (in closing): I differ from Dr. Jamison in that I have never seen granules in characteristic adult lymphocytes.

I wish to ask Dr. Weis to give the technic of examination for megalokaryocytes. I probably have never examined for their presence in the proper manner.

I have seen, as Dr. Durel says, undoubted separate nuclei in the neutrophiles, and especially in malaria cultures where, on the seventh or eighth day, the leucocytes begin to degenerate. Neutrophiles in the circulating blood possessing such nuclei probably represents the very old forms.

In regard to basophiles they are still being formed rudimentarily, as the appendix, the remains of a formerly functioning cell.

DR. COLE (in closing): Of course, we do not need a complete blood picture in every case, but in these difficult cases, presenting no classical symptoms, we should get a complete blood picture. I think this is the work of a specialist, as it requires practice and skill. The student should be trained along these lines, in order to properly interpret blood findings, but the doctor who is not doing it every day is not competent to make a reliable blood picture.

DR. J. D. WEIS: Answering Dr. Johns, I wish to say that it is not easy to see these cells. The blood is fixed with formalin and stained with a special stain. The blood must be suspended and fixed in the fluid; in a stained dry specimen we get only fragments.

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## REPORT OF A CASE OF EXTENSIVE LUPUS,

### Treated With Tubercle Bacilli Emulsion, Administered by the Author's Neutrophile Index Method.\*

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

Instructor in Tuberculosis, New Orleans Polyclinic, Post-Graduate Medical School, Tulane University, New Orleans.

In presenting this case, it is not my intention to discuss the treatment of lupus; but to give my observations of certain changes occurring in the tuberculous lesions, and in the blood, which, in my opinion, are important when we consider the treatment of tuberculosis with the tubercle bacilli culture products.

A few years ago, during the discussion of a paper read before this Society, one of our dermatologists gave as his chief objection to the use and value of the tubercle bacilli products in tuberculosis the reason that "lupus was never successfully treated with the tubercle bacilli culture products."

I was anxious from that time for the opportunity to treat an extensive and rebellious lupus, with one of the tubercle bacilli products.

This opportunity presented itself when Dr. Menage referred this case for treatment to the Tuberculosis Clinic at the Tulane Medical College.

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The following is the history of the case:

F. B., colored female, age 14 years. No tuberculosis in the family, showed, six years ago, under the left eye, a swelling looking like a bluish boil and lasting three weeks, when it burst, leaving an ulcer, looking like a cauliflower growth. Two weeks following, a similar swelling appeared under the left maxilla. She was then operated at the Charity Hospital, the ulcer under the left eye being scraped and the swelling under the left inferior maxilla opened. Two months after this the ulcer under the left eye was healed, but that under the left maxilla was not. One year after this the cervical glands on the left side were swollen to a large size, and were removed at the Charity Hospital. After this operation the ulcer under the left eye returned and showed again the cauliflower growth. This again was curetted and the swollen glands removed, but only to return in eight or ten days. Wherever there was an incision made there appeared an ulcer.

One year after this last operation the left side of the face showed a mass of cauliflower ulcers, with large cervical glands extending on the right side of the face.

Again she was operated, the ulcers curetted, and the glands removed. After eight months the ulcers looked slightly better, but soon showed signs for the worse, and the cervical glands on both sides became very large. Then it was that she was referred to Dr. Menage, who diagnosed the case as one of extensive lupus, with cervical glandular tuberculosis.

Dr. Menage's diagnosis of lupus was sufficient to convince me that this was a case of skin tuberculosis, with cervical glandular tuberculosis, but a very marked positive vesiculated skin tuberculin reaction corroborated and confirmed this diagnosis.

The recorded fact that lupus was not always successfully treated with tubercle bacilli culture products led me to believe that the faulty administration of the tubercle bacilli products, either in excessive doses or too frequently repeated doses, accounted for the failures reported.

Having completed my observations regarding the value of the neutrophile index, as a guide for the administration of the tubercle bacilli culture products, I thought this case would prove interesting, if bacilli emulsion was given by this method.

Taking the neutrophile blood picture every second day (as suggested in my report before the National Society for the Study and Prevention of Tuberculosis, 1912-1913), and also taking a differential blood count, I administered the bacilli emulsion according to the changes in the neutrophile index. Every second day the neutrophile index was taken, and starting bacilli emulsion with .00,000,000, 5 mg.; this was increased, diminished, or stopped altogether, according to the fall or rise in the neutrophile index.

During the greater part of the treatment, bacilli emulsion was not given if the neutrophile index was above 96. Bacilli emulsion was repeated when the neutrophile index was at or below 94, and it was never increased if the neutrophile index was not at or below 92.

At the end of four months I had reached the dose of .00,000.5 mg. of bacilli emulsion, and noticed that the lupus below the left eye showed signs of improvement. Increasing the dose of bacilli emulsion when the neutrophile index was at or below 92, I reached the dose of 00.005 mg. at the end of the sixth month. Then I noticed that the neutrophile index would remain above 96 for a week or ten days at a time, and would fall only when I would cease the use of the bacilli emulsion. I also noticed that when I administered the emulsion with the index above 96, especially when the larger doses of emulsion were given, that this was always followed by marked redness around the ulcers, with an increase in secretions and a swelling of the left eye. Upon four occasions the temperature rose to 100° F., with headache and pains.

At the end of the first year, though the ulcers were improved, I realized that the healing of the ulcers had been retarded by the giving of too large and too frequently repeated doses of bacilli emulsion, and these given with a neutrophile index above 96.

Then it was that I administered (during the last six months) bacilli emulsion in smaller doses (00,000,000.5 to .00,000,000,005 mg.), and only when the neutrophile index was below 94 or 92. Never was the dose increased after, if the index was not below 92.

To my agreeable surprise and great satisfaction, the above method was followed by a progressive healing of the extensive ulcers, and the enlarged cervical glands disappeared entirely three months before the lupus healed altogether. The higher doses and too frequently repeated doses of emulsion caused too frequent local reactions, the latter proving injurious to the patient.

The observations noted in this case confirm, to my mind, the hypothesis that artificial tubercle bacilli proteins stimulate the bone-marrow cells, etc., producing a leucocytosis, especially that of the neutrophiles; that a moderate qualitative and quantitative leucocytosis is beneficial to the healing of the tuberculous foci; that overstimulation, with large doses of any of the tubercle bacilli products, causes an excessive and injurious leucocytosis, proving injurious by flooding the blood circuit with new, immature

leucocytosis, deficient in effective antibodies, the latter immature leucocytes overcrowding the lupus or tuberculous foci, preventing the healing of the diseased area.

This shows that direct leucocytic immunity is the prime factor in the healing of all tuberculous foci, and that direct immunization takes place in the cells immediately surrounding the tuberculous foci.

In conclusion, permit me to state that nothing but bacilli emulsion was used in this case; that the latter was administered during the past six months, entirely by the neutrophile index method; that the large cervical glands on both sides of the neck disappeared after six months, when treatment was begun; that the swollen glands reappeared (though not to a large size) when bacilli emulsion was given in too large and repeated doses, with a neutrophile index at 96; that within the last six months all the tuberculous cervical glands have disappeared—so did the lupus heal entirely; that the ulcer under the chin was slow in healing, and this was accounted for by an irritation caused by the rubbing of a collar worn by the patient; that small fractional doses of bacilli emulsion have proven beneficial in this case, as in the other forms of tuberculosis.

#### DISCUSSION.

DR. LEMANN: I do not want to depreciate Dr. Durel's work, but I cannot satisfy myself as to the value of Arneth's classification of the neutrophiles. I think that the lobulation of the nuclei and the apparent separation of these lobules are due to artificial conditions. I do not think any dependence should be placed on this classification.

DR. MÉNAGE: At the last meeting of the American Dermatological Association a paper was read on the treatment of lupus with tubercular emulsion. I think the cure is due to plenty of patience and the persistent use of small doses. I want to congratulate Dr. Durel upon his results.

DR. C. C. BASS: I do not think we can attribute the favorable outcome in this case to the tuberculin treatment, as tuberculosis, especially lupus, has gotten well without tuberculin treatment.

DR. W. H. HARRIS: The tuberculin reaction is essentially a question of sensitization. The test is of more value when it is negative. The tubercular may be cured and cicatrized, yet they will get a positive reaction for five or ten years afterwards.

DR. W. J. DUREL (in closing): In answer to Dr. Lemann, I

would say that the neutrophile index is not based on Arneith's classification. I brought this fact out at the 1912 meeting of the National Association for the Study and Prevention of Tuberculosis. I base this neutrophile index on the study of the distinctly divided nuclei— not on the lobulation of the nucleus. I have been doing this work for five years, and can say that I find the same index on different parts of the slide, or on different slides, from the same patient. This completely refutes the theory that the cells are injured while smear is made. Regarding the tuberculin reaction, I would say that if we inject a person who has never had a tuberculous focus with 15 or 20 milligrams of old tuberculin we do not get tuberculin reaction. There was a recent report in the *Journal of the A. M. A.* on the subject. A tuberculous focus of any size will give a reaction. The focus may be only as large as a pinhead; no focus, no reaction.

I would like to have had the discharge from this patient injected into a guinea-pig, for probably the tubercle bacillus could have been found, as the patient reacted to tuberculin. This patient was operated upon five times and the secondary infection was removed, yet the patient did not get well. The patient is now clinically well.

A few of us are now using very small doses of bacillus emulsion in the treatment of tuberculosis, because, from the use of large doses of the emulsion, reactions were frequently observed. However, the small doses, if too frequently repeated, will do harm. It is not only a question of stimulating the bone-marrow cells, thus favoring the formation of new leucocytes, but the formation of matured leucocytes. Without the opsonic index or the neutrophile index, there is no way of telling when we are overstimulating the functions of the bone-marrow cells.

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## SOME PROBLEMS IN OBSTETRICS.

By PAUL MICHINARD, M. D.,

Professor of Obstetrics and Gynecology, Post-Graduate School of Medicine, Tulane University of Louisiana, New Orleans.

### Cancer of the Uterus Complicating Pregnancy.

The teaching of Hippocrates was that the presence of cancer of the uterus prohibited conception; Bartholin and Mauriceau were the first to demonstrate the error of such views. Mauriceau taught that it was not fecundation, but accouchement, that was made



difficult. They most probably had reference to cancer in its earliest stage, for conception is almost impossible during the stage of ulceration, owing to the bleeding and co-existing thickened and inflamed endometrium. Still, many adhere to the Hippocrates opinion.

Cancer of the cervix in the first stage is difficult of diagnosis, but may be suspected in early pregnancy by the absence of the usual color and softness. At the early stage there often is not much endometritis. At times the cancer is hidden above the external os, beyond sight and touch; or, as Dudley says, "The cervical wall around the external os may be only slightly thickened on the affected side. The indurated tissue may appear almost insignificant in amount." Hence, it is not diagnosed at the time of abortion during the first few weeks of gestation, an occurrence that is much more frequent than is generally supposed. The attendant is so occupied with the mishap that the affliction of the cervix escapes his attention. In my experience, I have had about seven of such cases (abortions occurring from the sixth to the ninth week); two of them in the early days of my practice were not diagnosed, their condition being revealed later, one by a developed cauliflower growth two months later. It may be contended that in these the disease began shortly after conception. I do not think so, because the disease was too evident at the time of abortion—only about six weeks in four of the cases. In the majority of cases, no doubt, the disease begins during pregnancy. The same absence of careful investigation is not rarely seen, especially where ruptured tubal pregnancy has been considered one of incomplete abortion.

Owing to early abortions and the rapid subsequent development of the disease, it is seldom seen in advanced pregnancy. During my long experience I have seen only five cases, two being my own. Abortions occur more frequently during the stage of ulceration than during the first stage. When abortion does not occur, the growth develops rapidly, and quickly invades the lymphatics, owing to the great vascularity and imbibing qualities of the lymphatics, as is witnessed in the lymphatics of the pelvis following unclean instrumental abortion, with a subsequent so-called "pelvis cellulitis." Abortion now is frequent. If abortion occurs after the twentieth week it is likely to be difficult, owing to the rigidity of the cervix, caused by infiltration of the tissues. Evacuation of the uterus per vaginam at any time after the twenty-fourth week is often attended by tearing of the tissues, a rapid spread of the growth and early

destruction of life from septicemia. A laceration under such circumstances causes a terrific hemorrhage, which cannot be easily stopped by sutures that cut through the friable tissues. Firm packing of the vagina and uterine cavity, with associated abdominal pressure of the aorta, served me well in one of my cases. Of course, where possible, clamping or ligating the uterine arteries per vaginam with or without immediate vaginal hysterectomy would be preferable. Should the weakened condition not permit of immediate complete operation at the time, it seems to me it would be well to allow the clamps to remain in situ for forty-eight hours, and then complete operation, either by hysterectomy or cutting, and scraping and cauterization of the cervix, as the condition would allow. In the presence of an impending abortion, the fetus not viable, the attack on the growth by cervical amputation, or with curette and cautery, is advisable, leaving the emptying of the uterus, if possible, to the natural forces (because manual or instrumental interference may increase the risks of extensive laceration), vaginal hysterectomy following. Should the child be viable, abdominal Cesarean section is indicated, preceded (not followed) by scraping and cauterization. The extent of infiltration, and condition of the woman, will determine complete removal of the uterus, or that only its body be amputated, the cervix then covered by the peritoneum, leaving the completion of the work per vaginam for a later day. Where the disease is not too extensive, Duhrrsen recommends vaginal Cesarean section even at term, complete hysterectomy being done at the same sitting.

Where the disease has progressed extensively, say to necrosis, it would be best not to prolong the work, but simply to close the uterine and abdominal wounds, after removal of fetus, and leave the woman to her inevitable fate, because these patients usually die long before the corpus is invaded.

These remarks apply equally as well to delivery at term. For the woman's sake, a full-term dead fetus should be removed by abdominal Cesarean section, because in advanced cases delivery by the normal route results in a maternal mortality of 44 per cent.

When the cervix is entirely destroyed, the pelvis being free, or when the growth is not too large and situated on the posterior lip only, spontaneous or instrumental delivery is often feasible. When posteriorly situated, the growth, during the descent of the head, is pushed into the concavity of the pelvis and then offers little

resistance. But when in the anterior lip, and large, it is jammed against the pubis, thus delaying or preventing delivery. When the vaginal wall, the cervical canal or the pelvic tissues are involved, labor is very tedious. The uterus may be ruptured at the lower segment, or the woman may die with the child *in utero*. The repeated and prolonged strong uterine contractions may so compress the placenta or the fetal chest as to cause its death from asphyxiation or from cardiac pressure. The treatment of a cancerous pregnant uterus is a debatable one: Whether the life of the fetus should be sacrificed in the interest of the mother, or whether the gestation be permitted to go to the viability of the fetus, are questions that present themselves. Many French authorities contend that, inasmuch as many cases reach the eighth or ninth month without great progress of the disease, a waiting policy should be adopted. On the other hand, most American and German writers are of the opinion that, experience having taught that cancer frequently extends rapidly during gestation, and abortion is of frequent occurrence during the stage of ulceration, the life of the fetus should be ignored and only that of the woman considered, because, at this stage, hysterectomy is a safe procedure and offers more chances for a long immunity than at a later period of the disease. Hence, hysterectomy is recommended up to four and a half months. After that date, gestation should be allowed to continue, the woman being examined at rather frequent intervals. Pregnancy continues to term oftener when the disease is limited to the vaginal portion than when it has invaded all of the canal. It seems to me it would be well to explain the different phases of the problem to the woman and her immediate family, and let them decide.

When gestation has gone beyond the eighth month, with the disease even in the first stage, especially if the sides of the cervix be involved, abdominal section and hysterectomy are called for, as delivery through the vagina is likely to be followed by extensive tears and septicemia; whereas, by section, only healthy tissue is cut, and the risk of infection minimized.

Before or at the beginning of ulceration, prior to the fifth month, supra-vaginal amputation of the cervix should be done, even at the risk of abortion. When a cauliflower mass exists it should be curetted away and the raw surface cauterized, the hot-iron cautery

being preferable. There is little risk of abortion if gentleness is practiced and opiates used.

Amputation of the cervix during the last weeks of pregnancy is tedious, accompanied by severe bleeding, and likely to be followed by immediate miscarriage, with damaging effect on the sutured tissues, and, therefore, is not to be recommended. Anterior to the fifth month, where the vagina is roomy, vaginal hysterectomy without first emptying the uterus has been performed successfully. Abdominal section should be had recourse to during or before the onset of labor, the final steps to be determined by the condition of the structures involved, and the strength of the woman. When the disease is extensive, radical operation will give meager hope for prolonging life, and may cause an early death. It must not be forgotten that placenta previa is occasionally a complication that demands abdominal section.

In the presence of infection of the body of the uterus extra-peritoneal section is recommended by some.

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IMMUNITY IN MEASLES.—Charles S. Woods, Iowa City, Iowa (*Journal A. M. A.*, September 5, 1914), calls attention to the apparent result of Hektoen in producing experimental measles as indicating beyond a doubt that measles may be transmitted by injecting the blood of a person having measles into another person in normal health. He relates an instance in which a woman in the eighth month of pregnancy contracted measles. The child, while *in utero*, must have had an ideal opportunity to acquire immunity against this disease. The child, however, now seven years old, had an attack of measles this spring. This emphasizes the great difficulty of securing immunity and the power of the virus of measles to invade the human organism.

CONFERENCE OF REPRESENTATIVES OF HEALTH AND  
EDUCATION BOARDS OF SOUTHERN STATES  
FOR THE BETTERMENT OF HEALTH  
CONDITIONS AMONG NEGROES.

Friday, April 24, 1914.

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(Concluded from the August and September numbers of the Journal.)

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THE CHAIRMAN: There is present a man who is considered a pretty good "hookworm." He knows the conditions existing in schools and homes of many of the colored people and I am sure you would like to hear from DR. S. D. PORTER.

DR. S. D. PORTER, New Orleans, La.: It strikes me that the problems that we have to contend with in regard to the colored race are practically the same as those of the white race with the exception of the predominance of ignorance, which accounts for the suspicion and lack of co-operation we get from them, and accounts, too, for the conditions which Dr. Gladden has enumerated concerning concealment of contagious and infectious diseases. I have had some experience with colored people throughout the rural districts and one instance I might cite was an epidemic of small-pox in a railroad camp. Dr. Dowling sent me over there to investigate and I went equipped to vaccinate everybody in camp. About forty comprised the crowd and every one vowed and declared that he had either been vaccinated or had had smallpox, while, as a matter of fact, half of them showed no evidence of ever having been vaccinated or having had small-pox. Now, from my experience, I believe the solution of this problem is, as has been said, a matter of education. I feel and believe the best possible means would be the same kind of educational effort as the State Board of Health has been conducting among the white people, and the same that its president is now planning for the colored people.

We must teach them first the cause and then the method to pursue before we can expect them to do much towards protecting themselves against disease. In the South one reason this question has not been taken up earlier is on account of lack of funds; no appropriation was made for public health work; that is, not sufficient funds. We know that even now it is very meager. It was generally insufficient to do the work even among the white people.

We all realize that problems among the white people need solution as well as among the colored race. Now the colored people are of us, or we are of them; because any man who lives in Louisiana realizes we can scarcely live without the negro. I have often made the assertion that I would not live in a country where there were no colored people. If that be so we certainly must interest ourselves in the betterment of their condition, particularly their physical condition and their environment. We realize if we do that we elevate the whole people.

Statistics show a great amount of illegitimacy among the colored race; the proportion of illegitimates born among the colored people, as compared with the white, is greatly responsible for the social condition of those people. With betterment of their physical condition, their environment and habits of living will come improvement. With a reduction of communicable diseases we are going to elevate the whole standard of that people.

I think every one in the South is interested in this, interested in an organized effort to improve that condition. As one gentleman said, it may be a selfish effort, because, as I said, they are of us. We have to live with them and aside from an altruistic motive, even from a selfish standpoint, we should interest ourselves in improving their condition. And if we do it from nothing more than from selfishness, it is worth while. I am glad to see these colored men present and I hope they may be inspired to redoubled effort through the remarks they hear this afternoon and will continue to assist Dr. Dowling and his co-workers in this great movement. I hope, too, that other Southern States will plan some definite campaign just as the State Board of Health proposes for this State for the betterment of conditions of the colored race.

**Dr. Herman Oechsner**, following Dr. Porter, member State Board of Health, expressed his sympathy with the work and his endorsement of the movement.

**Dr. H. B. White:** "I am sorry that I was not here to take part in the beginning of the conference, but I am glad to be here when we are considering matters for the benefit of the colored people. However, I don't think anything can be added to what has already been said. I hope, however, we won't take it all out in talking, but that we will do some actual work."

**THE CHAIRMAN:** Gentlemen, you have among you some of the representative colored people who live in the City of New Orleans. There are others, I am sure, who would be glad to be here to-day had it been possible. We have one who is a leader

among his race and he is joined by other leaders here. Attorney J. MADISON VANCE will have charge of their part of the program.

J. MADISON VANCE: MR. CHAIRMAN AND GENTLEMEN: I had no idea that this meeting would be for to-day, but Dr. Dowling has been so assiduous and persistent in his effort to have us understand ourselves that some days ago I spoke to a few friends of mine and asked them to take part in a conference some day during the week and jot down a few thoughts along the line of sanitation among our people.

You know I am a Southerner, born in the same house where we live now. My hopes are here. We are building here with you and as I heard the expression here this morning "we are of you." We want to try to do our part in this crusade.

Through the efforts of the State Board of Health, we have had meetings almost nightly throughout our city among our people. It is true some of them are evasive; it is true some of them have false pride. They don't like always to hear an ax called an ax and a spade called a spade; they take exceptions at some of these things. But, coming down to the ground work of the matter, they must learn that these things are told them for their own benefit.

I read your resolutions a minute ago. I would like to speak about them, if I may, Mr. Chairman.

Dr. Dowling: "I would rather you would not discuss them just yet as they have not been submitted to the Conference; I am waiting for other copies to distribute among the gentlemen present."

VANCE continued: All right, doctor, I just wanted to say something in connection with several of the points set forth in the resolutions of grave importance to my people. I simply desired to call attention to some of the articles or paragraphs in these resolutions and comment in a measure on them as to how our people stand, but the main proposition before us, as I understand it, is to educate all of our people up to the necessity of cleanliness and sanitation.

I said to a very distinguished white gentleman not forty-eight hours ago, that we are all neighbors; we *are* all neighbors to an extent. Your friend in his palace in Rosa Park is a neighbor to the cook who lives over in Jane Alley. You cannot tell from whom and wherefrom come these communicable diseases and it is up to you really, the burden is on you, to put those people in a position so that they can live in sanitary homes. I could point you out a

dozen shacks, and the colored man that the State Board of Health has employed and who has gone from one end of town to the other taking pictures will bear me out, where the yards and surroundings of those houses, as depicted in the photographs which the State Board of Health has, would astound you. These people are poor; they can't get away from cesspools and dirty surroundings; they are in the hands of the white landlord; and, in his avaricious desire to get for a little a great deal, they are placed in these shacks and shanties. And as one of your distinguished doctors said, they are ignorant. Gentlemen, are you going to judge them from the height you have attained? From your 2,000 years or more of civilization? You can't do it. You must judge them from the depths from which they have come.

In accordance with the idea of Dr. Dowling and your excellent group of health officers, we have enlisted the very best men in our community to go out among our people to disseminate information; to have them know the need and necessity for good housing; to have them know the necessity of fresh air, in order to put them in a position to withstand disease.

I have in our midst here four gentlemen. I have the nestor of our medical profession, a gentleman who has served on the Board of Health, a man who has a fine record here, Dr. Jas. T. Newman. I have also here one of our leading ministers, Rev. D. F. Taylor, of St. Luke's Protestant Church; he represents in a great part the educated ministers of our community. We have here also a younger physician; he has grown up under the tutelage and direction of the pioneers in this work, I refer to Dr. F. M. Nelson. And we have last, but not least, one of the strongest and most influential editors of the race in this country, I refer to the editor of the *Southwestern Christian Advocate*, Dr. R. E. Jones.

Now from each of them I would like to hear a word; I have limited them and they have limited themselves to brief remarks. I had hoped to have another with us. I had suggested to one of our leading educators, the head of one of our largest schools, a man of strength of character, that he meet with us, but, owing to the hour and the day being a school day, he could not get off. I refer to the Reverend Lawless.

But I would ask that you permit these gentlemen here to express themselves in their own way from their knowledge of our people, what they think best to be done with them because they know them better than you do.



From now on we hope with the committees Dr. Dowling has caused us to organize, to make talks from house to house and ward to ward, to each of our housekeepers and to each of those we come in contact with, to the many and the few, and teach them the absolute necessity for having hygienic conditions. We hope to begin that way, because an ounce of prevention is worth more than a pound of cure, and in order that we might live up to the possibilities of the future. We want to help you because you have made us largely what we are.

And now, gentlemen, we want to again thank you.

**Vance:** "I have asked Dr. J. T. Newman to talk next."

**DR. JAS. T. NEWMAN:** Coming as I do from the battlefield of professional life to take part in this great struggle which we are engaged in, trying to eradicate the great white plague, tuberculosis and kindred diseases, I greatly fear that I shall be unable to contribute anything that will heighten the interest of this occasion, and feeling my utter inability to meet your expectations, I fain would be silent. But, for me to decline now, would be to invite censure; to go forward might be to display ignorance, and court the criticism of these sanitary experts. Hence, you will readily perceive that at the very threshold of my remarks, my embarrassment must become to you painfully apparent, as I find myself confronted and environed by every variety of talent, taste and age.

In this great presence of intellect, any poor word that I may chance to utter will be to them as the rattle of musketry is to the booming of cannon; as the faintest whisper is to the rush and roar of the mighty Niagara. I look here and behold the yawning jaws of dread Charybdis; I look yonder and see the grim front of Scylla, in my perplexity and doubt, I ask myself, what Circe there is to pilot me on this adventurous and to me presumptuous voyage. I hear the voice of an oracle, and it says to me that some of you would have me dive deep down into the Arcana of this all-absorbing subject of the day, and lay bare the secret of its deadly power; still another would have me bear away and upward on the soaring wings of microscopy, bacteriology and pathology, and bring down high-born truths clothed in sanitary drapery.

But, Mr. Chairman, I am not vain enough to attempt either of these Herculean feats. You are aware that medical men are crowding all the fields of discovery and invention in medicine, and that they are surprising our credulity with their rapid installment of

wonders. Nothing seems too adventurous for their experiment. They perhaps will soon scare up and swing to the flying forelock of some wild element of nature, until it is tamed down, and to labor like a drudge upon the treadmill. No sooner were the wonderful discoveries of Koch, Pasteur, and Lœffler, and Klebs revealed to us, then we were startled with the announcement by the United States Marine Hospital Service, that the discoveries of Walter Reed and his associates have made Havana and the Panama Zone the most salubrious and healthful spots on the face of the globe. The work of the yellow fever commission established the fact that the germ of this disease was conveyed from the infected human being to others by means of a certain species of the mosquito, "*Stegomyia fasciata*."

So rapid and so vast are the discoveries made by science that the wonderful of yesterday is but the commonplace of to-day. And it is not too much to assume that before which the intellect stands appalled to-day, will to-morrow be recognized as the logical sequence of Nature's tireless evolutions. In the practice of tropical medicine, what wonderful revelations; in the practice of sanitary science, what astounding disclosures.

Materia medica, therapeutics, chemistry and pathology go hand in hand, while microscopy and bacteriology walk side by side with hygiene and sociology. Bacteriology, the youngest of the biological sciences, daughter of the genius of Pasteur and Koch, came into being at the beginning of the last third of the nineteenth century. This even was of the most transcendent importance dwarfing all other divisions into insignificance; it separates the history of preventive medicine into two great periods.

The era of empiricism and the era of science, the boundary between these periods like that between all great historical movements is not abrupt. Many great achievements, as, for example, the discovery and perfection of the microscope, heralded the coming of the era of science and the day is not far distant in which preventive medicine shall be wholly free from the benumbing influence of the ignorance and superstition which hampered its long pre-scientific period, but fifty years have not yet elapsed and preventive medicine is revolutionized. As of old, it occupies itself with the individual because the sick man must be succored and cured, but the single patient is no longer its chief concern.

To his interest added the larger and more important requirements of the community.

Medicine has thus become not only curative, but also protective. No possible knowledge of the effects could have given us preventive medicine. We owe this to the study of causes, and the means by which they have been and are being studied are bacteriology and animal experimentation. By the scientific and human methods of laboratory research, the nature of infection and immunity has been clearly established, the method by which particular diseases are transmitted has been revealed, the part played by various insects as direct carriers and intermediate host of disease producing micro-organisms have become known and the natural defense of the body against the infection investigated. This knowledge, when properly applied, has in the past and will in the future protect the lives of countless millions.

Fellow-citizens, the great object of this sanitary congress is to teach the rich and the poor, the child and the patriarch, a few of the laws of sanitary science that all may live out the three-score years and ten that has been allotted to us by holy writ. It is a fact beyond successful contradiction, that the negroes of this city have a death-rate almost three times as large as that of the white race. It is this fact which has brought us together to-day.

Right here I wish to correct an impression that is prevalent among colored people and also among uninformed white people, that the negro is a menace to civilization because of his alarming mortality. My experience has been that negroes who have proper sanitary environments are just as vigorous and will live as long as any other race of people. In confirmation of this assertion, I will refer you to Glidens and Morton's "Types of Mankind," page 389, for September, 1856, where Dr. Bennett Dowler, editor of the *NEW ORLEANS MEDICAL JOURNAL*—states the actual rate of mortality among the negro population of the Southern States was one in 60; he says, we have positive data for the mortality of free negroes in the Northern States, where the climate, as well as social condition is unfavorable to this class and the ratio is one death in thirty, annually.

We, however, fortunately have some statistics which are perfectly reliable at the South, and which will throw important light on the value of life among the blacks. We allude to those of the City of Charleston, South Carolina.

By the United States census of 1850, the entire population of white and colored was 42,985, of which 20,012 were white; 19,532 slaves; free colored, 3,441; total colored, 22,793.

Dr. Dowler says he worked up the vital statistics of Charleston and New Orleans from 1828 to 1845, in connection with the subject of life assurance. The ratio of mortality among the blacks for eighteen years gave an average of deaths of one in 42 per annum, and that the ratio of mortality was much increased by a severe epidemic of cholera in 1836, which bore exclusively on the colored population.

He further says there have been many disputes about the comparative longevity of races: but all these statistics of our Southern States prove that the negroes are the longest lived race of the world. Now, then, what is the cause of this fearful death-rate at the present time among negroes. We will answer that question by presenting to you facts which cannot be controverted as follows: Ostracism, poor compensation, poverty, unsanitary environment, ignorance and dissipation.

Taken as a mass, the negro is an agriculturist. He has made the South by his labor blossom like a rose. He has vexed the soil with such assiduity and vigor that it has become the garden spot of the world. He has felled the forest that has opened up your broad and rolling acres to cultivation. He has built your highways and made your rivers navigable and all he asks for this in return is a peaceful life for himself and family. But the blind unreasoning prejudice of the irresponsible element of the South has driven the negro into the large cities where he may find protection for himself and those he loves. He is ostracised and discriminated against on account of his previous condition. This has produced a congestion of population in the cities. The labor market is overstocked and his compensation is barely sufficient to sustain life. His compensation is so meager he cannot afford the price of healthful habitation. He is forced to live in squalid misery and dirt and it is a well known fact to sanitary science that where men and animals are assembled in unventilated apartments they soon communicate to it transmissible maladies.

The influence of occupation and the economic condition upon the length of the life of the negro in large cities and congested districts has never been sufficiently investigated, but all investigations which have been conducted point with unmistakable clearness in one direction. That is poor compensation, which means poor food and poor environment. It requires a perpetual struggle to keep the length of the labor day within the bounds of physiology

and hygiene and often the struggle to do so is unsuccessful. This strenuous life he is forced to lead weakens the nervous system and creates a craving for stimulents, which often leads to dissipation and vice.

We are told that 3,025 negroes died in New Orleans in 1913; 454 died of consumption of the lungs, 23 died of typhoid fever, 131 infants died of diarrhea and we know that one-half of these deaths were preventable.

In my practice I have observed that the greatest number of tuberculous cases occurring among the negroes of the underworld were found in low, damp, ill-ventilated apartments not fit for human habitation, surrounded by the low dance hall and saloon. These places are kept by white men who daily and nightly deal out poor whisky and clandestinely furnish the negroes with cocain and opium; in addition to their maladies they become frenzied drug fiends of the lowest type.

Right here let me emphasize the fact that nine-tenths of the low dives and saloons frequented by negroes are kept by white men. And here is where the greater number of criminal and diseased negroes congregate. Wipe out the saloons, the dance halls and the opium dens and crime and disease among the negroes will, in a large measure, disappear.

Relative to typhoid fever, the most of the cases I have been called to treat occurred in tenement houses, which were supplied with water obtained from cisterns that were almost dry.

In relation to our infant mortality, it is a well known fact that the great mass of negro women are wage-earners and on account of poverty they are forced to neglect their young. I have found that the greater number of infants died between one and five years of age, and that from five to sixteen was a healthy period of young negro life. From sixteen to twenty-five was one of the highest mortality. Having reached the age of twenty-five the responsibility of manhood forced the negro to become sober and upright and from that age onward, barring accidents, he bid fair to live as long as any other race of men.

We wish to inform our white fellow-citizens that the negro doctor, the negro midwife and the negro trained nurse are preaching the gospel of cleanliness, hygiene and temperance all over the State of Louisiana. The negro medical profession of this State met at Providence Sanitarium, 122 Howard Street, on the 26th

day of February, 1914, and was in session three days and the burden of their deliberations was tuberculosis and preventable diseases. The old, ignorant midwife is the thing of the past.

Our trained nurses are educated in hygiene, gynecology and surgical nursing. Our medical men are teaching the laws of health in every dwelling that they enter through the State. It is now up to you, Drs. Dowling and O'Reilly, to marshal these forces and concentrate their efforts into one great sanitary crusade and New Orleans and Louisiana will become one of the most healthful cities and States on the continent. It is up to you to help educate the negro and make it safe for him to enjoy the fruits of his labor and he then will return to the farm and become a blessing to himself and his white neighbors. Compel the avaricious landlord to build healthful tenements connected with sewers and sanitary requirements and you will find that the death rate will not exceed that of any other race occupying similar environment.

Mr. Chairman, I am proud to announce to you and to all the world that the negroes of this city and State are buying homes, accumulating property, building churches, improving their morals and fitting themselves for citizenship. They are taking a deep interest in this great exposition which is being projected for the up-building of our city and State.

Long may the Crescent City live and may her branches of industry and trade be spread so far and wide that she may grasp in her embrace and hang the golden key of commerce in her girdle until she unlocks her pathway from the Occident to the Orient. She is visited by huge leviathans of steel, propelled by belching engines until they moor majestically upon the broad bosom of the Mississippi. She is also intersected by steeds of steam on iron roads and electric messengers which divide the air, which attest the power and concentration of the people, and well bespeak New Orleans fit to be the chosen habitation of the classic muses.

Rev. R. E. Jones, editor of the *Southwestern Christian Advocate*, was next on the program. Vance introduced the speaker as editor of the paper having the largest circulation of any colored paper in the world.

REV. R. E. JONES, of New Orleans, Editor *Southwestern Christian Advocate*. Mr. Chairman and Gentlemen: I have no speech to get off. I do want to emphasize, however, what I said before noon, that it is a real inspiration to be here to-day, and we appreciate your efforts for the betterment of our race.

The negro is celebrating this year the fiftieth anniversary of his freedom and I can think of nothing more appropriate than that the white and colored people have gotten to a point where they can come together and work together for the good of all. Now, as a matter of fact, the point of contact between the white and negro physician is closer than that between any other element common to the two races. It is closer than between the white minister and the negro minister; it is closer, I think, because there is a scientific approach.

While I regret the negro has such a large mortality rate, I am, nevertheless, thankful from a racial standpoint that this meeting has been called.

It may be that I should not say it here in the presence of you gentlemen from other States, although I am sure you will pardon me—we people down here think we have about the best health officer in the whole country. If you should see Dr. Dowling on Sunday morning among our people in our churches and hear him talk, you would feel that he is doing a great service for the common good of all. In these meetings, where Dr. Dowling has spoken, was indicated also the fact that the negro is willing to co-operate.

Now, it is no surprise to me that negroes die in such large numbers; the wonder is to me that they don't die in larger numbers. The conditions among our people are simply appalling, and whatever you may do to help better these conditions, certainly, will be to the interest of the entire country. We are all interested in our section, of that we are all certain. I have lived in the South all my life; what training I had was in the schools of the South. We have a common footing, a common interest, and a common viewpoint. We have been living together for a long time and I hope will continue so for a long time to come.

The one thing we can do this afternoon is to study the way to help the negro to be more worthy of citizenship, and I am sure he will cooperate in every way to make himself worthy. And, knowing something of conditions, I know of no work more necessary and fundamental, especially in view of the fact that our race is dying out, than this movement for better health conditions. The negro race will become extinct, if something is not done to stop our heavy death rate. If you will help to teach us how to keep well and to protect ourselves so as to decrease the death rate, you will be doing

us great good. You do not need to worry about it being selfishness on your part, as some have said; let it be selfishness. You can go ahead and help us all you will, and we will receive it as gratefully as we know how. You will find this out. It may be true that sometimes the negro conceals disease when it is in his midst; it is true, however, that some of them are ignorant of the health laws that underlie community health. An ignorant negro knows that if he is laid up it interferes with his getting bread. This may account for some of the concealment. He can be taught what to do.

I have been publishing in my paper some health articles, and will publish as many papers read at this meeting as I can get, and send them broadcast over the State to our people. Dr. Dowling, if you take the health cars through the State to our people, as you plan, I think you will get good results, and I am sure your efforts will be appreciated.

Again I thank you.

REV. D. F. TAYLOR, New Orleans: Gentlemen: I had no idea I was going to address physicians as well as others, and, of course, I have no set speech, but as a layman I would not have the right to give my opinions before physicians. You listened to a most able paper from Dr. Newman. I don't know just what I am supposed to say, but I might relate a little anecdote here, since, as I say, I don't know for what purpose I was called on. Once there were two ministers. One was a white minister, and very well educated; the other was a colored preacher. Now, the white minister was very much impressed by the methods of the other minister. The colored man seemed to be very popular with his congregation, and seemed to sway them at will. Of course, the white man wanted to know his secret of success; in fact, the white man, with all his learning, didn't know how to do it. He said he would like to know why he couldn't get at his people that way. He said: "I am a graduate of a theological seminary and have a college degree, and I want to know how you can exert more influence over your people than I can over mine." And the colored minister gave as his explanation, "First, I takes a text; then I 'splains that text; then I 'spounds it, and then I puts on the rousements." Now, it may be possible that I am called on to speak of the "rousements."

I wish to speak of the minister's relation towards the sanitation question. It is often thought that colored ministers are only interested in things that bring them a revenue. Now, that cannot be



attributed to all the colored ministers as a class. I am satisfied that they are interested in everything that tends to the welfare not only of their own race, but of the community in general. Being one of them, I think I can speak for them.

Now, I am an officer of the Interdenominational Alliance, and at one of our recent meetings it was decided to have the ministers who are members of the Alliance preach a sermon on the last Sunday of the month on some phase of the sanitary questions which we are considering to-day. I think most of them did so.

There is no question that, whatever may be said of the colored ministers, they hold the colored people in their hands. There is no question of that. They have more influence over them than any other kind of professional man among them. And the fact that their influence is enlisted in this work speaks well for the success of the movement. They are interested for several reasons. We want our people to live so that we can train them; train the young and develop them into good citizens, so that they will make good leaders and help to make this section of the country blossom as the garden of the Lord.

Too much cannot be said of our colored townsman, J. Madison Vance, chairman of the sanitation committee, who is trying to stir up something; he is trying to wake the people up to the seriousness of their condition and carry among them the information that will be useful to them. I believe they are responding to his efforts.

I don't know anything that I can add except to assure you that the colored ministers are with you. One reason why no more are here is probably that many of them have to go around among their flocks, as it is so near Sunday; but they will help you all they can. It is possible that some few didn't understand about this meeting, but they are with you. They are ready to read anything you send them and do anything they can to better the sanitary condition of their people.

J. MADISON VANCE next introduced DR. F. M. NELSON as their youngest physician, who read the following paper:

DR. F. M. NELSON: In these days, when the signs of the times point so conclusively to a radical departure in methods medical, it is meet and just that those interested should confer upon the problems that are to be solved. The science of medicine is progressive, and this cannot be better demonstrated than by pointing to the fact that the march of events indicates that the practice of the future

will be prophylactic, rather than sanitary. Like the Celestial, whom our arrogance and derisiveness superciliously brand as an inferior, we are rapidly approaching to a realization of the fact that the true and radical conquest of disease lies rather within the province of prophylaxis than within that of therapeutics.

It were idle to seek to call into question the crying need of a systematic and concerted effort to improve the sanitary conditions which obtain among a large number of our people, but after we shall have remedied these conditions there will still remain untouched a most prolific cause for our high death rate. Until the majority of our physicians and a goodly number of those of the white race who choose to practice among black folk develop a keener sense of professional responsibility; until the pernicious system of medical practice which obtains here to a large extent is altered, our efforts at decreasing to any appreciable extent the mortality rate among our people will be largely love's labor lost. Halfway measures have never sufficed to correct an evil, and our high death rate is due not only to a nonobservance of the laws of sanitation, but, perhaps, even more largely to the bargain counter system of society practice by which so many of our people barter away their health and their lives to the lowest professional bidder. Let us seek to improve sanitary conditions; but let us also strive to instil into the minds of our people the necessity of selecting their medical advisers with discrimination, and not on the basis of bargain counter methods. It is a terrible indictment against a large element of the local profession to call for a keener sense of professional responsibility, but the indictment may be sustained by facts, and verily, "truth is oftentimes stranger than fiction." It has always been to me a thing incomprehensible how a physician can allow himself to be voted in as medical adviser of a score of organizations, receiving a mere pittance for his services, and still maintain his professional self-respect. As well may we "lay the ax to the root of the tree." I charge that this system of practice, breeding as it does neglect and slipshod methods, is more largely responsible than any other single factor for our excessive death rate, and I submit that it is for the best interests of both physician and patient to urge a crusade against it. Tuberculosis may kill its thousands; but *society practice kills its tens of thousands*. Health and life are boons too precious to be needlessly sacrificed on the altar of a vicious system.

We cannot silently pass over another important factor in the health and life of our people—a factor the importance of which is not sufficiently emphasized. It is an elementary fact that absolute rest is needed to successfully cope with certain diseased conditions, and absolute rest on the part of the vast majority of our people is an economic impossibility.

We are so situated financially that the bread and butter contest, like Tennyson's brook, must needs "go on forever." As I call to mind the history of the rise of nations and of peoples, the suspicion arises in me that a comparatively high death rate is the price of progress—the price which all nations have paid before attaining a commanding position as economic factors. History but repeats itself; our high mortality rate is, to a certain extent, the price of progress. Vain it is to attempt to institute any comparison between the death rate of the Caucasian, with his millions for defense, and that of the negro, with his cent for tribute.

Tuberculosis in its incipient stages can be cured by means of rest, nourishing food, fresh air and proper medical supervision. The negro who usually falls a victim to the disease is oftentimes able to secure only the fresh air, and sometimes not even that. I repeat, the problem is largely an economic one; and in proportion as the negro more fully overcomes his economic handicaps, in equal proportion will the atmosphere clear itself.

While I wish to emphasize the economic reason for our high death rate, I would not for a moment seek to minimize the part played by environmental diseases, diseases the existence of which an adequate conception of sanitary requirements would render well nigh impossible. And let it not be thought for a moment that a neglect of personal hygiene is the exclusive meat upon which these diseases feed and thrive.

It is often thought by proponents of racial segregation that the black man's opposition thereto is due to a desire on his part to inflict his presence upon the unwilling. Let the municipalities which have on their hands such a problem pay only a reasonable attention to the sanitary needs of the more distinctively negro sections of their cities; let these municipalities see to it that these sections receive the advantage of all public utilities, and the negro, as a whole, will not only not await the invitation to live among his own, but will soon see the wisdom of investing in these improved sections.

The black man who is better informed and who has a higher

concept of life feels as great a repugnance to conditions which obtain in certain localities inhabited by his people as the white man similarly situated does to localities inhabited by the less thrifty and less ambitious of his own race. Too long have we laid to our souls the pleasant unction that we may with impunity be sanitarily unfair to the less fortunate of the community. The connection between St. Charles Avenue and the neglected and squalid negro sections of our city is a closer one than we may at first surmise; and not even a segregation of vital statistics will render less distant the relation between the two sections. It is a known fact that at least 57 per cent. of the diseases of infancy and of childhood could be prevented if our present knowledge of sanitary measures could be rendered fully operative. I have no hesitancy in stating that an equal, if not a larger, proportion of rachitic, scrofulous and tuberculosis conditions could be prevented if public sentiment were fully aroused to the necessity of improved and sanitary dwellings, and if the ignorant were protected against the extortionate demands of the numberless white landlords from whom they rent the hovels in which these diseases thrive.

The correlation of medicine and of social economics must ultimately be recognized, and not until then will the art Esculapian assume its rightful place among the forces which make for the physical and moral betterment of humanity. And right here permit me to pay my respects to the ubiquitous "root" man. This product of a dead, sepulchral past flourishes not only in the smaller towns, but in this prosperous, progressive and representative center of culture and of chivalry, and plies his criminal avocation unmolested. In the smaller towns, where there exists no municipal ordinance requiring registrations of deaths, he is in league with Death, and the Grim Reaper, conscious of the bountiful and never-failing harvest, smiles his ecstatic smile at the unholy alliance. But why should the dual pact be broken? The stake is only such a small thing; 'tis only a human life!

Revolutionary as the thought may be, I am of the opinion that, sooner or later the powers that be will see the wisdom of giving some reputable negro physician power to reach our people officially in communities in which that race is found in large numbers; sooner or later the fact will dawn upon the minds of our authorities that the most efficient way to deal with the health and life problem is to invest the competent negro with the official powers of a Board

member. Not until then shall we see the dawn of that hygienic and sanitary millennium for the bringing about of which we are all so persistently striving.

**Vance:** "Dr. Dowling, this completes our part of the program and we thank you and the gentlemen here very kindly for your courtesy to us. We leave you now to your conference and, remember, we will help you in every way possible."

**Dr. Dowling:** "You need not leave; we shall be very glad to have you, if you desire to stay."

**Vance:** "We thank you, but as all of us have our offices and work waiting for us we will go now."

**DR. MAYER NEWHAUSER:** Mr. Chairman: It has been a great pleasure for me to listen to the statements made by these colored men, and I wish to say I anticipated their remarks. In my work throughout the State I have come in contact with many negroes while investigating their living conditions, and everywhere I have met with the response that they are trying to do all in their power to remedy the evil conditions in which they live.

I paid particular attention to Dr. Ledbetter's paper this morning, and really, if I were to read a paper here, his would be my very thoughts. It is true, most true, that we are partly to blame; in fact, to blame in a great measure.

I have visited houses among the better class of negroes. In justice to them I would say that in many of the houses the floors and walls were as clean as many of our own homes, and yet the very essentials of sanitation, for which we are to blame, were not there. I speak of the sanitary closet, proper drainage, and other conditions.

At one time, while making investigations in North Louisiana, I had occasion to go along a little road, and found that a certain little cabin was reported to have smallpox. I had to get through a barbed wire fence to reach the door. This brings to my mind the paper of Dr. Gladden in regard to negroes keeping their windows and doors closed and cracks ceiled; this is true, and right in this little closed cabin were a dozen cases of smallpox. In reference to variola, I just wish to make this little statement. I have seen a number of health officers and sanitarians throughout the State who have had numbers of cases and much experience with smallpox among the negroes, and after consulting them thoroughly there has occurred to me one thing that has been apparently overlooked by the majority, and that is the hair of the negro as a means of harboring the germs and as an active carrier. Now, the hair of the negro, being exceedingly kinky, has a tendency to cause a matting

of the scales, and in that way disseminating variola. I have seen cases that were reported well, and in going around and looking for contacts, upon investigation I have found the hair of convalescents matted with these little scales, and I earnestly desire to call your attention to this fact. I have spoken of this to the physicians in the State and have mentioned it to them so that the hair of these patients is cut and the head washed with bichloride as a necessary prophylaxis. I thought it might be well to call your attention to this means of carrying variola, in the hope of its mitigating future epidemics.

DR. G. C. MCKINNEY: Mr. Chairman and Gentlemen: I just want to tell what happened in Beauregard Parish this summer. I had occasion to visit a lumber camp at Camp Curtis belonging to the Bell Lumber Company, operating a sawmill at Lake Charles. The manager had offered a prize to the one in this camp having the cleanest house. When it came to an inspection, there was absolutely no comparison between the houses of the negroes and the white people. The negroes had invariably made an effort to clean up; the white people had made none whatever. That is a fact. The white people had made no effort at all to improve their places. Also, in investigating negro quarters of the single men, there was no comparison between the whites and the negroes. In the white men's quarters I found men lying in bed with their clothing on, with their shoes on. The manager told me when he made an effort to control the white men and tell them about this, and that they must not do these things, they resented it and said they would quit. They said they didn't propose to be interefered with, and in order to keep them he could not push this phase of the question. But when it comes to negroes, they were willing to do what he told them, consequently we found their quarters clean.

Now, my work is confined to the country, and I would make this statement: I believe in the country I invariably find the negro houses clean in most sections. I don't know any reason for this, except, perhaps, in slavery days they were owned by the better class of people and at that time had instilled into them the desire to have better things. And in looking for the solution, maybe the other is a class of people that have never been high up in the social scale; perhaps that is the reason.

DR. WM. M. PERKINS, New Orleans: Mr. Chairman: I did not expect to be called on to talk. I am not a sanitarian, and the

technical side of health work is not my study. As secretary of the Board, I have to handle the business side of these things.

Suggestions as to the details of this campaign for the betterment of health conditions among the negroes must come from the health officers, whose duty it is to direct sanitary work.

The number of topics outlined on this program suggest many points of attack. The good that this meeting will accomplish and the necessity for it can readily be seen. The responsibility for work of this sort must belong to the white race. They have the power; they are in control of legal measures; they have preponderance of education and advantage, and from their leadership must come the strength of this movement. It is folly to say the negro can handle his hygienic conditions. He is neither strong enough for this, nor has he the education sufficient to bring about the desired ends; nor has he given thought to this thing long enough to have it in proper shape to go to work. It is the white man's burden. We have often heard the expression "the white man's burden"; I believe it was first used in connection with Great Britain's responsibility in caring for her uncivilized territory. It's just as true in this case, for this is the white man's burden, and we cannot sidestep it. As to the details of how we are going to proceed or what kind of definite skirmishes are going to be needed, I know not. But the campaign must be waged.

When the first call for a conference of negro leaders was made, there gathered in the Louisiana State Board of Health's office some seven or eight of about as earnest and as enthusiastic workers as you would want to meet in any sanitary campaign anywhere. And the most encouraging feature was the fact that they evidenced not only hearty coöperation, but intelligent coöperation as well. I believe we can get most good from the campaign by strengthening and helping these negro leaders, because we all know where people do not read or write they are most easily influenced by hearing others speak, and the best results are obtained when those who do the talking are of their own race and close to them. For this reason, for instance, a negro physician can get a message into a home where the white physician cannot.

The kind of education to be carried on, as suggested this morning, must be determined by what is to be accomplished. It is absolutely necessary for the protection of any community, commonwealth or nation that its population should be taught the essentials of right living. Fundamental primary education—the "three R's"

—must be given, because the grossly ignorant man is a menace to his community, commonwealth and nation. Every man who cannot read is at the mercy of those who can, because he is naturally guided by what he hears. That kind of education which is passed around from mouth to ear is not the soundest, nor the most straightforward, nor the most intelligent. The man who cannot read and write is always at the mercy of the demagogue. We need fundamental education, because in print we have to attack many of our problems, and that, too, in a short time. We also want industrial education; we want the kind of education that will give the man a chance to make the most of his abilities.

For the betterment of hygienic conditions, I believe we should send out literature and furnish the colored leaders with such information as may readily help them to prepare talks, etc. We should furnish them with the wealth of data from leading authorities, libraries, etc. We should give them the ammunition with which to go to work. We should furnish them all the printed matter they need. Pictorial teaching should be used where possible, for this appeals most to those who cannot read print. For that matter, I doubt if there is a man among us who would say that he does not learn more readily through the eye than any other way. Where is the medical student, or the post-graduate, who can say that he did not often gain more through seeing pictures, or the thing itself, before him than from any learned description? Therefore, I think that in this work, and especially among colored people, we should emphasize our lessons through the eye, whether it be by a health train, moving pictures or anything of that sort. If you show the negro that certain things cause sickness and death among his race, that will strike home quicker than any sermon—show him and he will believe. I am sure the moving picture of a fly crawling over his bread and the sugar on his table, after crawling on offal, does more to teach him the danger of such things and the necessity for keeping the flies from his table than any talk or lecture possibly could. It will teach him not to forget the fly and what it means to have them around. Therefore, I think eye teaching should be especially emphasized.

DR. T. T. TARLETON, Grand Coteau, La.: Mr. President: I am not going to keep you long. I must say to our colored speakers here that I was very much surprised, and at the same time very glad, to hear the speeches. They were very apropos, and the subjects very nicely put.



I wish to give you a little of my experience among your people. I was born and raised among them in the old ante-bellum days. I know their foibles, and I know their good qualities. You have good qualities, and some serious defects.

The principal thing in educating anybody, white or black, is not the protection of the body alone, but you must instruct the moral man; you must make a pure man of him first. That will teach him to have his body clean and pure.

The greatest trouble with your race and what is decimating your people now are the venereal diseases. Where I live, twenty years ago there was very little communication among the negroes with the cities around, and at that time we did not have one case in a year of specific trouble. At present, since they have commenced traveling around to the cities and country towns, every young colored adult returning to our neighborhood comes back with one or both of these diseases. It is the curse of the race; not only with the white race, but the colored, too. This is not very complimentary to your people, but I am telling you the facts.

I am preaching to them all the time and telling them of conditions as they are at present and trying to get them to realize how things are. I plead with them, but it has had very little effect so far. In my neighborhood we have some very good colored families, people for whom I have been doing practice for a number of years, and to show that you can teach them sanitation, I will tell you what I have done. When I came among those people, years ago, typhoid fever was prevalent. If there was one case in a family, it would go right on through, and every member would often have it. I have talked sanitation to them and the way to prevent the disease spreading, and now if I have a case of typhoid in a family we have only one. It is simply because I have hammered and hammered it into them, both whites and blacks. I could talk longer, but I think that is enough for me to say this evening.

DR. G. M. TREZEVANT, Jonesville: Gentlemen: I don't know that I have anything of importance to mention, except the fact that in making our campaigns over various and sundry parishes the absence of sanitary closets has applied generally, especially to negroes.

We make a sanitary survey in going through the country of negro schools, wells, mills, churches, sanitary closets—the latter I should say preferably “F,” which means none at all, because that is the one we find oftenest. By that I mean the poor negro has to suffer

from soil pollution. I want to suggest, however, the farmer in a number of places has been awakened as to the financial side; that is, when it comes down to the good health of his laborers, he has fixed better houses. In the community where I have lived for thirteen years the negroes formerly lived in shacks and shanties. To-day much of the ignorance then prevailing has disappeared and conditions improved, because the closet situation has been explained to them.

Dr. Gladden told you this morning that we have worked hard in Ouachita to improve sanitation among the negroes. Having been with him on many occasions while he was health officer, I have seen how the negroes were huddled together and how they objected to living in the open.

I had an experience once in vaccinating forty-seven who had exposed themselves to smallpox unnecessarily. I found that the cause of this exposure was due to ignorance of personal contamination and curiosity of the negroes. I explained how easy it was for those not vaccinated properly to take on this loathsome disease, and also how very necessary it was for me to vaccinate each and all just as soon as possible to prevent its certain spread. After this teaching I had no trouble in vaccinating all of the forty-seven. I find negroes always ready to listen and be taught. Teaching will be one great aid in handling the negro in public health matters.

I want to suggest to you that in a number of places, houses, on account of not having the right kind of toilet, have been put on the bayou bank.

A few moments ago I heard some one of our friends suggest that the land owner was not interested in the welfare of the negro laborer from a hygienic and sanitary standpoint. With this I am compelled to take issue. It has been known by North Louisiana farmers for years that a sickly negro or one half-fed is not a profitable servant or adjunct to a cotton plantation, and, as is the case in many districts, the farmer has to secure the doctor against loss in a professional way among his laborers. With this great bunch of medical bills which year after year confront the planter, he has been forced to look toward the prophylactic side of this grave question. In lieu of that fact, many farmers of North Louisiana have had deep artesian wells drilled, to a depth of 500 to 650 feet. This at a cost of \$1.20 a foot to the planter. We find this has lowered the morbidity and mortality rate possibly 50 per cent. The

farmers of our section have made no effort to thwart effort for better health conditions among their help.

I do not want to throw any bouquets on the negroes of Ouachita Parish, but in numbers of instances they live in better houses than do the white people of some of the hill parishes. This is true, I assure you, in many parishes where Drs. Borum, McKinney and myself have worked. I do not want to hurt the feelings of anybody, but those of you who do not work in rural districts have no conception of prevailing insanitary conditions there to-day.

I find the negro eager to listen and learn, but very, very hard to get to put into practice his sanitary knowledge. He does not doubt the truths taught, but is forgetful in his effort to push its enforcement even in his own family. This I feel we can overcome only by continuous teaching and warning. A part of this by all means should be through his school teacher, a greater part through his physician, and a greater part through an all-time health officer. Indeed, no little compliment should be handed the State's Hookworm Commission. It is bettering those extremely rural people who are far from the railroad.

Within the next century we will have no more negroes. This statement may seem a bit strong to some of you gentlemen, but when you compare a death rate of 27 per cent. with a birth rate of 24 per cent. you can see they are soon to be extinct. The causes of the high death rate of the negroes to-day are tuberculosis, syphilis and race suicide. His insanitary surroundings are the cause of his easy susceptibility to tuberculosis, and his lack of education and insanitary surroundings the cause of the two latter. Insanitary conditions of the negro to-day, as well as of the poor white man, is the fight you, gentlemen, are going to have to make in your sanitary campaign.

**Dr. Dowling:** As Committee on Resolutions, I appoint: Dr. Wm. C. Woodward, Washington, D. C.; Dr. Jno. C. Bell, Memphis, Tenn.; Dr. Jas. A. Hayne, Columbia, S. C.; Dr. C. W. Garrison, Little Rock, Ark.; Dr. T. F. Abercrombie, Brunswick, Ga.; Dr. Herman Oechsner, New Orleans, La.; Dr. Thos. A. Roy, Mansura, La.; Dr. S. R. Mallory Kennedy, Jacksonville, Fla.; Dr. Oscar Dowling (by request), New Orleans.

Dr. Wm. C. Woodward, Chairman, Committee on Resolutions, reported as follows:

#### **RESOLUTIONS.**

Betterment of negro health was the subject of a Conference of Southern Health and Educational Officers, held in New Orleans, April 24.

The meeting was called by Dr. Oscar Dowling, of the Louisiana State Board of Health. Five States and the District of Columbia sent delegates. Eight of the leading negroes of the South were present.

To agree in practical measures for ultimate and immediate betterment was the purpose of the conference. Speakers and visitors were unanimous that the call was timely and that the need for concerted action is imperative.

After lengthy discussion resolutions embodying the sense of the convention as to pertinent and practicable measures were adopted. They are as follows:

Recognizing that sanitary conditions now prevailing among negroes are susceptible of improvement and that for the health, welfare and prosperity of both races immediate effort for betterment should be made:

Be It Resolved, That the responsibility of instituting and executing measures to this end is largely that of the white man;

That the active co-operation of the more intelligent negroes should be asked and their services utilized, as far as possible, in executing the plans adopted and in enlisting the co-operation of others of their own race;

That one point of attack should be on prevailing insanitary housing conditions, the main remedy being to enforce rigidly sanitary regulations pertaining to the disposal of night soil and other wastes, provision of a wholesome and adequate water supply, ventilation and light;

That each State and municipality make definite effort to obtain exact information as to the prevalence of tuberculosis, venereal and other diseases among negroes; that practical preventive measures applicable to local conditions be instituted; that the data gathered be transmitted to the local and State health officers;

That instruction, definite and persistent, in the primary principles of health be given, special features of the systematic work to be a program on health topics in every negro school in the State and sermons and talks on sanitation in every negro church at frequent intervals;

That teachers be asked to emphasize, in every possible way, in discipline and in methods of teaching, the element of self-control;

That visiting district nurses should be employed;

That a copy of these resolutions be sent to each State and City Board of Health with the request that definite action be taken to carry these recommendations into effect;

That the American Medical Association, the American Public Health Association, the Southern Medical Association, the Southern Sociological Congress, the Southern Commercial Congress, the National Educational Association of America, the National Housing Association, the Federation of Women's Clubs, and other health and educational organizations, be requested to establish standing committees on the health of the negro.

(Signed) WM. C. WOODWARD, Washington, D. C.;  
 JAMES A. HAYNE, S. Carolina;  
 C. W. GARRISON, Arkansas;  
 T. F. ABERCROMBIE, Georgia;  
 JNO. C. BELL, Memphis, Tenn.;  
 HERMAN OECHSNER, Louisiana;  
 THOS. A. ROY, Louisiana;  
 S. R. MALLORY KENNEDY, Florida;  
 OSCAR DOWLING, Louisiana.

Dr. Woodward: "Mr. Chairman, since writing the resolutions it has occurred to me that we should have added other organizations in addition to the American Medical, etc."

**Dr. Garrison:** "Dr. Dowling, since this point has been raised it has occurred to me that we might also be broader and include osteopaths, etc."

**Dr. Woodward:** "I would suggest, if it is satisfactory to the other members of the committee, that we leave the names blank and let Dr. Dowling fill them in as he is in a better position to do this than any one else."

Committee agreed—so accepted.

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## Miscellany.

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**Syphilis in the Negro.**—H. H. Hazen, Washington, D. C. (Journal A. M. A., August 8, 1914), finds that there are two classes of colored citizens—the better, who are trying to make something of themselves, and the improvident, who frequent the hospitals and dispensaries. In the former he is convinced that syphilis is not more frequent than among the whites. In the lower classes there are several reasons to make it prevalent, and these are the ones that have furnished the data from which generalizations have been made. He has endeavored to ascertain the frequency of the disease among the negroes of Washington, and his general results agree with those of Fox, who finds that it is nearly 50 per cent. more frequent among the negroes. The statistics of the Freedman's Hospital seem to show a larger proportion of white admissions from this cause, but this is explainable by the class of patients that would apply at the Freedman's Hospital, which is generally believed to be a strictly negro institution. One of the most serious facts is the amount of syphilis among the negro school children. As regards the late results, reliable statistics are hard to obtain, but it would appear that aortic insufficiency and aneurism are commoner among negroes. As regards the cutaneous manifestations, the annular form seems to be confined to the negro, and gumma much more frequent. Extragenital chancres are rare among negroes, and the macular syphilids are rare; papular the common variety. In fact, all skin diseases have a tendency to be more common among the negroes, namely, the follicular variety, the annular, the type resembling yaws, the large semi-globular papule, and the papulosquamous. The course of the diseases seems to Hazen about the same, and the negroes were usually rather faithful patients. The prophylaxis is difficult in the negro race. It is a question whether instruction or prophylactic packages will do much good. The home problem must be studied and the cocaine and alcohol questions. Hazen holds that probably the greatest good can be done by the hospitals by shortening the period of infectivity. The way syphilis is treated in the average ward or outpatient department is a disgrace, and he points out the reforms necessary. Many physicians slight these cases. The special hospitals, such as eye and ear, deserve special censure, as they make no provision for the treatment of this disease. Each hospital for a specialty should have a department where the general treatment can be satisfactorily administered under the care of a man skilled in this work, for patients cannot attend two hospitals, one for a local condition and the other for a general infection with syphilis.

# N. O. Medical and Surgical Journal

## Editorial Department.

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### DREAMS.

“Dreams are but interludes, which fancy makes;  
When monarch Reason sleeps, the mimic wakes.”

—Dryden.

So much has been drafted lately from the theories of Freud that it is of interest to have at hand a good translation of the original German\* and to understand the basis of Freud's reasoning. The original presentation of Freud's theories of dreams occasioned so considerable a discussion as to have provoked schools of Freudists and anti-Freudists. Even now it cannot be a question of whether we may agree with the great German thinker or not, for all that he writes bears the evidence of profound logic, worked out under

\* On Dreams, Prof. D. Sigm. Freud; translated by M. D. Edes, from the 2nd German Edition, with an introduction by W. Leslie Mackenzie. Rebman & Co., New York, 1914.

the rules of the game—but following always one lead, and that reasonably certain. Much in the book is obscured by the reference to symbolisms which are accepted by the writer and which may need interpretation on the part of the less learned reader. We cull, however, several salient thoughts which present the main skeletal features of the Freud theory. In the beginning we are to admit that dreams mean something, but never what they appear to mean. In other words, dreams must be interpreted to be understood. Dreams are psychic phenomena and have value as such; subjected to psychoanalysis, dreams are found to be referred to unsatisfied desires. The adult dream is the expression of erotic wishes, and may be traced to elemental instincts in the individual. The parallel of the undercurrent of eroticism in folk lore, fairy tales, etc., is argued as showing the primitive sex domination of the subconscious mind. In the distortion of thought and experience in the dream, Freud finds questions of the greatest psychological importance.

With the new interest in the psychic value of dreams, there must be some satisfaction to the sages and wiseacres who read signs in dreams; yet we are apt to grow skeptical when the restless night following an unusual late supper brings the "nightmare" and its clammy horrors, "of indigestion bred."

"I talk of dreams,  
Which are the children of an idle brain,  
Begot of nothing but vain fantasy;  
Which is as thin of substance as the air;  
And more inconstant than the wind."

Here the immortal William again touches the philosophy of the moderns—but in these lines more aptly reaches Bergson's views than Freud's.

Bergson\* conceives that our memory packs away all the impressions it may ever have received and that these are all under such pressure that now and then a dream acts as a safety valve. Even the smallest things in all life are mentally preserved. The correlation of dream images is occasioned by some visual or auditory impression on the subconscious mind—or on the mind of the individual who is asleep.

The mechanism of dreams is different from their interpretation, it is true, but it seems more like common sense to attribute the development of a disturbed vision or condition into a jangle of

\* Dreams, by Henri Bergson; translated by Edwin W. Stesson. B. W. Huebsch, New York, 1914.

ideas more or less co-ordinated than to be disturbed at the thought that whenever we dream we draw only upon the repulsed side of our memories. That joys and innocent pleasures are buried memories—beyond control, but that in the storehouse of thought as soon as slumber lets loose the disorder there rise on top only the worst of us to color our sleeping thoughts, indifferently associated, but arranged in some form creating more or less logical sequence.

We may never prove the theory of dreams—but we would rather believe that dreams were nebulous forms of uncorrelated thought waiting for the mind in control to assemble them in expression—for the purposes of life, whether the dream carry any of the virtues or not.

“Dreams, which, beneath the hov’ring shades of night  
Sport with the ever-restless minds of men,  
Descend not from the gods. Each busy brain  
Creates its own.”—Peacock.

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## THE PREVENTION OF INSANITY.

At the annual meeting of the Alienists and Neurologists of the United States, held in mid July at Chicago, under the auspices of the Chicago Medical Society, a pronounced stand was taken, by resolution, in the matters of mental deficiency, insanity and alcoholism. The summary of the proposed action premises with the acknowledgment that certain major causes are responsible, among which may be chiefly noted alcoholism, habit forming drugs, venereal diseases, occupation in unsanitary surroundings, hereditary influences and the immigration of the physically and mentally unfit.

The remedy radically aims at wholesale State legislation regulating the sale of alcohol and drugs of addiction; the control of venereal diseases with proper provision for public care and treatment of such and hospitals for the care and treatment of alcoholism and drug addicts. Further effort is directed toward a systematic and organized inspection and regulation of labor, with the abolition of child labor. For the control of the delinquents, exceptional and defective part of the community, it is suggested that all known dangerous defectives be kept under restraint; that reciprocal marriage laws be passed by the various States; that the principles of heredity and sex life be taught in the schools; that psychopathic



laboratories be established in connection with all of the institutions responsible for public safety, including courts, schools, railroads, public utilities, etc., in order that employees may be regularly examined for physical and mental fitness. It is proposed that a civil service system govern the appointment of all superintendents and other officials at the head of public health institutions.

These in brief cover the scope of the propaganda arising from a four-day meeting of representative students of the present status of mental and physical deficiency in the United States.

It is a large task for a small group of men to undertake, but the earnest way in which the beginning has been launched promises at least that the seed will be sown and that the different States will have a chance to reflect over the suggestions made. The harvest contemplates prohibition ultimately, and the control by restraint of the factors other than alcohol, which menace the mental integrity of the American people. It will require more than resolutions from a scientific body to gather results; but if the individual members of the organization promulgating the intentions as above outlined will exercise the necessary perseverance in educating the people, there may be amelioration at first—afterwards more trial for a complete result.

The whole structure of society is involved in the consummation of the ideal in the prevention of insanity and the problem is the largest of any undertaken in recent times. The movement in the control and prevention of the causes of tuberculosis and cancer is popular and gains ground every day. The elements involved in the factors which occasion insanity and defectives are more recondite and the more they affect the higher planes of social life, as organized, the more opposition there will be to the development of prevention. The largest work, however, will be among the proletarian group, which after all contributes most to the burden of civilization in the number of them needing aid and the effort may ultimately succeed by reclaiming the majority.

We may well pause, however, in any of our plans for the redemption of the race, when altruistic endeavor is checked and set back by the outlook created by such a wholesale conflict as the world at present contemplates in Europe.

The United States should not be involved, but we cannot fail to be affected and it will be a long time before there can be any adjustment of a balance in scientific thought in which our con-

temporaries abroad may share; our problems loom large in the prospect.

At any rate, good work has been done by the Alienists and Neurologists of the United States in starting a wholesale movement in reform and we share the hope for a successful issue of their worthy endeavor.

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### STATE MEDICINE TO-DAY.

In an address before the Midwinter Conference on Public Health, Legislation and Medical Education, held in Chicago last February, Dr. Frederick R. Green, the secretary, reviews the history of medical legislation with the beginning of the A. M. A. in 1846. In the rapid changes in public opinion, now kindly disposed to health observances, the printing and dissemination of this address\* is timely. It is of interest to know that as early as 1846 the Association appointed a committee to consider the expediency and method of furthering vital statistics and that the year following a permanent standing committee was organized to formulate the plans to bring about State legislation along the lines indicated.

The many phases of State medicine have evolved in the years past, but to the present, vital statistics have not been satisfactorily disposed of in many States. Dr. Green says that in 1900 "only eleven States had any satisfactory death registration" and only eight States in 1914 have any adequate birth registration.

In 1847 there were no State Boards of Health and there were no regulations covering license to practice medicine. Both have now places in State Medicine, but the author deplors the fact that the lack of forethought in educating the public to a need of protection has created the impression that the Medical Practice Act, in nine States at least, is a bill providing protection for the physician only.

It is gratifying to see the large recognition given to the work of Dr. Stanford E. Chaillé in public health legislation. Dr. Chaillé, in 1877, presented a paper before the Association which, in the opinion of the author, "is one of the most able and far sighted papers ever presented before the Association."

In reviewing State laws, the fact is brought out that much is done without mature reflection and that the law in many States

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\* Public Health Series. Issued by the Council on Health and Public Instruction of the A. M. A. Published by the A. M. A.

is burdened with provisions of special enactment, which might better be co-ordinated.

In Louisiana this has been consummated since 1878, again through the discernment of Dr. Chaillé and a group of co-workers.

In 1878 Louisiana by constitutional enactment committed itself to State Medicine and provided for the basis on which the present "Sanitary Code" has been built.

The ramifications of public health have increased so much that it now needs experts in the law and in hygiene to make regulations which can satisfy the public need. Numerous laws do not take the place of effective laws. Time has been lost in experimenting with legislation instead of studying working plans and trying them out before making rigid enactments. Public education has been neglected and public interest has therefore failed. Too many laws have suffered through neglecting their enforcement.

In sounding the opinion of many persons in public positions, Dr. Green concluded that there was not enough general interest in public health and that for the future presentation of an efficient State system some plan should be outlined for discussion. The basis is submitted in the following list:

1a. Board of Health Law; 2a. Vital Statistic's Law; 3a. Law for the Sanitary Survey of State, etc.; 4a. Practice Act, including Midwives and Sects, practicing for compensation; 5a. Law authorizing local and State health organization and the co-ordination of these; 6a. Food and Drugs Act; 7a. Law for water supply, sewerage and waste disposal; 8a. Milk and Dairy Law; 9a. Law for the Sanitary and Health Inspection of Schools; 10a. Housing Law or Industrial Disease Law.

We are interested in this list, as proposed for the consideration of State societies, largely because we are surprised at it. We have known that Louisiana was advanced in public health and that the quarantine and meat inspection systems, devised by Louisiana citizens, had been adopted all over the world, but we did not know that Louisiana was so exceptional in its health provisions as to be able not only to satisfy practically all the provisions of Dr. Green's list, but to go further. The present health organization in the State of Louisiana co-ordinates all of this list—but the school inspection, the Medical Practice Act and the Housing Law, under the Sanitary Code, which gives the Board of Health supreme power in all matters of State health.

In the country districts the school inspection falls within the provision of the State Board of Health.

During the administration of the present incumbent, Dr. Oscar Dowling, president, the State Board has instituted the "health car" for public instruction in health and the car is now in operation several years, expanding the function of the Board of Health into actual sanitation, and much real good has already been accomplished.

Dr. Green's review is altogether interesting and should have large influence on States needing proper legislation—but we should be glad to have any such study the Louisiana Code, Medical Practice Act and their operation, with a view to using them as examples.

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### THE CAUSE AND CURE OF RIGG'S DISEASE.

Though pyorrhœa alveolaris, or Rigg's disease, is generally looked upon as a disease of minor importance and is usually relegated to the dental practitioner, it is quite possible that its importance has heretofore been very much underrated. The announcement of its specific cause and cure, therefore, will be received with some gratification.

At the meeting of the Orleans Parish Medical Society held on September 14, Drs. C. C. Bass and F. M. Johns, of the Tulane College of Medicine, presented a paper in which they reported having found an ameba (*Entameba buccalis*) in the mouth lesions of 85 out of 87 cases examined, and in all stages of the disease. They further announced having obtained most remarkable and gratifying results from treatment with emetine hydrochlorid, administered hypodermically. The full detail of the paper will appear in the JOURNAL, but the effect of this announcement should be so far-reaching that we are presuming to present the news before we publish the full story of the method and results.

Amebæ have been known to exist in the mouth, and this fact has been established for many years, but their pathogenic relation is now determined by the work of Bass and Johns.

The use and efficacy of ipecac and of emetine in amebic dysentery is well established, and these drugs have been employed extensively. Smith (A. J.) and Barrett have obtained considerable success in the treatment of Rigg's disease by local application of emetine to

the diseased gums, and their work\* may be held as pioneer in this particular disease and with this remedy.

Bass and Johns have experimented considerably with the object of determining the proper dosage of emetine for this purpose, also to ascertain the proper interval between doses and the necessary duration of the treatment. They have not reached final conclusions, and are emphatic in stating that further experience and experiments now under way are likely to modify the present routine.

The dosage suggested is one-half grain of emetine hydrochlorid dissolved in one c. c. of water given hypodermically in the arm (or other part of the body) each day for three successive days. A similar dose should follow every fourth to seventh day until the gums are entirely healed and the loosened teeth have been tightened in their places. The degree of peridental membrane destruction will determine the length of treatment—which may be only a few days or may need months.

The object of the repeated doses of emetine after the first few days' treatment is to destroy any amebæ which may have escaped the previous treatment and to prevent the reinfection likely to occur before the gums have had a chance to heal and the root sockets to resume a normal condition.

Infection with this particular ameba is widespread, and the authors suggest that brushing the teeth with a few drops of fluid extract of ipecac on a wet brush may be prophylactic in mild or early cases of the disease. Bass and Johns express the belief that the treatment submitted by them is specific for Rigg's disease, but that it cannot be expected to replace the physical damage done by the disease. The usual dental care of the mouth must be practised, and the treatment of gums and mouth is necessary just as if there were no such infection.

The JOURNAL is enthusiastic over this further gratifying success of Bass and Johns, who, it will be remembered, gave new life to the study of malarial organisms not long ago. This new achievement can only bring the highest of praise and encouragement from their many professional friends and adherents, while, if the method carries as far as it should, it will bring the blessings of a multitude of those afflicted.

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\* *Dental Cosmos*, Vol. VI, No. 8, p. 948 et fol.

## THE NEGRO AS ASSET AND LIABILITY.

Elsewhere in this issue the JOURNAL presents the concluding instalment of the proceedings of Health Officers in Conference over Health Conditions Among the Negroes. To those of our readers who have followed these discussions, there must have appeared the undoubted value of grouping health officers from various parts of the South for this object. The negro needs to be studied from the health officer's point of view and notwithstanding the wide variety of topics disposed of in one day's meeting, there have been many sides of the question overlooked. The proceedings as published, however, must serve a large purpose in stimulating the further investigation among the negroes.

Perhaps the most interesting feature of the conference was the part played by the group of negroes who contributed to the program, for the most part, preachers and doctors. Each had a message, and a viewpoint quite different from the white man's. We may hardly dismiss this part of the conference without adverting to the discussion presented by Dr. F. M. Nelson, a colored practitioner of New Orleans, who seems to have reflected over the sanitary side of his race.

The plea for co-operation in health matters strikes a key which should sound some response. The supervision by the white man, arbitrarily for a large part, answers an excellent purpose, but with authority the negro physician could himself carry weight in furthering the work of health boards.

With the evils which have come in fifty years of freedom, there have developed in the negro many qualities of mind. Mingling with the white man, the negro has profited much by the good example of those who have been held superior. It will be a long time before the South outgrows the relationship of service from the under race and the very instinct of the negro has kept him among the people who have nurtured his children since the days when he was in bondage. This may pass, but it is slow to go and the household of the South will depend upon the black race for its domestic establishment.

Even with opportunities in education, the average negro finds his level in service and it is just now exceptional for him to rise much above that level. Meantime much of the negro race is building for evil through the dissemination of venereal disease, tuber-

culosis and the incidental diseases which come with low living and low ideals.

There is everywhere a movement for the betterment of the negro and education has at least encouraged the negro to better his children by a healthier surrounding; education helps some in this. The work of the public health officer will be all the easier when the negro realizes the sense of obligation to the future and rises to that obligation.

Meanwhile there seems to be little evidence of improvement in the legal status of the negro. His disfranchisement on educational grounds presupposes his inferiority, which is not now strongly denied. Still, in the economic makeup of a general citizenship, law and order must prevail and these should apply to all classes.

Morality is a natural outcome of civilization and it is supported by marriage and divorce laws which make for the protection of those marriages and for the preservation of those contracting marriage. With the negro no such laws seem to exist. Free love is extant and it is only here and there that a marriage ceremony is practiced. This does not prevent the interruption of the contract and bigamous or even polygamous marriages go unnoticed by the courts which would be prompt to act in like cases among the Caucasian population. Among the negroes it seems to be taken for granted that no law applies.

The basis of a rehabilitation of the negro's status in the South, at least, must contemplate a revision of such conditions, which, let alone, continue to breed coming generations which will be as indifferent, if not more indifferent, to all sanitary conditions, for no race with evil perverted sex instincts and practices can hope to arrive at a high degree of proper living without more or less rigid control.

The relations of the white and negro population must continue, but unless some studied method of procedure is worked out, only indirect harm to both will result by the neglect of the radical factors in the basic structure of negro economic existence.

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## **THE SOUTHERN MEDICAL ASSOCIATION AT RICHMOND.**

Each year the prosperous growth of this young association is evidenced in the attendance and excellent section work at all the meetings. The meeting at Richmond this year should be no exception.

The prospect of a good meeting is assured and the men of the gulf States expect to go.

Under the presidency of Dr. Stuart McGuire with able coadjutors the proceedings should be interesting. No program has yet appeared, but the *Southern Medical Journal*, the official organ of the Association, promises proper material.

The Southern Medical Association has taken a prominent place among medical organizations in the country and every physician in the South should join, not only to help the effort at bettering all phases of medicine in the South, but for loyalty to the ideals for which the Association stands.

The States in the Southwest should send a large contingent to Richmond for the ninth to twelfth of November.

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## Department of Obstetrics and Gynecology.

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In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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DYSTOCIA DUE TO ENLARGEMENT OF THE FETAL BLADDER.—Bohi (*Arch. Gynäk*) describes a case in which the fetal bladder contained three liters of fluid and constituted an absolute interference with labor. The diagnosis was not made at the time, but after puncture of the cystic mass, delivery was accomplished without difficulty. At the autopsy the bladder was found to consist of three portions, of which the center had undergone marked hypertrophy and hyperplasia of its muscular walls. The bladder was intimately connected with the abdominal wall and displaced the other pelvic and abdominal organ. The cause of the distention was found to be complete absence of the urethra.—*Jnl. Obst. and Dis., Women and Chil.*, Aug. 1914. MICHINARD.

RESISTANCE OF THE UTERINE CICATRIX IN CESAREAN SECTION BY EXTRAPERITONEAL METHOD.—S. Delle Chaije (*Rev. mens. de gyn. d'obst. et de ped.*, April, 1914) states that so discouraging has been the sequel of extraperitoneal section that it has not been extensively resorted to. He directs attention to the lack of firmness of the lower uterine segment wall (much less than that of the upper), which has a tendency to have its incision followed by



a weak cicatrix and uterine rupture in a subsequent pregnancy. During pregnancy the uterine tissues soften and the softened less resisting cicatrix gives way. To avoid rupture at a subsequent pregnancy there must be a good cicatrix of thick sutured tissues, good coaptation of cut surfaces and absence of infecting material from the wound. In 17 per cent. of cases the cicatrix has been found thin. This thinning may have been the consequence of a partial cicatrization of the wound in its subperitoneal portion, which thinning is augmented by the anteflexed portion of the uterus during labor. He is not optimistic in his view of the strength of the cicatrix here situated (in the lower segment), and avers that it gives no security at a later labor.—*Ibid.*

MICHINARD.

HEMOCONIES IN ICTERUS OF PUERPERAL STATE.—C. Jeannin and A. Lavant (*Rev. de gyn. et de chir.*, April, 1914) found in the fresh blood small corpuscles having Brownian movements. These corpuscles are plainly seen under the ultra microscope and are called hemoconies. They increase enormously in number while the fatty matters of the food are being absorbed. The doctors believe they are specific carriers of such fatty matters. In determining the function of the hepatic cells the study of the variations of the number of these corpuscles is important. If after a fatty meal there is comparatively an absence of hemoconies there exists fatty insufficiency. In icterus their examination affords a means of determining the activity of the hepatic cells. To determine the activity of the hepatic cells Bar used this method in women before and after labor. Histories of three women examined who had intoxication of pregnancy, and two with puerperal infection. There was icterus in different degrees, in the three cases of intoxication. In the first of these failure of the glycolytic power was indicated, but the hemoconies showed normal power of fatty absorption, the prognosis therefore was good. In the two others icterus was slight. Absence of hemoconies in one of these showed insufficiency of hepatic functions, and rapid termination of labor was indicated. In the infected cases, when the liver is affected, the intensity of the icterus is not an indication of the severity of the case, and the loss of hepatic power. In the third case the failure of the corpuscles also indicated operation, which was successful. In the first case the examination permitted a definite prognosis; the condition did not appear serious, yet there was an absence of hemoconies; death

resulted. In the second, death ensued unexpectedly. Thus it is seen that prognosis is aided by the number of these corpuscles in the blood is also the demand for hastening the termination of labor.—*Ibid.*

MICHINARD.

CAN SURGERY BE ELIMINATED IN THE TREATMENT OF FIBROIDS OF THE UTERUS?—In a paper read on this question before the Am. Gyn. Soc. at Boston, May, 1914, and printed in part in the *Am. Jnl. of Obstet. and Diseases of Women and Children*, August, 1914, Dr. John A. McGlinn, of Philadelphia, deplored the apparent developing in the profession of a tendency more or less general in the faith that all uterine fibroids could be cured, and with less danger by Röntgenotherapy than by the knife. He acknowledged the value of the ray in the treatment of myomas, but denied that it should entirely supplant surgery. He reported to the Society having sent 100 letters of inquiry to the “best known surgeons and gynecologists,” and to a like number of the members of the Amer. Röntgen-Ray Society. Forty-four answers were received from the surgeons; and their reply to the question, “Do you believe that all cases of fibroid of the uterus (not including the submucous) should be treated by the X-rays?” was *no*: sixty-two Röntgenologists replied to the question as follows: Nine, yes; twenty-five, no, and twenty-eight, not having sufficient experience with the treatment, preferred not to express an opinion. He stated that two of the affirmative answers were so qualified that they could be considered negative. He claimed that a close study of the literature of the subject did not justify the claims for the X-ray. Continuing he said, Mohr gave an analysis of 796 cases treated by the X-ray, with known results in 669. Of these he reported as cured 376 or 56.2 per cent.; improved, 208 or 31.1 per cent.; unimproved, 74 or 11.1 per cent.; relapsed, 7 or 1 per cent.; dead, 2 or .29 per cent. The doctor maintained a careful study of Mohr’s table would show not 56.2 per cent. cured, but in reality only 20 or 5.3 per cent. were completely cured. He called attention to the interesting fact that those complications which barred the use of the ray were the pathological conditions which increase the mortality of hysterectomy. “In plain words, surgery had to assume the responsibility in the very serious cases, which the X-ray would make worse.”

The doctor concluded his paper by proposing that surgery being the best procedure in the treatment of uterine fibroids, no other

known form of treatment could supplant it; that the X-ray is a valuable agent in the treatment, and that surgeons and röntgenologists should work together harmoniously. MICHINARD.

THE POST-OPERATIVE RESULTS OF TRACHELORRHAPHY, IN COMPARISON WITH THOSE OF AMPUTATION OF THE CERVIX.—(V. N. Leonard).—A complete post-operative history was obtained in 167 cases in which the cervix had been amputated or repaired by Emmet's trachelorrhaphy and the results of the two operations contrasted as to their therapeutic efficiency and as to their influence upon the subsequent marital history.

The author notes that, although post-operative hemorrhage is by no means uncommon after amputation of the cervix—5 per cent.—it is of very rare occurrence after trachelorrhaphy. Furthermore, the hemorrhage after amputation of the cervix may occur as late as the 27th day in the convalescence, while such a delayed complication is very rare following Emmet's operation. In none of the cases of trachelorrhaphy was it necessary to resuture the cervix to stop hemorrhage, while after amputation of the cervix, this became imperative in six instances.

About 90 per cent. of 167 cases reported a noticeable improvement in the general condition, whether the plastic operation on the cervix was done alone, or in combination with other operations. This improvement in the general health is attributed to the removal of the cervix as a focus of chronic infection, in the cases of amputation of the cervix, but it is claimed that trachelorrhaphy can only exert an indirect influence on a chronic endocervicitis in rendering it more amenable to treatment. The presence of a marked endocervicitis is considered as much a contra-indication to the performance of trachelorrhaphy as an indication for the amputation of the cervix. Furthermore, the cervix presenting multiple or stellate lacerations should always be amputated, trachelorrhaphy being reserved for those cases showing one or two discrete lacerations.

Of the 167 cases, 85 per cent. complained of a vaginal discharge before operation. After amputation of the cervix, in over 90 per cent of the cases the leucorrhœa either disappeared entirely in 62.5 per cent. of the cases, or was noticeably diminished in amount in 30 per cent. On the other hand, following trachelorrhaphy, the percentage of cures was much lower, the rate being

42 per cent., the percentage of cases in which the operation showed no effect on the discharge being more than twice as high. In the latter group of cases, the endocervicitis present was usually only very slight and leucorrhœa a relatively unimportant symptom, whereas, in the former group the reverse was true. It is claimed, therefore, that, although the repair of a lacerated cervix may render a mild grade of endocervicitis more amenable to treatment, trachelorrhaphy cannot be considered as having any direct effect upon the infection present, other than to enliven it, and that the presence of a marked endocervicitis should be considered a contra-indication to its employment.

Of 148 cases of lacerated cervix, 118 or 80 per cent., had dysmenorrhœa before operation. In 62 per cent. of these cases there was noticeable reduction in menstrual pain following operation; following amputation of the cervix, in 59 per cent. the dysmenorrhœa was cured or improved and the same result obtained in 70 per cent. of the cases in which trachelorrhaphy was performed. The conclusion is reached that lacerations of the cervix bear some definite relationship to dysmenorrhœa in multiparæ.

In order to compare the fertility of the patients after the two operations, only those cases in which the occurrence of pregnancy would naturally be expected were used; i. e., married women under forty years of age at the time of operation, who had borne one or more children previously and upon whom no operation had been performed which might render the occurrence of impregnation unlikely. It was found that of this group but 19.4 per cent. reported fertility following amputation of the cervix, while after trachelorrhaphy, 38 per cent. of the cases had become pregnant. The comparatively high percentage of sterility following amputation of the cervix is explained by the frequent occurrence of cicatricial stenosis after this operation, it being pointed out that the cicatrix, invariably following the operation, occupies a plane perpendicular to the cervical canal and in contracting must encroach upon its lumen from all directions. Cases are cited of complete cervical atresia following the operation, with hæmatometra resulting.

The influence of amputation of the cervix upon the course of subsequent pregnancy is very marked, while trachelorrhaphy is apparently without effect in this respect. The incidence of premature delivery and abortion is more than doubled after amputation of the cervix, less than half the pregnancies occurring after

this operation being carried to full term. On the other hand, the course of pregnancy after trachelorrhaphy is not influenced one way or the other.

More than 60 per cent. of the full term deliveries after amputation of the cervix were difficult. Following trachelorrhaphy, 80 per cent. of the full term deliveries were described by the patients as easy labors.

The author claims that the rigid cicatrix which accounts for the high percentage of sterility in the former group likewise explains this serious influence upon the course of labor. In properly selected cases, the therapeutic efficiency of Emmet's trachelorrhaphy is quite as high as that of amputation of the cervix and, since the many serious objections to the latter operation as regards the subsequent marital history do not apply, it should be considered the operation of choice for women in the child-bearing period.—(*Surgery, Gynecology and Obstetrics*, April, 1914.) MILLER.

INCREASE OF TEMPERATURE DURING MENSTRUATION, IN PULMONARY TUBERCULOSIS.—(F. W. Wiese).—An increase in the temperature during the menstrual period is of diagnostic importance, as it occurs most frequently in tuberculosis, according to Kraus, in two-thirds of all cases. A premenstrual increase occurs in 40 per cent. Subfebrile temperatures up to 99° F. are of significance for the initial stages. The increase in temperature before the menses is thought to be due to a progress of the pulmonary process, which may be explained by hyperemia of all the organs, including the lungs. If a rise in temperature is only a slight one, a resorption of old foci is concerned; if high, an exacerbation of inflammatory foci. The heat regulating center of the tuberculous patient is so labile that it is stimulated by exercise, psychic influences, etc. Easily excitable persons react much more readily with an increase in temperature, pulse rate, and all metabolic processes. Intra-menstrual elevations of temperature occur in 13 per cent., usually on the first day, and at times, also, continuing over the second. The endometrium is the portal of entrance for bacteria. Often the picture is that of a seriously diseased person. Cases of post-menstrual elevations of temperature are rare, amounting to about 2.4 per cent., and are mostly subfebrile. They are a very unfavorable sign. In rare instances menstruation may exert a beneficial influence and cause a decrease in the temperature. The author

observed intramenstrual decreases of temperature in 11.5 per cent. of his patients who had previously had subfebrile and even febrile temperatures, which continued afterwards to be afebrile. This fact might be explained by the improved circulation in the lungs during the menses. The time of the ripening of the follicles coincides with that of the increase in temperature. The increase in temperature, either before, during or after menstruation, corresponds to the time of rupture of the follicle, which may occur either before, during or after the period. Menstruation in tuberculous women deserves particular attention, as it may serve as an aid in diagnosis, and even in prognosis.—*Ibid.* MILLER.

CESAREAN SECTION: A STUDY OF A CONSECUTIVE SERIES OF CASES.—(A. B. Davis.)—Davis reports an additional forty-six cases to the series of 147 previously reported cases, and studies the results of the combined series of 193 consecutive cases operated by him since 1901. Of these cases 174 mothers, or 90.2 per cent., including five convalescent cases, recovered, while nineteen, or 9.8 per cent., died. Of the nineteen deaths fifteen occurred in the first 100 cases. Twelve of the nineteen deaths were due to sepsis, nine of which are ascribed to the attendance prior to the patient's entrance to the hospital. In all, 196 infants were delivered—twins in three instances; 164, including four still in the hospital, or 84.1 per cent., survived the puerperium; thirty-one, or 16.9 per cent., were still-born or failed to live; of the thirty-one eleven were stillborn. The majority of the deaths subsequent to delivery were due to prematurity.

In reviewing the results obtained in the various affections necessitating the sections, the author states that fifteen sections were performed for eclampsia; all the patients were either having convulsions or were in coma; twelve were primipara; none were in labor, scarcely any of them were at full term. Eleven, or 73.3 per cent., of the mothers recovered; four, or 26.7 per cent., of them died. Five children were delivered of the four mothers who died; four of them lived. In all seventeen children were delivered from the fifteen mothers: one set of twins and a premature fetus were still-born; three other babies died during the puerperium, making a combined fetal mortality of six, or 35.3 per cent. Eleven babies, or 64.7 per cent., were dismissed in good condition.

Three of the cases had a rupture of the uterus in a subsequent

labor; in one case both mother and child died; in the other two both survived. Davis considers that the danger of a rupture of a section scar is a real danger, and that the patient should be carefully watched during pregnancy, and that a section should again be performed at the term or in the first part of labor.—*Ibid.*

MILLER.

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## Department of Therapeutics and Pharmacology.

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In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

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WHEN AND HOW TO USE TUBERCULIN PREPARATIONS IN PRIVATE PRACTICE.—Dr. S. Solis-Cohen, Philadelphia.—My modification of Latham's method: tuberculin residue (T. R.) triturated with milk-sugar is given with skim-milk, whey or beef-juice. The initial dose is 0.000001 mg. Both subjective and objective symptoms of reaction are watched for. The dose is repeated once or twice weekly, according to result. It is gradually increased by increments of 0.000001 mg. to the reaction point, and then dropped one point lower, and so continued for some weeks. Later, a further increase is attempted, and if reaction is not shown, is proceeded within a similar gradual way. The arbitrary increment of 0.000001 mg. is maintained during this remittent progression, until 0.0001 mg. has been reached. After that, the increment may be raised to 0.00001. Thus, by successive stages, a maximum dose is attained at a point determined for each individual by all the factors in the case, including the rapidity of increase, character and intensity of reaction and maintenance of tolerance, as well as the focal and general signs of improvement. The treatment is continued with intermissions, for many months, and may be resumed, if necessary, from time to time over a period of years.

In the majority of advanced cases tuberculin is likely to be harmful. Experienced observers may employ it cautiously under conditions that seem to call for its use, but others should avoid it, especially in cases which show a tendency to continuous fever, or in which there is, or has been recently, active softening. In the great bulk of early cases it is needless. Under proper treatment, medicinal, as well as hygienic, recovery will take place without it. Its

field of action is in the treatment of cases which have not passed beyond the stage of infiltration and which have shown a certain degree of improvement under proper food, fresh air, judicious rest and exercise, and other approved measures, including the right drugs, but in which improvement becomes sluggish or ceases, or retrogression takes place. The slight additional stimulus afforded by an appropriate tuberculin preparation administered at well-chosen times, and in correct dosage, will often reawaken the defensive and restorative processes of the organisms, and be followed by complete recovery.—*Jour. A. M. A.* J. A. S.

**SEXUAL NEURASTHENIA.**—Robinson considers the treatment of sexual neurasthenia in detail and says that the drug treatment of neurasthenia plays a secondary role, and what we said about drugs in the treatment of impotence applies with almost equal force here, except that we would emphasize the great value of strychnin.

Some consider strychnin *the* sovereign remedy in neurasthenia. Somebody has said, "what morphin is in painful conditions, strychnin is in neurasthenia." I give it here, the same as in impotence, in large doses, and frequently hypodermically. It is here that the compound syrup of hypophosphites, the compound glycerophosphates, lecithin, neuro-lecithin, and similar preparations prove signally beneficial. Arsenic often works wonders. The following simple combination is very good :

Arsenii trioxidi . . . . .	gr.	1-30.
Strychnin sulphatis . . . . .	gr.	1-20.
Calcii glycerophosphatis . . . . .	grs.	2.
Massæ ferri carbonatis . . . . .	grs.	2.

M. ft. pil. vel caps. No. 1, D.t.d. No. 30.

*Sig*:—One t. i. d., p. c.

Lecithin (neuro-lecithin) is useful, and small doses of the thyroid and the adrenal glands sometimes proves singularly and mysteriously beneficial. Perhaps we have no right to use the word mysteriously, for there hardly is any doubt now that sexual neurasthenia, with all its symptoms, may be caused by some disease or deficiency of the thyroid gland.

One thing we must always remember in the drug treatment of neurasthenia: to change the treatment frequently (if it be only the form—from solid to liquid or vice versa—or the vehicle) and to intermit every week or two for two or three days altogether.—*American Journal of Clinical Medicine.* J. A. S.



## Department of the Ear, Nose and Throat.

In Charge of DRs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

**LIMITATIONS OF BRONCHOSCOPY.\***—(By Chevalier Jackson, M. D.)—After a long series of successful bronchoscopic foreign body removals one is apt to think there are no limitations to bronchoscopy. The author had five failures, one of which he excluded because he alone had bronchosoped the case and permission for a second bronchoscopy had been refused. The other four cases had been attempted by two or more other bronchoscopists, and therefore might be said to define the limits of bronchoscopy. The limitations of bronchoscopy were reached in the inability to find a small foreign body far down and far out at the periphery of the lung, rather than in a failure to remove when found. The limitations in a particular case could not be said to have been reached until bronchoscopy had failed at the hands of at least two bronchoscopists of experience. Then thoracotomy should be done immediately, without waiting for pus formation. In his own cases the author would not feel justified in advising thoracotomy until another bronchoscopist besides himself had failed. Waiting for a foreign body to be coughed up was inadvisable, because, as shown by Delavan, even after expulsion, death had followed from disease meanwhile set up.

**Discussion:** Dr. Cornelius G. Coakley, New York City: With regard to the case of 1908, referred to, this woman had held a pin in her mouth; it was one with a white bead head and was about an inch long. She also had a very large goiter which had compressed and dislocated the trachea so that it was practically impossible to pass a bronchoscope down to the trachea. We could not use force enough to pass it below the compressed area of the trachea as far down as the bifurcation. A tracheotomy was done and then a subsequent attempt was made to get the pin; the patient coughed and I lost the pin, which went down further with the point up, and, although I was able to see it, I was later unable to get it. Dr. Jackson did not even see the pin. I think there is no question that had the modern methods of lung surgery with the intratracheal anesthesia been then developed, it would have been a perfectly safe and probably successful procedure in removing this pin. This attempt took place in about the first three weeks of the involvement. Dr. Jackson, in his modesty, did not tell you of another case. Dr. Jackson very kindly came to Rochester about two years ago to see my sister-in-law, who had inhaled a piece of orange peel through the larynx into the trachea, and developed soon after a very severe irritating cough and bronchitis, forgetting all about the original cause until about two weeks

\* Extracts from the Thirty-sixth Annual Meeting of the American Laryngological Society, held in Atlantic City, May 25 and 27, 1914. Including discussion.

after the accident, when the physician discovered this localized bronchitis and could not understand why it was localized until he got this history. Moreover, the fact that on two or three previous occasions some similar foreign body had been taken in during the process of mastication, coughing and inhaling, and each foreign body had been expelled within a few hours or two or three days after the accident.

A radiograph showed considerable involvement of that side of the lung, but air could get in. After a physical examination, Dr. Jackson decided, although there was nothing showing in the radiograph, not to do a bronchoscopy. The patient developed an abscess there and a bronchiectatic abscess or abscess of the lung, and discharged pus in great quantities and lost fifty or more pounds in weight during the next six months. The sputum showed no evidence of tuberculosis. She made a good recovery after a year of suppurating process in the bronchus or lung about this bit of white skin from inside the peel of the orange. If Dr. Jackson had gone down and done a bronchoscopy, in all probability with his skill, he would have found that piece of skin and recovered it and save the patient the following dangerous, but fortunately not fatal, condition.

Dr. Thomas Hubbard, Toledo: With regard to the limitation of bronchoscopy, this may often be established by the patient. Nothing is so exasperating as not to have your patient's support and that of his physician. Dr. Jackson will corroborate me in saying that secondary operations are very difficult ones without the full support of the patient and attending physician. On the other hand, occasionally the support of the patient is a factor in success. I recall a case of a woman who had a fragment of dental cement in the lower right bronchus, and one of these radiograms reminds me of it; it was located about the ninth rib, posteriorly, with some months of ulceration, abscess formation, and symptoms of tuberculosis. This woman's intuitive conviction that she had a foreign body there saved her life. Although two or three radiographs showed nothing, she insisted there was something there, and finally a competent roentgenologist located it. The first attempt at removal was a failure; the abscess cavity was full of pus and debris, and I could not locate the foreign body; the second attempt was made with a stereoscopic picture to guide us, and we successfully removed the foreign body and the patient recovered. Following the first operation I told her we had failed, but she said, "Never mind, you will get it the next time." That courage inspired us to do our best, and we were successful.

I recently had another patient with an upholsterer's tack in the right lung, who had been worked upon four hours consecutively by a bronchoscopist, under local anesthesia. He had literally soaked the patient with cocaine and his courage never faltered. After four hours' trial he consented to another type of operation. This I deemed impracticable by the upper method, fearing laryngeal edema after such a prolonged use of the tube. So a low bronchoscopy was done and the foreign body was found. The previous effort had turned it sideways and made it very difficult to extract. I must say that I doubt if the upper method could have reached the point of that nail, because it was so far to the right, and it was necessary in the introduction of the tube through the lower wound to carry it off at an extreme angle to bring the tack into the tube.

Dr. Emil Mayer, New York City: I recall being asked to see a boy who had a tack in his right bronchus, which had been there for more than a year, in the Presbyterian Hospital in New York. It was quite easy to do the bronchoscopy, but I simply could not see any sign of this tack. The bleeding was profuse and put me in such a position that I could not see any evidence of the foreign body, and I felt that here was one of the important rules to live by—to be sure you are right, then go ahead. It is possible if then I had known as much about using the powerful magnet, as Dr. Iglauer has recently recorded, I might have been more successful.

In another instance, showing the difficulties of bronchoscopy, I was called recently to see a young infant of about thirteen months, who had inhaled an open safety pin. A picture showed the pin in the upper portion of the larynx, and the local physician thought he could get it out by doing a tracheotomy. He failed. A second picture showed the pin had slipped down into the bronchus. It was not a difficult thing to introduce the bronchoscopic tube through the opening the physician had made, but the baby's condition was poor and I could not find the pin; the child's condition becoming worse, I desisted, and a few hours later the child died.

Dr. D. Bryson Delavan, New York City: It is interesting to understand the limitations of bronchoscopy, but also to thoroughly realize what it has done for humanity and we recognize that it is purely an American invention. Dr. Horace Green was the first to promulgate this method of treatment. Before the days of bronchoscopy the inhalation of foreign bodies was necessarily fatal. I remember a case in the '80's at the New York Hospital, where a young trained nurse with pleurisy was placed in my hands and we aspirated the chest. When introducing the cannula, and just as we had it well in position and were about to withdraw the blade, the girl made a wild movement of the arm, drawing it sharply back so as to break the needle close to the body, and by the time we raised her arm the needle had disappeared. We said nothing about it; there was a rise of temperature, but the patient got well. I followed her about twenty years, during which time she carried on her function as a nurse in excellent health.

Another case was a young farmer, who inhaled a full head of barley. The accident was followed by violent pneumonia and that by abscess of the lung, which broke through the outer wall of the chest, and in coming away the head of barley was found intact. He survived all of this. Such results are extremely rare.

Dr. E. Fletcher Ingals, Chicago: I am very glad that Dr. Jackson has brought up this subject, and I hope he will, in closing, say something about the limitations as to time. Dr. Hubbard spoke of some one working for four hours, and this impresses upon me the necessity of having a final word on the time one may work on such a case. For my part I have felt that we ought not to work more than a half an hour. When one feels the next second will be successful he hates to quit; also when there is a good deal of secretion, you dislike to stop before you try once more. In some of the long drawn out operations, about nine-tenths of the time is occupied in swabbing and one-tenth in looking for the foreign body. If we say no case should be operated on for longer than one hour, we would not be far wrong; while half an hour is the limit in the majority of cases.

I have had my failures in getting out foreign bodies, and I have sweat blood over them. I have recently, as you know, written a short article on fluoroscopic bronchoscopy, which I think is going to be a great aid in certain cases. With foreign bodies which do not throw a shadow, we must still rely on ordinary bronchoscopy. When there is an abscess formation with pus, it is often impossible to find the foreign body. When there is a stricture it is liable to be impassible. Fortunately, some of these organic substances will be coughed out, but I think that 90 to 95 per cent. of people will die from foreign bodies in three or four years from various abscesses, usually multiple, unless the foreign body is removed.

Dr. Williams E. Casselberry, Chicago: These foreign bodies do not always stay put in the lungs; they are movable, some of them, and it may explain why some of them, such as collar buttons, etc., have not been found on bronchoscopic examination. This was illustrated in my practice by a large grain of raw corn, first in the bronchus of a very small child; the child was small, and I should perhaps have made a lower bronchoscopy, but I made an upper bronchoscopy, and although there was considerable difficulty in getting this tube through and in getting vision, it did go to where the skiagraph showed a spot which seemed to be the grain of corn, and this showed in four skiagraphs. It corresponded to a place where there was obstruction and density of air. I aimed for that spot with my very small bronchoscopic tube, and searched diligently, but found no grain of corn. Things were beginning to look very uncertain when, on withdrawal of the tube, gradually and cautiously, just as my tube slipped out of the top of the larynx, the grain of corn popped into view beneath one vocal cord. In that position of the patient, with the head down, it had left its position in the bronchus and slipped up.

Dr. Harris P. Mosher, Boston: I have put the limitations upon myself rather than upon the subject. Certainly, in the case where I hunted two hours the other day to find a foreign body, I felt the limitations were mine.

In one case, after the patient came out of ether, there was a right hemiplegia, but that was the first time it had ever occurred in any case I have had to do with. The question came up as to what was the cause, whether it was the heart condition, the strain of the cyanosis in a thick necked individual, or an embolus.

There is another thing in connection with bronchoscopy; I have not seen it mentioned in the books, but it has occurred to me three times successively. This is a procedure that I do not feel like bringing before you, as it seems like going back to working in the dark. That is the old procedure of fishing. As you know in many cases, when you get the open speculum in, which was used before Dr. Jackson's speculum was devised, the cords stand very clearly apart and you look well down into the trachea. The trachea, however, is not likely to open. It occurred to me in such cases you might use the trachea for the tube in place of the bronchoscopic tube; in other words, having the cords well open, you could go down with your forceps and take a blind shot in the dark, knowing it was a blind shot.

The first case of mine was in a two-year-old girl, who had a two-inch pin lying head up and across. In that case a blind shot, boxing the

compass with my forceps, was successful. The second case was a fifteen-month-old baby, who had a nail in the lower bronchus, head up, and in that case I decided to try a shot before putting the case under ether. I caught the head of the nail and brought it out. I just had a third case in connection with Dr. Clark, in which a fifteen-month-old baby had a peanut in the bronchus for three or four days; the trial of a luck shot here did not reveal anything. A luck shot in the right bronchus produced nothing, but in the left bronchus it brought out the peanut. If you will gauge the limitations and put a limit on yourself, it is worth while to try this shot in the dark, because it will sometimes work.

Dr. Chevalier Jackson, Pittsburg (in closing): In regard to Dr. Mosher's statement as to the limits, the point I want to make is that the difference between personal limitations and the limitations of the method are shown when two men have tried and failed, for then I think we can call that failure due to the limitations of the method rather than to personal limitations.

In regard to the case of embolus that occurred after a foreign body, which was quite easily removed four weeks previously with no special difficulty, either from a septic endocarditis or from the lung itself, an embolus had gotten into the cerebral circulation. His physician reported the boy improved for almost a month and gaining rapidly when suddenly he had a convulsion with paralytic symptoms.

Dr. Swain raises a number of interesting questions in regard to anesthesia, but I have seen no reason to change my attitude from that of two years ago, especially in children under six years of age.

In regard to suspension laryngoscopy for foreign bodies, I have not tried it, and therefore am not qualified to speak; I have no doubt it has a large field of usefulness.

The limitations in regard to time were asked for by Dr. Ingals. Each must decide for himself. The limitations stated by Dr. Ingals are about right. If every man would publish the time used on every case it would be well. Half an hour for a child and an hour for an adult might be taken for a standard, to be modified in the particular case. My personal limits have been in adults three and a half hours, but this patient had no anesthesia; he was a marathon racer, an athlete used to enduring physical stress, and he insisted on my going ahead.

Dr. Ingals brought up the limitations in upper bronchoscopy, which I am glad he called attention to. The limitations I spoke of were far out in the periphery in the posterior branch, too small for bronchoscopy. All were failures to find, not to remove foreign bodies after finding them.

Dr. Delavan referred to Horace Green's work; this is entirely new to me.

Dr. Mayer's and Dr. Hubbard's points bring up too much for this discussion. In regard to Dr. Coakley's case, where we decided not to do the bronchoscopy, that was an error of judgment on my part, and is not to be taken into consideration in this discussion, because if we include the errors of judgment there is no limitation to what bronchoscopy may do.

LYNCH.

## Miscellany.

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BRONCHIAL DEBILITY.—(*Gazette des Hôspitaux*, April 28, 1914.)  
 —At the meeting of the *Soc. Méd. des Hôspitaux*, April 24, 1914, Drs. A. Florand, M. François and H. Flurin stress the importance of bronchial debility in the domain of chronic bronchitis. The persistent inflammation of the bronchi, in the majority of the cases, is referable to a diminution of their power of resistance, a veritable bronchial debility. This debility is differentiated from other organic debilities by the fact that, apart from inflammatory attacks, it does not remain absolutely latent, but can be recognized clinically by the special symptoms which constitute its revealing syndrome.

The characteristic signs of this syndrome are hyperesthesia of the mucosa, instability of the circulation, and the special modality of the secretory reactions.

1. The bronchial hyperesthesia shows itself by a contraction of the respiratory muscles under the influence of the slightest irritation, whence results a lessening of the respiratory amplitude and increased frequency of breathing.

2. The circulatory instability provokes transitory congestions of the mucosa, which cause alterations of the voice, chiefly noticeable among vocalists.

3. Disturbances of secretion. Sulphur and iodine, besides other remedies, give rise to a catarrhal reaction in these subjects, which some writers have endeavored to explain by means of an idiosyncrasy, and which seems to be almost always associated with the other symptoms of bronchial debility.

McSHANE.

INFANTILE DIARRHEA IN BRISBANE, AUSTRALIA.—Dr. C. A. Thelander contributes a very practical paper to the *Australasian Medical Gazette*, March 21, 1914, on the treatment of epidemic infantile diarrhea in Brisbane, the so-called "gastritis," gastro-enteritis, or summer diarrhea of infants. He regards as diagnostic features the arrest of the digestive functions and the appearance of the typical green stools with their characteristic odor. He has treated over four hundred cases, ranging in age from eight days to seven years. Of the cases treated by him from the beginning, only two died: in one of these cases intussusception developed, and in the other a relapse occurred.

The most characteristic feature in the gastro-intestinal condition is the stool. There is often costiveness at first, in which case the child is almost invariable feverish, and the first stool are not usually green, but whitish, or very pale yellow. This is so frequently the case that any child who has passed an unusually pale motion, and is out of sorts, but not jaundiced, should for safety be treated as gastro-enteritis, no matter what symptoms preponderate. After the pale motions, often loaded with white curds, and generally of a characteristic mawkish fetor, come the typical green mucous stools, with some curds, pale or green mucus, and traces of blood or pus in variable proportions. The disease should be well under treatment by this time. The temperature has gone up to 103° F., and in one case to 106° F.

Dr. Thelander has evolved a definite system of treatment. He never uses gastric lavage, neither enemas. The latter were used at one time with discouraging results, and the former did not appear to be rational treatment. The first instruction is to stop all food, and to give water very copiously. It is useful to give albumen water or barley water; besides, it pleases the anxious mother. A little salt should be added to the albumen water, for it makes the child drink better. When a child is in a very low condition, repeated drinks of warm water are as good a stimulant as is required for a few hours; thereafter, liquid peptonoids may be given.

The first medication is, as a rule, calomel, one or two grains every hour or two until six doses are given. If costiveness be marked, however, an initial dose of castor oil is useful, followed by calomel. In the early morning sulphate of magnesia is given in doses of from 20 to 30 grains, adding a little salol, or menthol and glycerin. Menthol seems to be better when there is any tendency to vomiting. If the vomited matters be very acid, carbonate of magnesia (5 to 15 grains) is useful. Diluted sulphuric acid or hydrochloric acid is often of service.

Nutrition must not be overlooked; a large amount of water should be given. Next day, one or two doses of calomel are given, and sulphate of magnesia the next morning. It is rarely necessary to continue this treatment more than four days.

The action of the magnesia-sulphate seems to be three-fold: purgative, mildly antiseptic and precipitant. The toxic albumoses or albuminoid substances generated in the intestines are precipitated by the metallic sulphate, and their absorption thus hindered, and

to this action is probably to be attributed the fact that even very collapsed infants stand the drastic medication very well. The stools soon lose their fetor, and, as a rule, the yellow color returns on the third day. The magnesia is given four or five times a day until the stools are yellow again. No milk or milk products are given until the stools are yellow.

Thelander never uses bismuth, opium, or astringents.

McSHANE.

COMMENTS ON VERA CRUZ WOUNDED.—Most of the wounds were caused by the Mauser type of steel-jacketed bullet. Many were at ranges considerably under 600 yards, and the explosive effect on long bones at such range was well illustrated in several cases.

The general character of the wounds conformed to the well-recognized effects of the modern high-power rifle. A number of wounds were caused by small fragments of the steel jackets of the bullets. As the fighting was largely in the street, it is supposed that bullets striking the hard pavements exploded, with the result that the fragments of the jacket became secondary missiles.

In many of the flesh wounds it was noted that either the wound of entrance or the wound of exit, or both, were ringed by an area of greatly devitalized tissue. This usually sloughed off within ten days, and healing went on by granulation. This devitalization of tissue was particularly marked in long, guttered wounds with laceration.

Three cases of late hemorrhage occurred—two in wounds of the thigh and one in a wound of the arm, the latter due to separation of the slough from a burn of the brachial artery.

There were three cases, as described above, of nerve injury.

The one wound of the skull coming under our observation bore out the well-known fact that without fracture, or at most a very slight injury to the outer table, extensive damage may result to the inner table or brain.

All observers agree that gunshot wounds of the spine are remarkably fatal, and the serious nature of such cases is augmented when there exist chest and abdominal injuries or hemorrhage.

Of the five cases of abdominal wounds only two involved the peritoneum. Three cases had the wound of entrance in the hypogastric region and involved neither the bladder nor peritoneum.

Infection, except in the cases noted above, was mild in character. In the amputations infection of the stumps occurred. In two of



these the bullet had entered above the line of amputation, necessitating incision through the track of the bullet. In the cases of gas infection the extension of the ordinary pyogenic organisms by the lymphatics is a strong probability.

Eighteen or 32 per cent. of the cases were wounds of the lower extremity, comprising two of the three fatal cases. Both of these were compound fractures of the thigh. In each case the bullet had struck the femur and produced extensive comminution, injuring soft parts and vessels by secondary missiles of bone. Certainly compound fractures of the thigh, associated as they frequently are with hemorrhage infection and the difficulties of transportation, will tax to the utmost the judgment and skill of the surgeon.

It is generally conceded that wounds of the chest do remarkably well, and the one serious case on the Solace bears out this opinion. On admission the case appeared to be very grave, but went on to a rapid convalescence.

The knee joint was perforated in two cases. In neither was there infection, and impairment of function will probably not result.—(*Naval Medical Bulletin*)—*Army and Navy Register*.

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## Medical News Items.

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THE MISSISSIPPI VALLEY CONFERENCE ON TUBERCULOSIS will be held in St. Louis on October 6 to 8.

PUBLIC HEALTH MEETING CANCELLED.—Because of the unsettled war conditions in Europe, the meeting of the Canadian Public Health Association, which was to have been held in Fort William and Port Arthur, Ontario, September 10 to 13, was cancelled.

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY will hold its annual meeting in Boston, October 19-21.

AMERICAN PURE FOOD LEAGUE.—This new organization has just been launched and its first meeting will take place on May 7 and 8 at the Academy of Medicine in New York City. The League's methods are to be constructive and they will demonstrate the possibility of protecting the rights of the consumer to honest foods, with no intention of being unjust to the producer, the manufacturer

and the distributor. The league believes that a majority should control the question of the people's food supply, and not a minority. The list of officers and members of the advisory board include men and women who have rendered long service in State food control work and who have given the pure food problem intelligent investigation and support. They include representatives of organizations, magazine writers, editors and others who have been active in educating the public as to the evils and remedies of food adulteration. The new league is partially the outgrowth of the advisory board of the food committee of the National Consumers' League, organized by Miss Alice Lakey in 1905.

BRITISH MEDICAL ASSOCIATION.—Under the presidency of Sir Alexander Ogston, M. D., K. C., V. O., emeritus professor of surgery in the University of Aberdeen, the eighty-second annual meeting of the British Medical Association was held in Aberdeen, Scotland, on July 28-31. Sir T. Clifford Allbutt, K. C. B., professor of medicine at Cambridge University, was elected president for 1915-1916; Dr. W. Ainslie Hollis and Dr. W. T. Hayward, chairman of the Australian Federal Committee, were elected vice-presidents. Cambridge will be the next place of meeting which will be held July 2-10, 1915.

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.—At the meeting of this Congress, which was held in London July 27, 1914, the following officers were elected: President, Dr. Charles H. Mayo, Rochester, Minn.; first vice-president, Dr. H. A. Bruce, of Toronto; second vice-president, Dr. Robert L. Dickinson, of Brooklyn; secretary, Dr. Franklin H. Martin, of Chicago (re-elected); treasurer, Dr. Allan B. Kanavel, of Chicago (re-elected); general manager, Mr. A. D. Ballou, of Chicago (re-elected).

FIVE-COUNTY SOCIETY FORMED.—The counties of Adams Amite, Franklin, Jefferson and Wilkerson, Mississippi, were organized into a medical society on September 10. The name chosen for the society is the Homoebitto Valley Medical Society. The following officers were elected: President, Dr. R. D. Sessions, Natchez, Miss.; vice-president for Adams county, Dr. J. D. Shields, Pineridge; for Amite county, Dr. W. R. Brumfield, Glosster; for Franklin county, Dr. Geo. Warren, Bude; for Jefferson county, Dr. R. L. Harrison, Fayette; for Wilkinson county, Dr.

C. L. Field, Centerville; secretary and treasurer, Dr. Marcus Beekman, Natchez.

**NEW DEAN OF TULANE DENTAL SCHOOL.**—At a meeting of the Board of Administrators of the Tulane Educational Fund on September 8, Dr. Wallace Wood was elected to succeed Dr. A. G. Friedrichs as dean of the Dental Department of Tulane University. Dr. Wood will fill the position of professor of operative dentistry and chief of clinic. A reorganization of the dental branch of the University was considered advisable by the Tulane Board after Dr. Friedrichs resigned. The dental clinic at the Hutchinson Memorial will be open the entire year from 8 a. m. to 5 p. m. The laboratories are to be renovated and completely equipped with modern appliances. It is the intention of the University to make the Tulane Dental School rank with the best in the United States and to occupy a position equal to that now held by the School of Medicine.

**NEW DEAN TULANE SCHOOL OF HYGIENE AND TROPICAL MEDICINE.**—On September 14, 1914, the Tulane Board elected Dr. W. H. Seemann dean of this school. The Tulane Board constituted the faculty for the coming year of the same members as heretofore with a few additions among the instructors. Dr. Seemann is well known for his active work as bacteriologist of the State and City Boards of Health, and he has been a member of the faculty of the school since its organization, having previously filled the chair including Tropical Diseases in the New Orleans Polyclinic.

**EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.**—Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B Street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass.; Stapleton, N. Y.; Chicago, Ill.; St. Louis, Mo.; New Orleans, La., and San Francisco, Cal., on Monday, October 19, 1914, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detec-

tion of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet 4 inches, nor more than 6 feet 2 inches in height.

The following is the usual order of the examinations: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate, and that they will serve wherever assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon generals \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40, and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years, up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

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

**BUREAU FOR PROTECTION OF MEDICAL RESEARCH.**—A letter has been sent out to the editors of the medical journals of the United States by the Bureau for the Protection of Medical Research of the

American Medical Association, asking that they carefully scrutinize all articles submitted to them for publication which deal with animal experimentation, or which discuss new or unusual methods of diagnosis or treatment, especially those relating to children. The reason for this is that anti-vivisectionists and fanatics are making well-meaning people believe that animal experimenters inflict torture upon the animals chosen for experiment.

LUCIEN HOWE PRIZE.—Dr. Mark J. Schoënberg has been awarded the Lucien Howe prize of the Medical Society of the State of New York for research work in ocular tuberculosis.

POLICEWOMAN A TRAINED NURSE.—The first policewoman of Buffalo is Mrs. Carrie S. Austin, a trained nurse. The *Buffalo Medical Journal* was among the first to advocate the appointment of policewomen in the cities of western New York.

GIFT TO ALBION HOSPITAL.—Mr. Arnold Gregory has donated \$30,000 to remodel and equip Albion Hospital, New York.

OPEN-AIR SCHOOL.—The Florida Open-Air School, an institution devoted largely to outdoor sports and exercises, opened in Jacksonville on October 1.

HIGHER REQUIREMENTS.—The State Board of Health of Illinois has issued a schedule of requirements in which this clause is included: "No medical college shall be considered in good standing for the purpose of the Illinois Medical Practice Act that does not require after July 1, 1918, of all students, excepting graduates of colleges of arts or science to whom advanced standing is given, in accordance with the requirements of this board as a condition of graduation, an attendance on five full courses of lectures in five separate years."

HOSPITAL TRANSFERRED.—The Long Island State Hospital for the Insane has been transferred by deed from the city to the State of New York. Hitherto the hospital has been leased from the city of New York to the State for the sum of one dollar per year, since the State act went into effect in 1893.

SWIMMING POOLS CONTAMINATED.—The swimming pools of Columbus, Ohio, have been treated with chlorid of lime as an examination by the health department of that city revealed contami-

nation with colon bacilli in one case and insanitary conditions in others.

**GIFT TO COLLEGE.**—The Medical Department of the University of Georgia, Augusta, received recently \$25,000, to be devoted for the improvement and development of the library of the college. The principal is to be invested and the income is to be used by the board of directors of the department for purchasing and binding books, periodicals and magazines designated by the dean.

**GARLIC IN TUBERCULOSIS.**—American physicians are experimenting with garlic as a possible cure for tuberculosis. According to reports, a Dublin doctor has met with considerable success in its use, and has published a book upon it. It is now being tried in the Metropolitan Hospital in New York. It is said that there is little tuberculosis in Italy, where garlic chewing is a national habit, and that in this country it is the Italian children, who have given up chewing garlic, who succumb to tuberculosis. Garlic contains a chemical substance called allyl sulphide in the percentage of two drops to a teaspoonful of juice, which is much stronger than the amount of the same chemical found in onions and shallots. It is this drug, it is claimed, which destroys the tubercular bacilli. Garlic juice is said to act very quickly upon tuberculosis of the throat, and application of the juice to lupus has excellent results, unless the disease is of long standing.

**AMERICAN RED CROSS SERVICE.**—The American National Red Cross Society has offered its services to all European nations involved in the war. Ten hospital units of three surgeons and twelve nurses each, with complete equipment, have left for the European war zone.

**CHRISTIAN SCIENTISTS CANNOT PRACTICE.**—A bill to allow Christian Scientists the legal right to practice was recently vetoed by the Governor of New York and protested by the State Board of Education, the Board of Regents and the State and County Medical Associations of New York.

**NURSES TO PROVIDE RADIUM BOND.**—According to report, the Milwaukee Radium Hospital, which is to have one-eighth of the world's supply of radium, will require every nurse employed to provide a bond of \$100,000. This step has been taken because of the need of protecting the radium against loss by theft.

PHRASE NOT A GUARANTEE.—Announcement has been made by Secretary Houston, of the Department of Agriculture, that after May 1, 1915 the phrase, "Guaranteed under the pure food and drug act," will no longer be used by manufacturers and packers of food. The reason given for this change by the Federal Food Inspection Board is that the guarantees have been used to mislead the public into believing that the food and drug articles distinguished by this phrase have been approved by the government.

PROMOTIONS IN UNITED STATES PUBLIC HEALTH SERVICE.—The following have recently received promotions in the United States Public Health Service:

Passed Assistant Surgeons Arthur M. Stimson, William C. Rucker, Richard H. Creel, Ruel E. Ebersole, and John W. Trask, promoted and commissioned surgeons in the Public Health Service.—August 14, 1914.

Assistant Surgeons Richard A. Kearny, Warren F. Draper, Julian M. Gillespie, and Lewis R. Thompson, promoted and commissioned passed assistant surgeons in the Public Health Service.—August 14, 1914.

Drs. Clarence H. Waring, George A. Wheeler, Thomas F. Keating, Henry C. Yarbrough, and Roland E. Wyrme, commissioned as assistant surgeons in the Public Health Service.—August 14, 1914.

THE FIFTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY AND PREVENTION OF INFANT MORTALITY will be held in Boston, November 12-14, 1914. A preliminary program has been sent out, which promises to be of much value to those interested in this work. Any information in regard to the meeting can be had by writing to the Executive Secretary, 1211 Cathedral street, Baltimore, Md.

MEMPHIS SANITARIUM EXPANDS.—In order to accommodate increasing admissions, Drs. Pettey and Wallace announce that they will build larger and more complete accommodations. An ideal location has been chosen for this purpose on beautiful grounds situated on the south side of South Parkway, Memphis, Tenn.

INOCULATION IN THE BRITISH ARMY.—The British War Office issued orders to the officers of the Royal Army Medical Corps on the importance of early resort to antityphoid inoculation during field service in the present European war.

HOSPITAL BEQUESTS.—By the will of the late Dr. Almena J. Flint, of Boston, the Massachusetts Momeopathic Hospital will receive \$10,000 and the Boston University Medical School \$5,000. By the will of the late George L. Thorndike, of East Boston, \$200,000 has been bequeathed to erect in Boston a hospital in memory of his brother, the late Dr. William H. Thorndike.

THREE NEW MEMBERS FOR TULANE BOARD.—At a meeting of the Board of Administrators of Tulane University of Louisiana, held on September 8, 1914, Messrs. Ernest Lee Jahncke, Joseph A. Breaux and Dr. M. J. Magruder were elected members of the Board. Mr. Jahncke succeeds D. C. Scarborough, of Shreveport, who resigned some time ago; Judge Breaux takes the place of Dr. J. H. Dillard, who resigned, and Dr. Magruder succeeds Dr. F. W. Parham, who also resigned.

MEDICAL WOMEN'S CLUB.—The official bulletin of the Medical Women's Club of Chicago has been received by the JOURNAL. It is a monthly publication issued by and in the interests of women physicians. The officers of the club are: Dr. Sadie Bay Adair, president; Dr. Mary J. Kearsley and Dr. G. Durbin Ries, first and second vice-president; Dr. Clara P. Seipel, secretary, and Dr. Blanche A. Burgner, treasurer. The office of the club is in the Fine Arts Building, Chicago.

SPECIAL ANESTHESIA SUPPLEMENT.—Beginning with the October issue and quarterly thereafter, the *American Journal of Surgery* will publish a 32-page supplement devoted exclusively to anesthesia and analgesia. This supplement will contain editorials, contributed articles and communications, abstracts, transactions of societies and book reviews; in other words, it will be a complete journal within a journal. The supplement has been adopted as the official organ of the American Association of Anesthetists and the Scottish Society of Anesthetists, and it will also publish the transactions of other like societies. Dr. F. Hoeffler McMeehan, of Cincinnati, is the editor of this supplement.

THE ST. JOHN-ST. CHARLES BI-PARISH MEDICAL SOCIETY held its regular quarterly meeting on September 2, at Reserve, La., with the following members present: Dr. R. H. Johnson, of Moberly, presiding; Drs. V. Lehman, of Hahnville; J. P. Elmore, Edgard; S. Montegut, Laplace; Louis A. Caboche, Lions, and L. Cheves Tebo, Reserve.



STATE BOARD EXAMINATION.—The Louisiana State Board of Medical Examiners will hold its examination on October 29-31, 1914, at the Hutchinson Memorial Building, 1551 Canal street, New Orleans. For further information address Dr. E. L. Leckert, Secretary, 104 Baronne street, New Orleans.

PERSONALS.—Dr. C. Irving Fisher, after nearly thirty years' service as superintendent of the Presbyterian Hospital of New York, has resigned as the head of the institution.

Dr. J. R. Dobyns, superintendent of the Mississippi Institute for the Deaf and Dumb for more than thirty years, has resigned and his son, Richmond F. Dobyns, has been appointed as his successor.

Dr. Oscar Dowling has been asked to give a talk before the Esculapian Club of Harvard University some time in January, 1915.

Dr. and Mrs. Charles Chassaignac, with their family, returned during the month, after spending two months in France.

Dr. Charles Borey, who left the early part of the summer for Europe, returned to New Orleans the early part of September.

Dr. and Mrs. John Elliott left during the month for Virginia, where they will be the guests of Mrs. Elliott's mother, Mrs. Douglas Forsythe.

Dr. and Mrs. George K. Pratt arrived recently from California, where they spent the summer.

Dr. and Mrs. Arthur Weber have returned from a visit to friends and relatives in Missouri and Arkansas.

Dr. and Mrs. Horatio Wiley spent a short while in Gulfport during the month.

Dr. and Mrs. J. Leo Burthe, who are visiting in Rogers Rock, N. Y., will spend a while in North Carolina before returning home.

Among the doctors who have returned from their vacations and resumed practice are: Drs. E. J. Mioton, W. W. Butterworth, G. K. Logan, Louis Levy, Isidore Cohn, Felix A. Larue, George Huhner, I. I. Lemann, E. F. Bacon, E. L. King, M. H. McGuire, and L. L. Abbott.

REMOVALS.—Dr. A. J. Warren, from Hurdle Mill, N. C., to Hillsboro, N. C.

Dr. George M. Malkin, from United States Navy Recruiting Station, New Orleans, to United States Navy Recruiting Station, Des Moines, Iowa.

Dr. P. Graffignino, from Charity Hospital, to 212 Medical Building.

Dr. W. P. Bradburn, from Charity Hospital, to Cusachs Building.

Dr. M. Bradburn, from Charity Hospital, to 1105 Maison Blanche Building.

Dr. G. D. Murphy, from Turkey Creek, La., to Meridian, La.

*Medical Economist*, from 712 Masonic Building, to Room 1210 302 Broadway, New York.

DIED.—On September 13, 1914, Prof. John A. C. Mason, educator, lecturer and master of the science of modern European history, and a member of the faculty of Tulane University.

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## Book Reviews and Notices.

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

Publication from the State Institute of New York for the Study of Malignant Diseases. **Carcinoma of the Thyroid in the Salmonoid Fishes**, by Harry R. Gaylord and Millard C. Marsh. Serial No. 99, issued April 22, 1914. Washington Government Printing Office.

In 1907 the Gratwick Laboratory, a part of the State Institute of New York for the Study of Malignant Diseases, became interested in the distribution of cancer and allied affections in fish. A study of the fish in the hatcheries in New York State made apparent the great extent of the disease in New York and other States. The conclusion was reached that it was necessary to get the co-operation of the United States Bureau of Fisheries. Mr. Roosevelt instructed the Commissioner of Fisheries to undertake the investigation in conjunction with the Gratwick Laboratory and Mr. Marsh was detailed for the work. The report now published by Dr. Gaylord and Mr. Marsh represents the combined labors of the Government Bureau of Fisheries and the Gratwick Laboratory of New York. A historical review and a complete bibliography are given and the work is embellished with numerous illustrations.

They conclude that the disease known as Gill disease, thyroid tumor, endemic goitre or carcinoma or the thyroid in the salmonidæ, is a malignant neoplasm, that it occurs under conditions of freedom in populated areas; that when introduced into breeding establishments it becomes endemic with epidemic outbreaks; and that the feeding of uncooked proteid food favors the disease. They found that the scrapings of water-soaked troughs in which the disease is endemic contained an agent which seemed to give rise to the disease of the thyroid through the drinking water. The work is a valuable contribution towards the etiology of the disease.

PARHAM.

**Surgery; Its Principles and Practice, for Students and Practitioners, by**  
Astley Paston Cooper Ashurst, A. B., M. D., F. A. C. S. Lea &  
Febiger, 1914.

This is intended as a text-book of surgery. It is, as the author's preface states, the function of such a work "to furnish the foundation on which a knowledge of surgery is to be built." We think the author has kept this object in view. As the basis of a surgical education this volume may be heartily commended to students and general practitioners, who have not made a specialty of surgery.

What the student of medicine needs is to get, as the author truly states, a correct perspective of the science and art of medicine, so that he may not unduly estimate the value of any branch. The author has certainly done this for surgery in the present volume. He has not attempted to cover the whole field of surgery, but has furnished a comprehensive, though concise, **foundation**, on which the student can build as his future may lead him to desire. The teaching throughout is sound and the descriptions clear, never prolix, but always to the point, so that the student can easily grasp the instruction intended, and not be led astray. For example, the discussion of fractures is very judicious and the student is readily made to understand the rational basis of their management. So, throughout the book, the principles of common sense prevail. It is a safe guide for the student and as such we commend it. A student may not learn all of surgery from this volume, but he certainly can get a good idea of the fundamentals which is really all he should get.

PARHAM.

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**A Handbook of Psychology and Mental Diseases, by C. B. Burr, M. D.**

This is a compendium of 235 pages, written in purely elementary style, and intended to give to the reader an adaptation of the basic principles of psychology to a practical understanding of insanity. The writer devotes the early chapters to discussion of psychology and attempts to show in what respects the normal or accepted principles of psychology are violated upon the inception of mental diseases. The remaining chapters deal with the different types of insanity, and how cases may be best managed, nursed and treated. The body of this manual very well meets the announcement of its title page. It represents one of the few serious efforts of medical writers to make a useful application of the dicta of psychology to the better comprehension of insanity.

E. M. HUMMEL.

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**Diseases of the Rectum and Colon and Their Surgical Treatment, by**  
Jerome M. Lynch, M. D. Lea & Febiger.

Because the region involved is not a vital one, and because fatalities seldom result from carelessness and error, it would seem rectal surgery has not received the serious attention from the profession which it is due, and which it must receive if it is to be redeemed from the hands of those who prey upon the ignorance and credulity of the public. The present day interest in the treatment of hemorrhoids and in rectal diseases in general is probably due in no small measure to the ultimate realization by the profession that an important and profitable department of practice was passing from its hands.

The present work is addressed more particularly to those practitioners who have not yet attained well-rounded experience in rectal and colonic surgery. The author has therefore discussed the subject in very full detail. The opening chapters have under discussion the general diagnosis, the preparation of the patient for operation and anesthesia. Under this last caption I cannot subscribe to the views expressed on spinal analgesia. The author says, "For these reasons spinal anesthesia has a very limited field of usefulness. Indeed, one is hardly ever justified in using spinal anesthesia in rectal work." It is in this very kind of work that spinal analgesia finds its best application, and operators who have familiarized themselves with its technic are emphatic in their claim of its many advantages, while those who criticize it most vehemently probably do so largely on theoretical grounds.

The principles of rectal surgery are well and clearly laid down, and the diseases, accidents, operations and procedures which come largely within the skill and experience of the practitioner who does surgery are given a gratifying amount of attention, with concise but ample description. The most modern operative technic is outlined, while absolute treatments and operations are only referred to when necessary to show the progress made in the practice of proctology. The chapters on hemorrhoid, fistula, prolapse and stricture are particularly well presented, so are those on colostomy and appendicostomy. The closing chapters on the new and yet unsettled subjects of short circuiting and serums and vaccins are timely and bring the work up-to-date.

Barring slight differences of opinion, the views expressed by the author, and the operative technic advocated should meet with the approval of all competent rectal surgeons.

Special effort has been made to render the very full series of illustrations as instructive as the text. The steps of the operation have been carefully shown. It is a book which covers the entire field in the most practical and comprehensive manner.

S. P. DELAUP.

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**Diseases of the Rectum, by A. B. Cooke, M. D. F. A. Davis Co.**

Twenty years ago there were few text-books available and the current literature upon the subject was very scant. Since then the needs have been more than amply supplied and to-day the announcement of a new work on diseases of the rectum is received with but a passing mention.

The impression gained on a reading of this book is one of conservatism and practicability. Both bespeak the good judgment of the author, which is a comforting quality to the student or practitioner who depends on a text-book in any branch as a guide to study or for reference in his daily work.

The subject is handled by several contributors; the first sixteen chapters are the work of the editor and the subsequent fourteen are credited to as many collaborators, proctologists of experience representing the views of the various sections of the country. A description of the surgical anatomy and physiology of the organs of the rectal tract precede the technic of the various operations; and the newer aids to diagnosis, e. g., proctoscopy, microscopy, etc., are fully dealt with, likewise the subject of treatment, both medical and surgical. The book goes further, for it includes the preparation of the patient, the after treatment, com-

plications that may occur, and how to overcome them. It also contains cautionary advice as to mishaps to be avoided.

In the discussion on the treatment of hemorrhoids, I cannot agree with the author in condemning the angiotribe method, a very satisfactory mode of treatment, in my opinion. However, I fully endorse his condemnation of the Whitehead operation, as being the most dangerous, the most complicated, and the most painful of all operations for hemorrhoids. It is unfortunate that this last operation is being done promiscuously by surgeons to the exclusion of more simple and better operations, irrespective of the number and size of the piles. I am also in accord with the author in discrediting the use of the gauze packing or rectal tube so frequently used, as being not only superfluous, but also the cause of much suffering.

The illustrations, mostly from photographs, are abundant and appropriate to illustrate the text. As a whole, it may be said that the volume represents the most authoritative teaching upon the subject.

DELAUP.

**A Clinical Study of the Serous and Purulent Diseases of the Labyrinth,**  
by Erich Ruttin, translated by Horace Newhart, with twenty-five textual figures. Rebman Co., New York.

This small volume, upon which so much has been written, contains, in a most clear, concise way, just the proper amount of description and explanation to give its reader a very solid foundation in the study, and a clear idea as to indications for treatment. The argument is so clear cut and to the point throughout, backed by 108 cases and used throughout the text collectively, that one must be convinced of the soundness of this Vienna School principle. We recommend this not only to otologist, but likewise to student and practitioner who must now need this information in his work every day.

R. C. LYNCH.

**Recent Studies of Tuberculosis.** (A reprint of articles published in the Interstate Medical Journal.)

This book furnishes to the medical practitioner forty-three articles on tuberculosis—discussing the disease in the various phases; and giving novel ideas as to methods of prevention, diagnosis and treatment.

Although some of the authors arrive at conclusions probably premature, the variety of subjects discussed shows how workers, of careful training and acknowledged faculty of conception, are persistingly endeavoring to tear the veil of mystery, thus giving to the world facts and knowledge which Koch and others have shown possible of attainments.

W. J. DUREL.

**Atmospheric Air in Relation to Tuberculosis** (with ninety-three plates),  
by Guy Hinsdale, A. M., M. D. (Smithsonian Miscellaneous Collections.)

The author of this treatise discusses in a most elaborate manner the relation of atmospheric air to tuberculosis, showing the prodigious researches that have been made during later years, with reference to

atmospheric air. The whole theory of ventilation is brought out under new lines of scientific investigation.

The value of forests, the influence of sea air and sun light (heliotherapy), especially in surgical tuberculosis; the interpretation of fogs in the populated districts, in the mountains and at sea level; the influence of compressed and condensed air; the physiologic value of ozone in the atmosphere; the relation of artificial pressure and breathing exercise; the great importance of fresh air schools for the tuberculous; the experiments, showing the relative value of exercise and graduated labor; and the description of various accessories for the fresh air treatment of tuberculosis, all impress the reader with the importance of harmonizing the out-door life, with the hygienic and other measures adopted for the cure of the disease.

In the statistics quoted, high altitude does not seem to play the influential part ascribed to it in the past years.

This book should be read by all Southern practitioners, for it contains valuable information of great interest to the phthisiologist and to the general practitioner. The conspicuous absence of statistics on tuberculosis from our Southern section—relative to the prevention, mortality and results of treatment, should be an object lesson to us and should awaken us to greater activities in tuberculosis work, in order that results in the prevention and cure of tuberculosis in our Southern section will be hereafter quoted and compared favorably with those of other sections of the country.

W. J. DUREL.

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## Publications Received.

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**LEA & FEBIGER**, Philadelphia and New York, 1914.

Blood Pressure, by George William Norris, A. B., M. D.

Dietetics, by William Tibbles, LL. D., M. D., L. R. C. P., M. R. C. S., L. S. A.

Diseases of the Nose and Throat, by Cornelius G. Coakley, A. M., M. D.

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Trachoma, by A. D. Foster, P. A. S., U. S. P. H. S.

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#### **Reprints.**

Significance of a Declining Death Rate, by Frederick L. Hoffman.

Reasons and Remedies for our Business Troubles, by Samuel Untermyer.

The Therapeutic Value of the Potato, by Heaton C. Howard, L. R. C. P., M. R. C. S. (Paul B. Hoeber, Publisher, New York, 1914.)

Medical Education and the Municipal Hospital, by August Schachner, M. D., Ph. G., F. A. C. S.

The Economic Progress of the United States During the Last Seventy-five Years, by Frederick L. Hoffman.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for August, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	4	2	6
Intermittent Fever (Malarial Cachexia).....	2	2	4
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	2	1	3
Diphtheria and Croup.....	6	2	8
Influenza.....	1		1
Cholera Nostras.....	1		1
Plague.....			
Pyemia and Septicemia.....	2	1	3
Tuberculosis.....	26	43	69
Syphilis.....	4	3	7
Cancer.....	21	11	32
Rheumatism and Gout.....			
Diabetes.....	6	1	7
Alcoholism.....			
Encephalitis and Meningitis.....			
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	20	8	28
Paralysis.....			
Convulsions of Infancy.....			
Other Diseases of Infancy.....	6	9	15
Tetanus.....	4	2	6
Other Nervous Diseases.....	2	1	3
Heart Diseases.....	46	36	82
Bronchitis.....	1	1	2
Pneumonia and Broncho Pneumonia.....	8	14	22
Other Respiratory Diseases.....	1	1	2
Ulcer of Stomach.....			
Other Diseases of the Stomach.....			
Diarrhea, Dysentery and Enteritis.....	14	11	25
Hernia, Intestinal Obstruction.....	4	3	7
Cirrhosis of Liver.....	7	2	9
Other Diseases of the Liver.....	3	4	7
Simple Peritonitis.....			
Appendicitis.....	3	2	5
Bright's Disease.....	28	17	45
Other Genito-Urinary Diseases.....	11	9	20
Puerperal Diseases.....	8	4	12
Senile Debility.....	2	1	3
Suicide.....	12	1	13
Injuries.....	20	15	35
All Other Causes.....	21	13	34
TOTAL.....	297	220	517

Still-Born Children—White, 28; colored, 25. Total, 53.

Population of City (Estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 per Annum for Month—White, 13.10; colored, 26.14. Total, 16.63.

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

Mean atmospheric pressure.....	30.04
Mean temperature.....	82
Total precipitation, inches.....	8.47
Prevailing direction of wind, southeast.	



# New Orleans Medical and Surgical Journal.

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No. 5

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## Original Articles.

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

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### ON THE BACTERIOLOGY AND PATHOLOGY OF BUBONIC PLAGUE.

By H. WINDSOR WADE, M. D.,  
Assistant Pathologist, Charity Hospital, New Orleans.

It is within a comparatively short time that the *Bacillus pestis* of Kitasato and Yersin, the etiological factor of bubonic plague, has become the subject of more than passing interest in this community. Previous to the appearance of the present outbreak of the disease but one culture of this organism had ever been isolated in New Orleans, that culture coming from a plague rat found, in 1912, on the water-front of this city.

Since the middle of June of this year a number of cases of plague in the human has appeared, and a much larger number of plague-infected rats has been captured. The earliest cases which were diagnosed as plague occurred in the Charity Hospital, and from each of them cultures of the causative organism were obtained.

These isolations, together with others from cases not occurring at the hospital, have afforded an opportunity to study, culturally and otherwise, the organism from different human cases and from the rat. No difference has been detected in any of these strains.

The lesions caused by *B. pestis* are less frequently discussed than the organism itself, but, as might be expected from the peculiar nature and manifestations of the disease, the tissues secured at autopsy show changes which are striking enough to well repay study. From two fatal cases occurring at the hospital, as well as from other more recent cases, an abundance of fresh tissue was secured. Both the gross lesions and the microscopic findings in the different cases coincided to a remarkable extent, probably the more so since all of these had been very acute and rapidly fatal.

The causative organism of plague is, because of its effect, appearance and cultural characteristics, classed as a member of the so-called hemorrhagic septicemia group. Other members are the bacillus of chicken cholera (*B. cholerae gallinarum*, Perroncito), and that of swine-plague (*B. suisepiticus*, Iæffler and Schütz). *B. pestis* is the only one of this group pathogenic to man, unless it is correct that allied organisms cause the typhus fever of Texas and the spotted fever of the Rocky Mountains.

The organism itself may be described as a non-motile, non-spore-bearing Gram's negative bacillus of varying morphology. It is said that a capsule is demonstrable when the organism is grown in the animal body, and, occasionally, in cultures. This is not a constant feature, however, for which reason it is not a matter of surprise that all attempts to demonstrate this structure in smears from human and experimental tissues and from various cultures have proven negative.

*Morphologically* there may be seen marked variance under different conditions. In the most of the tissue smears studied there are found vast numbers of rather plump bacilli with rounded ends, lying among the aspirated cells. Although many are solid and stained intensely, in the majority of individuals there is seen a more or less prominent central thinning, while many exhibit a distinct bipolar concentration of the cytoplasm. In some this appearance is so extreme that there is but a thin shell of cytoplasm visible. Under conditions of cultivation the morphology varies with the medium, but in all there are found a greater or less number of involution forms. These characteristically and regularly appear

in considerable numbers on media having a high sodium chlorid content.

The *isolation* of the organism is usually not difficult, although the amount and nature of material obtained by aspiration varies at times with the case. From a plague bubo it is seldom difficult to withdraw a few drops of material which is usually bloody, varying from a slight red coloration to a true bloody fluid. This is not indicative of *B. pestis* infection, however, since it may be seen in acute adenitis of gonococcal or other pyogenic origin. In an occasional case, particularly if early, it may be difficult to find enough characteristic bacilli in the aspirated fluid even to make a tentative diagnosis. Nevertheless, properly made cultures of this material will almost always yield a growth. The blood stream is, as a rule, free from organisms aside from the relatively few which are swept away from the primary focus. These are retained, for the most part, by the spleen. Only in a septicemia will the blood culture yield the organism, and in the cases of purely septicemic plague this is the only method of securing it, since there is no localized focus of infection.

Once isolated, there are several media upon which *B. pestis* will grow readily. The medium most frequently mentioned is a neutral or slightly alkaline agar. Upon this there developed, in twenty-four to forty-eight hours, a fairly thin, grayish, translucent growth, which, upon handling with the loop, is seen to have a tenacious, sticky consistence. Smears from this show a rather large, plump, solid bacillus with rounded ends, a few showing a tendency toward central rarification of the protoplasm. Here and there are seen individuals differing radically from the majority, in that they are very long, irregularly curved or bent, and by taking the counter-stain less intensely than the others, seem to be made up of less firm protoplasm. On agar made up with 2.5 to 4 per cent. sodium chlorid, instead of the usual 0.5 per cent., these involution forms are more numerous and assume more bizarre shapes. Human or animal blood-agar is very useful for the cultivation of the organism, but since it presents no advantages, it is little used. On glycerin agar the growth is at first light, but after a few days becomes quite heavy and white in appearance.

The most useful medium for the isolation and cultivation of the *B. pestis* has, in our experience, proven to be Lœfler's blood serum, such as is used in diphtheria work. This is easily procured, as a

rule, and upon it the organism grows quite luxuriantly, the reaction and constituents apparently being well suited to the germ. The twenty-four-hour growth on this is heavier than on the other media, and smooth and moderately shiny in appearance. Stained smears show the organisms to be shorter and plumper, and more coccoid in appearance than in any ordinary medium other than bouillon. In the latter the bacilli are frequently seen to form short chains of distinctly coccoid individuals.

Since the organism is non-motile and facultatively anaërobic, growing equally well with or without free oxygen, the growth in the semi-solid stab medium of Hiss is seen as a thin, sharply limited line along the stab-tract. No gas is produced from this medium, although in dextrose serum water it will form acid and cause coagulation. In a hanging-drop preparation of the living organisms motility is never seen.

As for the length of life of the organisms in vitro, cultures properly scaled have been found by certain observers to be viable upon transplanting as late as ten years and three months after planting.

The *infectivity* of *B. pestis* to all of the ordinary laboratory animals is very high. It is, therefore, good practice, when aspirating a suspicious bubo for diagnosis, to inject some of the aspirated material into the subcutaneous tissues of a guinea pig. In this animal a few organisms will cause death in three to five days when inoculated subcutaneously, or four to ten days when inoculated cutaneously, i. e., by rubbing the suspicious material upon the dry, shaven, slightly abraded skin of the belly. From the subcutaneous lesions lymph nodes, spleen and liver, the organisms may be found in smears and recovered in cultures. In this way a diagnosis based on cultural tests, whether positive or negative, will be confirmed. Or, if one prefers to await the result of the inoculation of pigs before making a definite diagnosis, a matter of three to six to eight days, the culture work may be avoided. The infectivity of the strains of *B. pestis* isolated in this epidemic is retained for a period as yet undetermined. Certainly cultures of at least one month's standing cause death of the guinea pig, using both methods of inoculation, with no less promptitude than when freshly isolated.

The infectivity for man seems to be quite as great as for the lower animals, and the effects of the invasion of *B. pestis* are reflected in the mortality statistics. The death rate varies very

greatly in different epidemics, being influenced by race, environment, climate, and, no doubt, very largely by the strain of the organism which causes the infection. In the great epidemic of 1901 in India bubonic plague among the natives attained a mortality of 76 per cent., there being 278,000 deaths in 362,000 cases. In Hong Kong, in 1894, 95 per cent. of cases were fatal. In Manchuria, where the disease assumed the pneumonic type, practically all of the individuals thus affected died. In San Francisco, in 1907, there were 77 deaths in 159 cases, a mortality of 49 per cent. In this community, where anti-plague serum has been used in large amounts, there have been but 4 deaths in 20 cases to date.

*Vaccins* made from either broth and from agar-slant cultures may be used in the immunization of individuals against the infection. While definite statements as to the efficacy of this as a prophylactic measure cannot be made, still, from experimental evidence, from serum reactions, and from certain reports on the vaccination of entire villages in India, there can be no question that a fairly complete immunity may be developed. According to some observers, vaccination in the first day or two of the disease will lower the rate of mortality. The toxic broth preparation could not be used for this purpose.

Upon the mode of *transmission* of the causative organism depends the whole epidemiology of plague. It is primarily a disease of rodents, appearing only secondarily and, one might say, accidentally in the human. It is carried from rat to rat or from rat to man by the flea as the intermediate host. Direct infection is said to be quite rare. The fleas concerned are not limited to any single species; probably any flea which will feed upon the blood of the rat may transmit the disease. *Pulex cheopis* is the Indian flea most commonly implicated, but in San Francisco the rats were found to harbor three times as many individuals of the species *Ceratophyllus fasciatus* as of *P. cheopis*.

The point of inoculation in the majority of cases cannot be determined. The bite of a flea is often a matter of but passing interest, especially with those accustomed to being so bitten. The organisms implanted do not, as a rule, give rise to any local lesions, but are carried by way of the lymphatic channels to the nearest node. Here they multiply and first make the result of their presence apparent.

The lesion produced by the *B. pestis* in the human body is quite

an unusual specimen of pathology. Ante-mortem there may be little seen besides a bubo, which is most frequently femoral, and which, when well developed, is diffuse and boggy, filling Scarpa's triangle and containing within its mass all of the lymph nodes in the immediate locality. At the autopsy table these lymph nodes are found to be greatly enlarged, soft, irregularly hemorrhagic and necrotic and rather indefinitely outlined from the hemorrhagic and edematous interglandular tissue. The organisms and poisonous products generated by them seem to have a peculiar engiolytic property. While the bubo is yet young the node is only moderately enlarged, quite firm, and most frequently is exquisitely tender. Later on, usually after the disease is well established clinically, the bubo begins rapidly to enlarge and soften. This is mainly occasioned by extensive diffuse infiltration of the glands and of the periglandular tissues with blood, and, beyond the zone of hemorrhage, with serum.

On account of the rapidly overwhelming progress of the infection and the vast numbers of bacteria produced, the organisms quickly overcome the natural barriers and are diffused along the lymphatic channels above the "primary bubo of the first order." This tract along the lines of lymphatic drainage above the "primary bubo of the first order" is often equally hemorrhagic as the primary areas, and contains numerous lymph nodes, "primary buboes of the second order," which may be as extensively degenerated as those first involved. The mesenteric, axillary and other distant nodes may form secondary buboes by metastasis of organisms, by way of the blood stream.

The spleen, liver, kidneys and lungs usually show extensive pathological changes, varying in degree, rather than in type, in different cases. These are marked parenchymatous degeneration and marked congestion. In the spleen this may, in areas, amount to hemorrhage. In the lungs there is often found great edema. Frequently the most striking feature of the gross pathology of these organs are numerous petechial hemorrhages of the serous surfaces.

Microscopically the largest and most severely affected lymph nodes are so greatly disturbed in their cellular arrangement that they are frequently scarcely recognizable. The sections as a whole show evidences of what appears to be an extremely powerful fibrolytic or connective-tissue-dissolving toxin. The walls of many

of the smaller vessels are so destroyed that they are merely indicated by roughly-sketched rings of swollen, disconnected fibers embedded in a mass of red blood cells.

Hemorrhage is very extensive in many of the larger nodes and in the periglandular tissues. In places, particularly within the nodes, areas are seen in which but few intact red cells remain, the most of them having been converted to a granular, amorphous debris, in which can be seen many bacteria. Where hemorrhage was most extensive, both within and without the lymph nodes, the cells present, not only those natural to the tissue, but those which are infiltrative as well, are dispersed and separated. In areas where less blood is present, however, they are more or less massed. In such areas are found fewer bacilli than where there is more cell debris. Serous infiltration is another striking feature of some of the sections, more especially those taken from tissues outside of the zone of greatest hemorrhage. Throughout the sections there is a considerable amount of fibrin deposit, in certain areas occurring in masses, while in others it is seen as a diffuse, irregular network.

Polymorphonuclear leucocytic infiltration is extensively found, not only in the nodes, but in the adventitia. Where the hemorrhage is more marked, however, these cells are comparatively few and dispersed. Fragmentation is frequently noted, and in many areas all of the cells present seem, by the dead, dull-black staining reaction of their nuclei, to be degenerated. Nowhere are leucocytes massed in collections great enough to suggest abscess formation. Endothelial leucocyte invasion is noted in all of the sections, although the proliferation and collection of these cells is more marked farther away from the more severely infected areas, and hence from the influence of the most concentrated and potent toxins.

Sections of the spleen show evidence of severe inflammation. Large numbers of polymorphonuclears are found throughout, together with less numerous large endothelial leucocytes, some of the latter containing phagocytized cells. Congestion is extreme, in areas being so marked as almost to amount to hemorrhage. In such areas are seen many very small foci of necrosis, in which very many bacilli and a variable amount of fibrin deposit can be demonstrated in the cell-debris.

In the kidney is found an extensive, very acute albuminous generation of the parenchyma. Quite unusual in ordinary pathological

conditions of the kidney is the deposit of strands of a fibrinous exudate in the glomeruli, indicating the severity of the action of the toxin at this point.

In the lungs there is nothing seen but a marked engorgement of the capillaries and a finely granular material in the acini, indicating fixation-coagulation of the fluid exudate of edema. The congestion noted here is a very noticeable condition of all of the sections studied, and is general all over the body. In cases which are prolonged death may intervene as a result of a secondary pneumonic.

As a whole, the gross and microscopic findings in a case of *B. pestis* infection are essentially degenerative, and, secondarily, hemorrhagic. This feature, in the acute cases, entirely overshadows the infiltrative and proliferative activities, which are seen at points distant from the original focus and in the cases of low-grade virulence, which more commonly recover.

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### CYSTITIS—AN OVER-WORKED DIAGNOSIS.\*

By A. NELKEN, M. D., New Orleans.

There are in medical nomenclature a number of plausible diagnoses to which the careless practitioner is much inclined to resort. These labels satisfy the curiosity of the patient or that of his family, and save the doctor the time, thought, and trouble that might be required if he were more competent or more conscientious.

To the snap diagnostician, all obscure fevers are "malaria," pains are "rheumatism," skin eruptions are "eczema," and any departure from normal urination or from normal urine is summed up under the all-inclusive diagnosis—"cystitis." But cystitis is no such common disease as its frequent diagnosis would suggest. Acute cystitis, uncomplicated by disease elsewhere in the genito-urinary tract, is extremely rare except when due to the introduction of instruments, used without due attention to the laws of surgical cleanliness. When an acute cystitis does occur, with or without treatment, the condition tends to spontaneous cure, and rarely becomes chronic. And chronic cystitis, uncomplicated, instead of

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\* Read before the Orleans Parish Medical Society, July 27, 1914. [Received for publication August 11, 1914.—Eds.]



being one of the most common of diseases, as the frequency with which this diagnosis is made would suggest, is, on the contrary, of very infrequent occurrence. It is well recognized, I believe, that chronic inflammation of mucous membranes localizes itself in or about glandular structures. An example of this is the infiltration about the glands of Littre, in long-standing inflammation of the anterior urethra, and chronic posterior urethritis always includes infection of the prostatic follicles. Chronic infection of the kidney pelvis is no exception to this rule, for, where retention, stone, or tumor of the pelvis can be excluded, pyelitis will be found to be dependent on involvement of the uriniferous tubules, an inflammation too mild in its symptoms to suggest the diagnosis of pyelo-nephritis.

And while it is true that recent histological research has shown the presence of occasional mucous glands in the bladder, for practical purposes this organ may be considered as containing no glandular structures.

Let us now consider some of the more common types of cases that come to the urologist with the diagnosis, made either by the family physician or by the patient himself, of cystitis.

First, there are the patients complaining of frequency of urination, examination of whose urine shows neither macroscopical nor microscopical pus. Too much emphasis cannot be laid on the fact that cystitis cannot be present without pus. And, in order to make the presence of pus of diagnostic value, we must know how the urine was obtained. In women, voided urine is almost certain to be contaminated with vaginal discharges, and in men, if any diagnostic importance is to be laid upon the presence of pus, we must make sure that its source is not urethral. Frequency of urination, in the case of a patient whose urine shows no pus cells, may be, and often is, a pure neurosis. In a case seen recently, the patient, whose mother had died of carcinoma of the bladder, was obsessed with the idea that she was threatened with the same condition. Because she had urinary frequency, her physician had made a diagnosis of cystitis, and had caused bleeding by the careless use of a catheter in irrigating. The sight of blood convinced the patient that she, too, had a cancer of the bladder, and her condition was much aggravated. Cystoscopic examination showed the bladder to be normal, and microscopical examination of the urine was negative for pus and blood. Cases of this type, not usually so extreme, are not of uncommon occurrence, and often tax our thera-

peutic skill, after disease of the urinary apparatus has been excluded by careful examination.

Other common explanations of frequent urination, when the microscope shows the urine to be negative as far as products of bladder inflammation are concerned, are to be found in diabetes insipidus, diabetes mellitus, and in the non-exudative type of chronic nephritis, the quantity, and not the quality, of the urine being the cause of the frequency for which the patients consult the physician.

Then, there is the woman who, having been subjected to some pelvic operation, ever after complains bitterly of bladder disturbance. Cystoscopic examination of the bladder and microscopical examination of the urine show nothing abnormal. If the purely neurotic element, such as might be caused by an artificially induced menopause, can be eliminated, such cases may be explained as being due to operative disturbance of the nerve supply of the bladder or to pressure on the bladder by the uterus in an abnormal position. In a case seen in consultation recently, relief of a most troublesome frequency was only obtained when the abdomen was reopened, and the uterus, which had been anchored to the anterior abdominal wall, was released and allowed to drop back. Such cases must not be confused with that pathetic complication, seen all too often after pelvic operations upon women, where a stubborn and often incurable peri-cystitis gives rise to a most troublesome form of bladder disturbance.

So much for pseudo-cystitis, the diagnosis of which is readily disproven by the absence of pus in the urine. Yet, pus in itself is not final evidence of the existence of cystitis. Primary infection of the bladder, save when due to the introduction of unclean instruments, is an exceedingly rare occurrence. The short urethra and patulous meatus of the female with much vaginal discharge at times explains an acute cystitis in certain susceptible individuals, trauma of the mucosa occurring in some unexplainable way. As has been already emphasized, the unbroken bladder mucosa, like intact mucous membrane and skin elsewhere, is an efficient protection against germ invasion. Pure cultures of pyogenic organisms have been injected in the healthy bladder without producing infection. It is a common experience to find a profusely discharging pus kidney or prostatic abscess with no involvement of the bladder mucosa. And where infection of the bladder has occurred,

when the inciting cause of the cystitis has been removed, the tendency is towards spontaneous cure. Even if the cystitis has been of long standing, the removal of the source marks the beginning of the cure. As an example of this, witness the healing of bladder tuberculosis after removal of the infecting kidney, that is, unless permanent changes have taken place in the deeper layers of the bladder, with marked infiltration with scar tissue—the result of long-standing and severe inflammation.

Thus we see that, before making a diagnosis of cystitis, the careful clinician will first have made certain, by the finding of pus in the urine, that an inflammatory condition of the genito-urinary apparatus is actually present; secondly, that, being present, the bladder itself is involved; and thirdly, if cystitis be present, such bladder inflammation be not dependent upon other pathological conditions, the removal of which is essential to the cure of the bladder lesion. For the purpose of an exact diagnosis, cystoscopic and urethroscopic examinations are essential in order that our opinions may rest upon the terra firma of scientific deduction. To one with a large experience in urological examinations, examples in proof are so frequent as to reduce this statement to a truism. I myself have seen any number of patients with pus in their urine who have been treated for months with irrigations of the bladder with all sorts of antiseptic solutions without benefit, and the cystoscope has shown a normal bladder, the source of the pus proving to be one or both kidneys. Another very common source of pus in the urine is the prostate. Here the bladder itself is usually normal. In a case under observation recently where there was a history of prostatic abscess of forty years' standing, no infection of the bladder had occurred, although it had been constantly bathed in pus discharging from a large pocket in the prostate. Acute infection of the prostate and of the prostatic urethra, such as occurs in gonorrhoea, is usually complicated by inflammation of the trigone. If this is so, the symptoms differ from those cases in which the trigone is not involved, in that there is no relief to the frequency of urination when the patient is in a recumbent position. When there is inflammation limited to the posterior urethra and prostate, the upright position favors the escape of a drop or two of urine into the prostatic urethra, giving rise to an uncontrollable desire to urinate. In acute cystitis, on the other hand, frequency is persistent, regardless of posture. One of the puzzling features of these cases of pos-

terior urethritis is that, in two patients with about the same amount of pus in the urine, while one will be suffering severely with tenesmus and frequency, the other will be having no discomfort. A reasonable explanation seems to me to be that in the case with the disturbance the inflammation has spread beyond the prostatic follicles and involves the peri-follicular tissues. In cases of prostatitis accompanied by cystitis, the bladder mucosa rapidly returns to normal as the acuteness of the infection subsides, even though the bladder still be bathed in the pus discharging from the prostate. This pus discharge is thrown into the prostatic urethra, and escapes backwards through the weaker bladder sphincter, rather than forward through the compressor muscle. The urethroscopic picture in these chronic cases is interesting. If the infection has been severe, going on to abscess, it is easy to see the opening of the pocket in the urethra, usually at the site of the mouth of a prostatic duct, to the side of the veru. I have seen a number of cases in which I was able to introduce a No. 6 ureteral catheter without difficulty. Pressure with the finger in the rectum causes a gush of pus, rapidly clouding the urethroscopic field, and making it easy to understand the persistently cloudy urine of the patient. It is evident that, in such cases, any line of treatment that is directed towards the bladder, ignoring the source of the pus, the prostate, must be futile.

Acute infection of the seminal vesicles is practically always accompanied by infection of the prostate, and it is not easy to separate the symptoms produced by vesiculitis from those of prostatitis. Chronic infection of the vesicles does not, in my experience, give rise to bladder disturbance, but the admixture of the alkaline secretion of the infected vesicle with the urine may cause persistent phosphaturia, with pus cells and bacteriuria.

Such, briefly, are some of the extra-vesicular conditions that give rise to symptoms that simulate a true cystitis or that are responsible for pus in the bladder urine. The routine use of the cystoscope will show many intra-vesicular conditions which, secondarily, produce cystitis, and the removal of which is essential if any progress is to be made in curing the trouble in the bladder. Of these causes, the most common of all is retention of urine—the inability to completely empty the bladder. The causes of retention are many. The more frequent ones are stricture of the urethra, hypertrophy of the prostate, diverticula of the bladder mucosa, cystocele in the female, and spinal disease, such as tabes, which makes it difficult or impos-

sible for the patient to relax the vesical sphincters. Cystitis, too, may be due to the presence in the bladder of a foreign body. In a case seen recently, a physician had made a diagnosis of reflex bladder disturbance, due to uterine displacement, and had actually done a laparotomy to relieve this trouble. Examination of the bladder showed a stone of the size and shape of a small chicken egg. Such experiences are of not uncommon occurrence.

New growths of the bladder will sometimes be found to be the pathological basis of an intractable cystitis. Here the only symptom may be hemorrhage, usually with the addition of pus. If the growth is malignant, there will usually be severe subjective symptoms, such as pain and tenesmus, in advanced cases giving rise to violent disturbances of urination. It is unnecessary to lay stress upon the importance of early diagnosis in this condition.

If any progress is to be made by the general practitioner in the treatment of genito-urinary conditions, it is essential that he familiarize himself with the use of the cystoscope. Unless he is competent to make a diagnosis, he has no right to waste his patient's time and money with the "guess-work" diagnoses of a decade ago. The cystoscope is not so mysterious an instrument as many of those who have not used it would be inclined to believe. Even moderate expertness requires practice in its use, it is true, but the general practitioner should no more attempt to treat urological conditions without it than he should try to treat the eye, being unfamiliar with the ophthalmoscope, or the larynx, not knowing the uses of the laryngoscope. His patient is entitled to the benefit of the latest progress along medical lines, and it is the duty of the physician to see that he provides it.

#### DISCUSSION.

DR. H. W. E. WALTHER: This paper is very timely. This subject was discussed before the Section on Genito-Urinary Diseases of the A. M. A. in 1913, when Smith read a paper on "Chronic Cystitis." In women it is not classed as a disease, but as a symptom. Dr. Nelken well stresses the point that if a patient has sufficient bladder symptom to cause him to come to the physician, he needs careful study, with the aid of the cystoscope and the microscope. Cystitis, we must remember, is to be considered primarily a symptom. Dr. Nelken's suggestions are timely and of great value.

## THE EFFICACY OF VACCINS IN THE TREATMENT OF CHRONIC DIPHThERIA CARRIERS.\*

By ARTHUR I. WEIL, M. D., New Orleans.

[This is an abstract of a paper read before the American Laryngological, Rhinological and Otological Society at its annual meeting in Atlantic City in June, 1914. The complete paper, with detailed report of cases, can be found in the *Laryngoscope*, 1914.]

The occasional persistence of Klebs-Löffler bacillus in the nose and throats of patients for weeks and months after their complete clinical recovery is a well-known phenomenon and has long caused annoyance. Also the presence of the bacilli in patients who have never had diphtheria, but who are as dangerous as the others, from an infective point of view. These patients carry infection as readily as the others, and require as complete isolation.

To shorten this period of enforced isolation in both classes, various procedures have been recommended—antiseptic sprays and gargles for the nose and throat, local applications to the tonsils, especially deep into the crypts, antitoxins, extirpation of the tonsils and adenoids, the use in the nose and throat of a living broth culture of the staphylococcus, endotoxins and vaccins. In a recent article (*Journal of the A. M. A.*, September 27, 1913) Albert has summarized these methods with sufficient reference to the literature.

It is the eradication of the diphtheria bacilli from the nose, throat and ears of both classes of carriers, and the resultant stamping out of a diphtheria epidemic in a public institution, an orphan asylum, that forms the basis of the present paper.

After a year or more of sporadic outbreak of the disease, constantly recurring, in spite of the most careful isolation of the diphtheria patients, twenty-four cases finally remained in the isolation wards of the Touro Infirmary, where all the active cases had been treated. Dr. Wilson, the visiting pediatricist of the asylum, kindly turned these cases over to me with the request that I should attempt to free them of the diphtheria bacilli, so as to allow of their return to the asylum.

For purposes of classification I divided the patients into three groups. First, those in whom the bacilli had persisted for more than two weeks after their complete clinical recovery, whom I called chronic active carriers. There were nine children in this group.

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Second, those who had never had active diphtheria, but in whom the presence of the bacilli was discovered by a routine cultural test of all the children in the institution. There were twelve children in this group, whom I called chronic passive carriers. And third, three children in whom less than two weeks had elapsed from the time of their complete clinical recovery from diphtheria to the beginning of the vaccin treatment. These last three, since they are not chronic carriers, are not considered in the summing up of the case reports.

It was a question at the outset which of the several methods that have been recommended to get rid of germs in carriers gave the best promise of success. For several reasons it was decided that the use of vaccins was the most advisable treatment.

Vaccins have been used for this purpose by several observers, who report varying success. The first to use them was Petruschky (*Arch. a. d. Path. Inst. z. Tübingen*, 1908, VI, Part 2, p. 331). He later reports seven cases (*Deutsch. Med. Wochenschrift*, 1912, p. 1319). His attempts were moderately successful. He also suggests the use of vaccins by the inunction method in children as a prophylactic. Of several hundred children thus treated only one has contracted diphtheria.

Hall and Williamson (*Jour. of Path. and Bact.*, Jan., 1911) and Forbes and Newsholme (*Lancet*, London, 1912) both report fair success with this method of treatment. All agree that even where the bacilli persist they are present in much smaller numbers than before. In my cases I used first a stock vaccin obtained from one of our manufacturing chemists, beginning with 20 to 40 million, and repeated every three or four days in increasing dosage until a maximum dosage of 400 million was reached. Six doses in all of the stock vaccin were used.

After an interval of twenty days treatment was resumed in the unsuccessful cases with a mixed autogenous vaccin, that is, one obtained from a mixed throat culture of several of the patients, and made in the laboratory of the Touro Infirmary. The dosage with this vaccin was begun at 300 million and rapidly increased to 1,400 million, five doses in all being used. There was no systemic reaction in any of the patients, and the local reaction was in no case very severe.

Of the twenty-four cases three had chronic otitis media, with the bacilli present in the aural discharge. Quite a number also had

a chronic nasal discharge, with the diphtheria bacilli present in the discharge. Cultures were always made from the nose and ear as well as the throat, and a negative report means that all discharges were negative. The results obtained, though at first somewhat disappointing, were in the end, I think, sufficiently satisfactory to warrant their further trial in the treatment of chronic carriers.

No culture was made until ten days after the initial dose of vaccin and three days after the third dose (160 million) had been given. At that time six cases gave negative cultures which remained permanently negative; that is, they may be called cures.

At the same trial eight other cases gave negative cultures and we had high hopes that the experiment would prove a brilliant success. On later trials, however, they gave positive cultures again. Indeed, throughout our experiments it was not at all unusual for two or three negative cultures to be followed by a positive and vice-versa. On this account no case was called cured until it had given at least six consecutive negative cultures. It might be said in passing that all cultural examinations were carefully made and that the alternation of positive and negative cultures was not due to slipshod examinations.

At the close of the first period of treatment; that is, treatment with stock vaccins, six more cases gave negative cultures which remained permanently negative. To most of these, since they had not yet at this time given six consecutive negative cultures, the mixed autogenous vaccins were later given in order to insure the permanency of the cure.

There remained nine cases of the twenty-one chronic carriers in whom the diphtheria bacilli persisted twenty days after the close of the treatment with the stock vaccins. These were then treated with the mixed autogenous vaccins, beginning with a dosage of 300 million and repeated larger doses every three or four days until a maximum dosage of 1,400 million was reached. Five doses in all of the mixed autogenous vaccins were given. By this time all but five gave permanently negative cultures and these five within a few days also gave permanently negative cultures. That the cures have been permanent is evidenced by the fact that up to the present time, over a year since the close of treatment, no case of diphtheria has developed in the asylum. A period of about two months had elapsed from the beginning of treatment until all the patients gave permanently negative cultures.



In drawing conclusions as to the value of the vaccin treatment in the twenty-one chronic carriers, the possibility must not be lost sight of, that many, if not all, of them might have cleared up without the use of vaccins. In view of the fact, however, that practically all of the cases showed a marked diminution in the number of bacilli present, shortly after the treatment was begun, and that all of them eventually did clear up with the large doses, and also in view of the fact that no further cases have developed in the asylum where they were constantly recurring before, the belief would seem to be justified that the vaccins are of some value. At any rate, it has been shown that in spite of the endotoxins they contain, diphtheria vaccins in large doses can be given without the slightest inconvenience to the patient and we are justified at least in recommending their further trial whenever the occasion arises.

From our experience it would appear that large doses give better results than small. Whether the autogenous vaccins are more useful than stock is a question on which our present experiment does not allow us to express an opinion.

Our conclusions would be more valuable if they were based on the observation of a larger number of patients.

*Conclusions:* 1. Chronic diphtheria carriers do exist.

2. The use of vaccins does have an influence in destroying the bacilli in chronic carriers.

3. The number of bacilli is markedly diminished by the use of vaccins, even where they do not entirely disappear.

4. Diphtheria vaccins, in spite of the toxins they contain, can be used in comparatively large doses without causing a rise of temperature or other evidence of a general reaction.

5. There seems to be no relationship between the amount of local reaction and the efficacy of the treatment.

6. Large doses of vaccins seem more efficacious than small ones.

7. It is necessary to get a number of consecutive negative cultures before a cure can be said to be effected.

#### DISCUSSION.

DR. H. E. MÉNAGE: I would ask about the examination of the urine in these cases?

DR. A. NELKEN: I have for a long time been much interested in the use of vaccins, especially in reference to genito-urinary con-

ditions, and I have experimented with them all—stock and auto-genous, and all modifications of vaccins as they have appeared on the market, more especially, the phylacogens. I am sorry to say that, with the exception of a few isolated cases where apparently brilliant results were secured, my results have been disappointing.

I have now under treatment a case of pseudo-diphtheria cystitis, a very rare condition of the bladder about the therapy of which very little is known. As a last resort, I am using an autogenous vaccin which contains largely the pseudo-diphtheria bacillus and the staphylococcus. After several months of faithful trial of this method, I am prepared to say that it has done no good. Along the line of Dr. Weil's remarks about a spray of staphylococci in diphtheria carriers, it has been believed that the pseudo-diphtheria organism could not live in the presence of staphylococci. That is not true in my case, for both organisms have been found in every culture.

I think it difficult to say what part the use of vaccin played in the cases reported by Dr. Weil, for cure was only found several months after use of the vaccins. It has seemed to me that the best results have been reported with vaccins in acute self-limited conditions, suggesting *post hoc* results.

DR. H. W. WADE: I am not well-informed on the treatment of diphtheria carriers by vaccins. Dr. Perkins asked me the difference between the action of antitoxin and vaccin. The difference is that antitoxin is used in an effort to overcome one particular substance, the toxin; a vaccin is intended to stimulate the production of several different protective substances, such as bacteriolysins, antibodies, etc.

DR. H. B. GESSNER: In defense of phylacogens, I would like to say that they were employed on me during the past year, with good results. I had grippe, complicated by frontal sinus involvement. Dr. Landfried gave me 5 c.c. of mixed infection phylacogens; I had a chill and fever that night and was soon relieved of my sinus trouble.

DR. A. I. WEIL (in closing): In answer to Dr. Ménage's question, would say that there was no systematic examination of the urine, but it was examined at irregular intervals. As far as I am aware, the use of vaccins causes no urinary changes, unless we have severe constitutional reaction. I agree with Dr. Nelken in regard to the therapeutic uses of vaccins; they seem to be of little value. In chronic ear, nose and throat cases, I have tried vaccin, with no

very beneficial results; hence I was skeptical as to the value of the treatment in these cases. The use of vaccins to rid carriers of the organisms is different from their therapeutic use. My ideas on the subject are similar to those expressed by Dr. Wade. The staphylococcus spray has been tried in many cases, with a moderate degree of success. Some cases of rather serious sore throat and tonsilitis, with constitutional symptoms, have been reported after using the spray. No bad effects have been observed, not even a constitutional reaction, after the use of vaccin. I was surprised, as I expected a reaction, especially as I was dealing with the diphtheria bacillus, which is rich in toxins.

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### SURGICAL SURPRISES.\*

(From the Department of Gynecology, Tulane University.)

By MAURICE J. GELPI, A. B., M. D., New Orleans, La.

A report of fifteen cases, illustrating the importance of considering the unexpected in giving a prognosis in gynecological and abdominal surgery.

I heard recently a most unmerciful criticism of an excellent surgeon, based on the sole fact that he gave an unqualified prognosis for recovery, in a case that died two days later. The captious layman, in this instance, did not stop to consider that ordinarily a laparotomy that is up and about fourteen days after operation is not expected to die. The surgeon, on the other hand, did not stop to consider that the unexpected sometimes happens, and that he should protect himself accordingly in giving his prognosis. This little incident made me curious to know, just how many times we might have exposed ourselves to the same criticism.

With this object in mind, I reviewed three hundred hospital cases treated in the gynecological department of the Tulane staff, and found that no less than fifteen of these cases, furnished us with what might be called serious, distinct, surgical surprises. I may state here that I am very much indebted to Mrs. A. M. Howell, in full charge of the records for the department at the Charity Hospital, for her valuable assistance in compiling the data for this paper.

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INTRA-ABDOMINAL RUPTURE OF PUS TUBES.—I found in a total of three hundred cases of all types, three cases of intra-abdominal rupture of pus tubes. In other words, we met this condition in one per cent. of the total cases reviewed and in three per cent. of the total cases of salpingitis, appearing in this series. This percentage is based upon only those cases of salpingitis in which the diagnosis was confirmed by the microscope, or by autopsy. The only exception to this is the case reported here in which no autopsy could be obtained, but which was typical clinically. These three cases are indeed surgical surprises to those who, like myself, were taught that a pus tube practically never ruptured.

It is to be noted that two of these cases ruptured while the patients were in bed, taking what we call the typical rest treatment. That is to say, they were confined to bed absolutely day and night and were not even allowed to get up for evacuation of the bowels. An ice cap was kept constantly on the abdomen and douches were given three times daily. Vaginal examinations were made from time to time in order to determine the presence of fluctuation, which might be drained from below. In but one of these cases did the abscess point in the vagina.

All three cases gave a typical history and objective signs of P. I. D., so that I shall not bore you with unnecessary details in that connection.

The first case was admitted in moribund condition. She was taken shortly before we saw her with sudden, severe abdominal pain, followed by a rapid rise in temperature and pulse rate. She died promptly after the rupture in spite of vaginal drainage, which was done without delay. The diagnosis could not be confirmed by autopsy, as the body was claimed, but clinically the case was typical.

The second case was in such bad condition before the rupture, that after the rupture occurred she was absolutely beyond reach surgically and she died promptly. Autopsy showed that part of the abscess wall was formed by a sloughing myoma.

The third case occurred just recently, and serves to illustrate the gravity of the situation, even under the most favorable circumstances.

In the morning the patient was about the same as usual, temperature 100.2°, pulse 80; had a good breakfast and did not complain of anything unusual. She also ate a hearty meal at noon. At about four in the afternoon she was taken suddenly with excruciating

abdominal pain in the region of the umbilicus. She immediately became cold and clammy, and her pulse rose to 150. Her leucocyte count was 19,000. I saw her less than three-quarters of an hour after these symptoms appeared and immediately opened her abdomen, evacuating about two quarts of pus, lying free in the lower abdomen and pelvis. All that was left of the adnexa were shreds of tissue floating in the pus, which filled a large cavity extending from the umbilicus to pubes and lined on all sides, by a thick, hard, inflammatory rind. In less than two hours after the first symptoms of rupture, the patient was drained and back in bed. You could hardly expect to diagnose such a case any earlier, nor could you expect, under ordinary circumstances, to institute treatment more promptly. Yet before eight o'clock that night the patient was dead.

POST-OPERATIVE RUPTURE OF RECTUM.—Another one of our surprises was a death following supravaginal hysterectomy for pus tubes and myoma. This case stood the operation well and when she got back to bed, she was put on proctoclysis, which we use almost routinely, for some hours at least, unless contraindicated. Twelve hours after operation, she expelled a large quantity of saline, with blood clots per rectum. Proctoclysis was immediately stopped. The patient became rapidly weaker, showed signs of internal hemorrhage, was laparotomized again and died the next day. Operation revealed the abdominal cavity filled with saline, which had ruptured through the rectal wall, next to which a pus tube had been dissected away.

POST-OPERATIVE RETROPERITONEAL INFECTION.—To continue my gruesome but instructive story, we had another death four days after supravaginal hysterectomy and appendectomy. On the second day this patient's temperature shot up to 104°; her pulse became rapid and weak, and her respirations were also considerably increased. The vagina, abdomen and urine were negative. The base of left lung showed a few rales. The appearance of the patient was strikingly depressed. On the fourth day she died. At autopsy, we found the peritoneum glistening, dry and without exudate or adhesions. There was a certain puffiness in the pelvis, however, and on opening the peritoneum, there was a definite swelling and edema of the retroperitoneal tissues, extending downward to the parametrium and in the region of the cervix. We concluded we were dealing with one of those violent, fulminating, retroperitoneal infections, ascending from the cervical lymphatics, of the type recently described by J. B. Murphy in his *Surgical Clinics*. In our

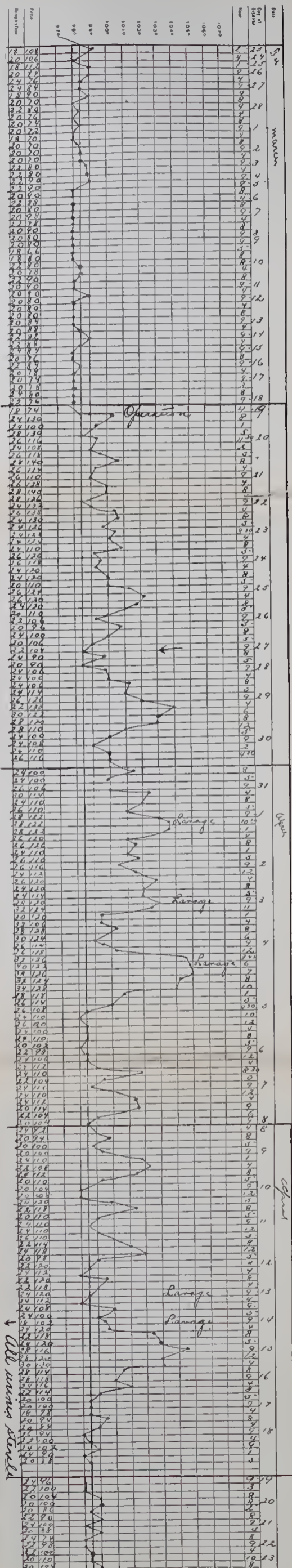
**case**, it was localized, especially to the right side. The right lung showed areas of consolidation,—lobular pneumonia. It is interesting to note that our record of the case states distinctly that we did not iodinize the vagina, as we usually do before our plastic work, or when we intend doing hysterectomy.

**POST-OPERATIVE THROMBO-PHLEBITIS.**—Less serious perhaps, but equally interesting from the standpoint of prognosis, was a case operated on September 4, 1913. I did an appendectomy, umbilical herniotomy and a Baldy-Webster suspension of the uterus. That patient remained in the hospital twenty-eight days on account of a septic thrombo-phlebitis of the right thigh and leg, following operation. I saw her recently, and fortunately she has recovered completely.

**POST-OPERATIVE INTESTINAL OBSTRUCTION.**—I had another interesting experience in a young woman in whom I did a supravaginal hysterectomy for pus tubes, leaving in a doubtful looking right ovary. About one year later she returned, complaining of severe constipation and pain in the right ovarian region. At the second laparotomy I found the condition pictured in Figure 1. There was a firm, thick band of adhesions about one-inch long and about the same width, stretching from a loop of ileum kinked into a V, to a large cystic ovary, pulled out of its bed. I excised the band, and the cystic ovary, covered up the raw surfaces and the woman was relieved.

**USUAL POST-OPERATIVE HERNIA.**—We had one case that suppurated, following a Montgomery round ligament suspension of the uterus. This case subsequently developed an inguinal hernia of the left side.

**POST-OPERATIVE PYELITIS.**—One of the most interesting cases we had in the series was a case of alarming post-operative temperature, cleared up by means of the cystoscope. Incidentally I may state that many gynecological and pseudo-gynecological conditions have been similarly cleared up for us by means of this instrument. This woman had a dilatation and curettage, trachelorrhaphy, perineorrhaphy, lipectomy, resection of tubes, and round ligament suspension. Her post-operative recovery was uneventful until the ninth day, when her temperature rose and she had a chill. Her temperature later rose to 104. All wounds were clean. The blood was negative for plasmodia. Her leucocytosis was 14,237; urine pre-



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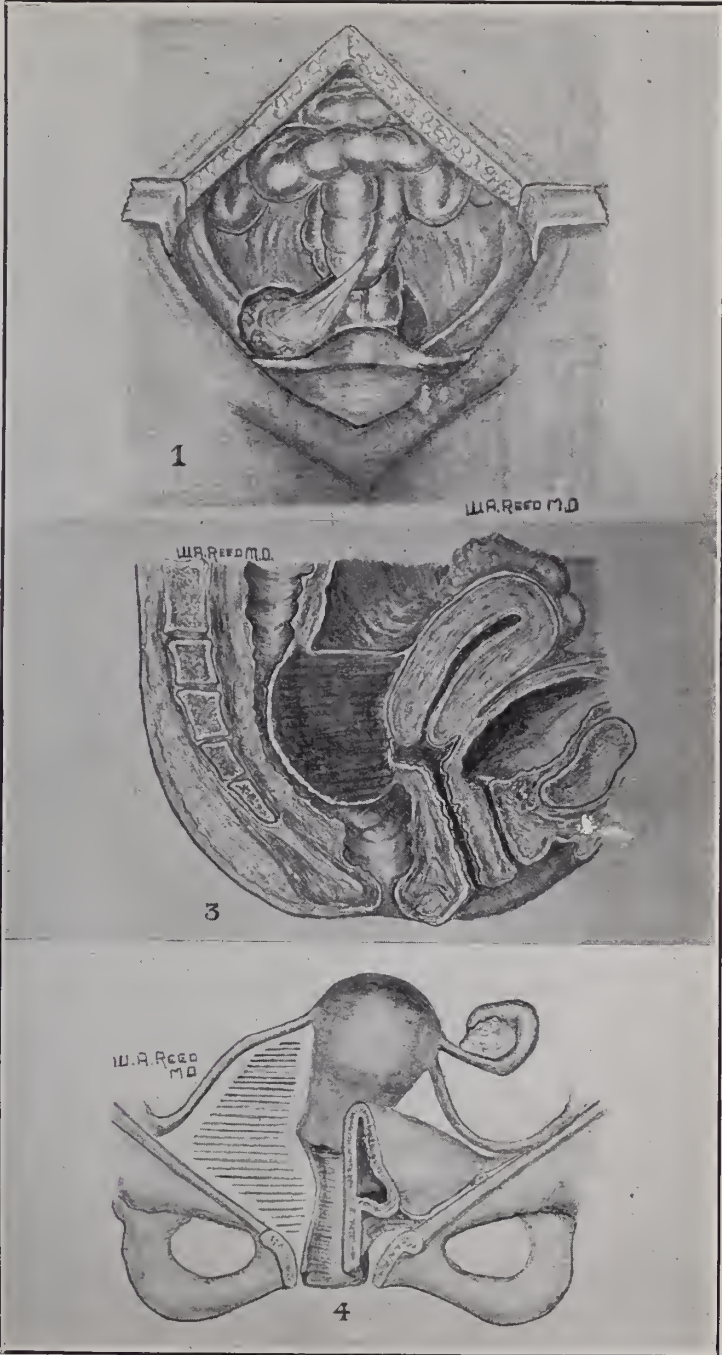
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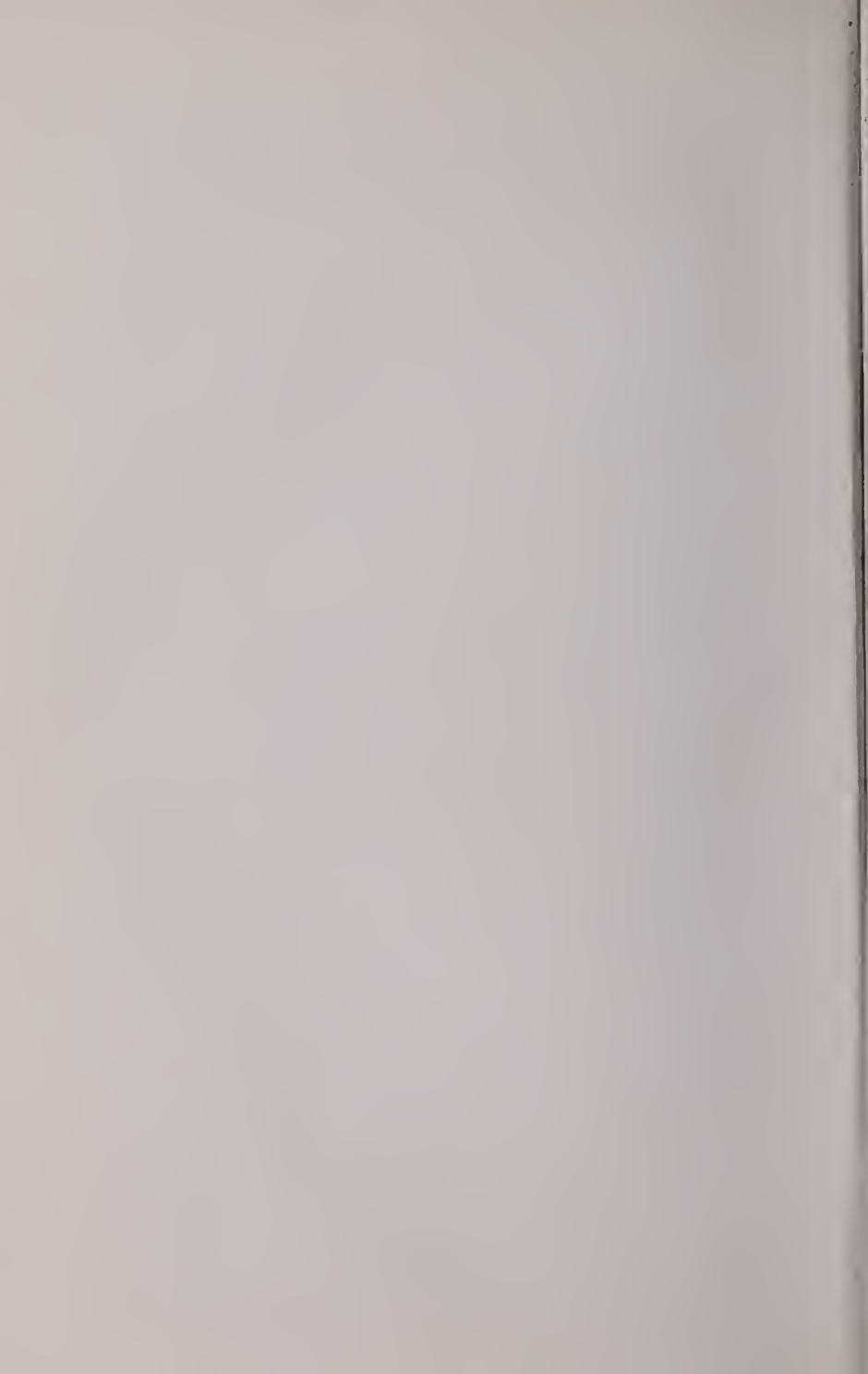
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viously examined showed nothing of note. Another specimen taken after the chill, revealed many pus cells and a pure culture of colon bacilli. By cystoscopic examination I localized the source of this infection to the pelvis of the left kidney. Immediately, pelvic lavage was instituted with  $\frac{1}{500}$  silver nitrate, with the success that you see indicated on Chart 2. This patient was discharged on the thirty-fifth day after operation, with all cultures from the urine sterile and apparently perfectly well.

**POST-OPERATIVE HEMORRHAGE.**—I find that in this series we had three interesting cases of post-operative hemorrhage. One of these was quite serious and followed excision of a vulvo-vaginal cyst.

The two other cases followed cauterization of inoperable cervical carcinomata, and in one of these the hemorrhage was so severe, that the patient died. The bleeding occurred about the sixth day in both cases,—just about the time that you expect the sloughing after burning. I may state here that this cauterization was not the superficial singeing that you ordinarily see, but the thorough burning which can only be accomplished by Percy's technic. This transforms the carcinomatous area into a solid mass of desiccated cells in which all the surrounding blood vessels are necessarily completely obliterated.

**UTERO-SACRAL AND PELVIC CELLULITIS.**—Another interesting case was one operated upon just before I left for my vacation, about the first of May. I did a dilatation and curettage, amputation of the cervix, and perineorrhaphy. I also removed an ovarian cyst of the right side, did a round ligament suspension and appendectomy. Some days after operation she developed a persistent septic temperature and, to my surprise, when I returned one month later, my patient was still in the ward. This woman developed a utero-sacral cellulitis, apparently ascending through the lymphatics of the cervix and involving the cellular tissue, especially behind the cervix and around the rectum, Figure 3. The inflammatory reaction was so marked, that Dr. Kostmayer made an attempt to drain the cul de sac, thinking that he was dealing with a deep-seated pus pocket. Nothing but a bloody ooze was found at this operation. This patient finally recovered completely under the rest treatment.

We had another such case, except that in this instance, only the cellular tissue of the right broad ligament was affected. This appeared in the form of a hard, painful mass, about the size of an adult's fist. This mass developed after a salpingo-oophorectomy of

the right side and appendectomy. This case recovered without drainage. Figure 4.

POST-OPERATIVE ATRESIA OF THE VAGINA.—The last case I wish to report is that of a complete atresia of the vagina, following cauterization of an inoperable cervical carcinoma. I am glad to state that this complication has not been repeated since we have improved our technic, and are using routinely water-cooled specula to protect the healthy tissues adjoining the carcinoma.

In order to forestall any possible criticism of this type of paper, I wish to explain that I am one of those who believe that often a single frank exposure and discussion of our failures results in considerably more enlightenment to ourselves and others, than would ten times as many reports of our successes alone. In certain types of cases, we expect successful results, and certainly there is not much to be gained by making these the special object of a report. But the objection may be raised that in reporting our bad results, we may be exposing, at the same time, our mistakes. My only answer to this is, that those who make no mistakes, either do nothing, do not know a mistake when they make it, or simply have no regard for the truth.

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## ACETONE, ACETONURIA, ACIDOSIS, ACID INTOXICATION: A PROTEST.\*

By E. D. FENNER, M. D., New Orleans.

Acetone is one of the decomposition products of oxy-butyric acid. It is not normally present in the urine. It is believed to indicate an abnormal acidity of the system. Acetonuria may then be regarded as the detected scout who reveals the approach of the enemy; acidosis, the detachment whose shots may do some damage; acid intoxication, the overwhelming attack of the main body of the foe.

In the past few years a great deal of writing has been done upon the subject of acetonuria in childhood. The effect of much of this literature, I firmly believe, has been pernicious in its teaching, and has resulted in a good deal of severe illness, and even in some deaths, in young children. Inasmuch as it is the purpose of this paper to be brief, practical and largely in the nature of a protest

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against the usually recommended treatment of the cases under consideration, I shall not attempt any review of the theories and explanations of the conditions which have been called acidosis, or acid intoxication, according to the severity of the symptoms. All this you can readily find in the files of the journals or in the more recent text-books on pediatrics.

The practical result, however, has been to elevate acetonuria, in the minds of a good many, into a clinical entity, to relegate all other considerations to the background upon the discovery of acetone in the urine, and to concentrate the therapeutic efforts of the physician upon the attempt to neutralize the tissues, or to alkalinize them, in order that the dreaded acetone may no longer be found in the test tube. Soda is the sovereign solution of the sickness, say the solons who have solved the problem for us. **Soda in large doses! At frequent intervals! At the beginning, in the middle, and after the termination of the attack!**

Vomiting, persistent and frequent, without fever, generally without diarrhea, but, on the contrary, with obstinate constipation, is a complex often seen in infancy. There is a group of cases in which attacks of this character occur with more or less regular periodicity. This is called recurrent, or cyclic vomiting. Either the sporadic or the recurrent cases are promptly attended by the occurrence of acetone bodies in the urine. The attack often comes on without premonitory symptoms, in the midst of robust health, and the child rapidly exhibits the signs of severe illness. To say that this is an auto-intoxication is truthful, but is not satisfactory to parents. To exhibit the superb purple reaction of acetone in the urine satisfies all the conditions. Doubt, like vice, is "a monster... of hideous mien," but here we have the malefactor caught. The parents can see it with their own eyes, and all that is necessary is to shoot it with broadsides of soda!

"Acetone bodies," says Ratchford in his recent book on pediatrics, "are found in the urine in many pathological conditions, and are found much more frequently in children than in adults. These bodies are commonly observed in diabetes, malignant disease, prolonged fevers, starvation, gastro-intestinal disorders, recurrent vomiting, other forms of severe and prolonged vomiting, nervous disorders, migrain, broncho-pneumonia, influenza, severe mal-nutrition, and in poisoning from atropin, lead, morphin, antipyrin and chloroform."

Occurring in such numerous and diverse conditions, it surely cannot be considered the main index to treatment! But in these otherwise mysterious, and, to all practical intent, inexplicable attacks of severe vomiting in babies, the temptation of acetone is almost irresistible. It is, as it were, so tangible. It so perfectly satisfies yourself; it so completely silences the doubts of the parents. The physiological chemist has worked out the acid answer to the acetone, and any ordinary chemist will tell you that soda will neutralize acid. To drop into slang, "Go to it, Kid!"

In the recent and excellent treatise by Ratchford, referred to above, there is found the following: "The diagnosis of this form of acid intoxication is made by the finding of one or more of the acetone bodies in the urine". . . .

"For the immediate relief of an attack of acidosis, from 2 to 5 grains of calomel, combined with bicarbonate of soda, should be given, and followed by a saline laxative. Immediately afterwards the administration of alkalis in large doses should be begun."

Other writers are somewhat more conservative, and appear to recognize the fact that sometimes soda will not be retained, but there is no doubt that the general tendency of the teaching is to emphasize the absolute necessity of soda therapy. It is urged by some that it be given intra-venously, if difficulty is encountered in its oral or rectal administration.

It is my personal conviction that 1. The number of cases of acetonuria you will see depends upon how regularly and systematically you submit the urine of babies to examination for acetone. 2. Consequent upon this, the number of cases you will diagnose as acidosis depends upon how completely you have been convinced that the diagnostic formula quoted above is correct. 3. The number of cases of acid intoxication, the dreaded big brother to acidosis, you will encounter depends upon how enthusiastically and vigorously you follow the advice given above for treatment.

It is far from my intention to advise that the presence of acetone in the urine be entirely disregarded, or to contend that there is no such thing as acidosis. What I wish to impress is that every case of illness in babies in which acetone appears in the urine, does not call for heroic medication with soda, and that the very cases which appear to be typical examples of "acetone poisoning" are least apt to be benefited by the soda therapy, against which I am protesting.

Acetone in the urine is but one of the manifestations of a sys-

temic disturbance of which the nausea and vomiting are far more important and dangerous. We all know the pallor, the dyspnea, the cold sweat, the feeble pulse, the sensation almost of impending death that attend upon severe nausea and vomiting. And if these are prolonged over many hours or days, how profound must be the disturbance of the cerebro-spinal and sympathetic nervous system, and, consequently, how terrible the havoc wrought upon the viscera—the liver, pancreas, kidneys.

I shall not burden you with any report of cases. In the last ten years I have seen many, ranging in severity from the mild types, lasting only twelve to twenty-four hours, to those extreme types of intoxication, in which the Hippocratic expression, unquenchable thirst, terrible restlessness, active delirium, persistent, even bloody, vomiting formed a scene of horror which once witnessed can never be forgotten. The latter, I am glad to say, I have only met in consultation after they had reached this stage. I have never had the misfortune to record a death among my own patients.

For a long time I was accustomed to give soda, not, it is true, in any such dosage as has been recommended and practiced by others (one of my friends has told me that he has given as much as sixty grains every two hours, and has frequently given it until a free diarrhea was produced by the soda); but still in doses as high as ten grains every two hours. To-day I seldom give it at all by the mouth, unless in doses of one or two grains, in combination with other drugs. Sometimes I use the Murphy drip, and dissolve the soda in the water so given. I am sure that my cases of vomiting with acetonuria are of briefer duration, and of less severity, than in the past.

My own conclusions in regard to vomiting with acetonuria in children are as follows:

1. The vomiting, and not the acetone, is what should occupy our attention. I have seen case after case, in which the vomiting was relieved; the symptoms of illness, and these are severe enough, had disappeared; the child was bright, and anxious for food, which was eagerly taken and assimilated, where the urine continued to be acid and to show quantities of acetone. With the resumption of normal functions, the acetone disappeared also.

2. In many cases calomel is rejected, but inasmuch as only those who are very badly bitten by acetone will consider every case of vomiting to be an instance of acidosis, it is worth while to try the

effect of fractional doses of calomel in the beginning. Soda is usually vomited, particularly if given in the large doses endorsed by so many authorities. At best, except in very weak solution, it is a nauseous dose, as any of you can demonstrate at the nearest soda fountain. If frequently repeated it becomes a positive irritant. I have seen children of two to two and one-half years of age, who could retain their food, such as condensed milk, but who would begin to retch the moment the nurse approached with the dose of soda. And yet the soda was continued!

3. The sovereign remedy for these cases of vomiting is morphin. It may be given hypodermically, or in the milder cases by mouth, in very small doses, combined with a tiny dose of cocain, and a few grains of magnesia, in a little chloroform water, or plain water. Once the vomiting has been arrested, you may attempt to neutralize the acid condition with alkalis. Meanwhile the agonizing thirst and the dehydration of the tissues must be dealt with. And since water is generally vomited as soon as it is taken, this indication is met by the Murphy drip. Here again the action of morphine is admirable. It is no easy matter to use the drip in children under two years of age. The rectum is irritable, and the extreme restlessness interferes sadly with its administration. During the slumber or drowsiness produced by the morphin, the rectal tube can be slipped in without arousing any protest from the baby, and the thirsty tissues eagerly absorb the life-saving fluid of which they have been drained.

4. During the height of the attack it is useless to try and give food by the mouth, but there comes a time when, with the resumption of bowel movement, and the improvement of the other symptoms, some nourishment must be tried. In my experience very dilute condensed milk, or malted milk, will be retained sooner than anything else. I have never had the temerity to try cow's milk first.

I recognize the audacity of this attack upon the teachings of authority, but authors do not always practice what they preach, and the history of medicine is filled with the records of exploded panaceas, and I am convinced that much mischief has been done by the overshadowing importance which has been accorded to acetoneuria, with the corrolary that soda is its specific. If soda dosage were calculated as food calories are, the 180 grains a day, which have been suggested for a twenty-pound baby, would demand 1,350 grains for a 150 pound adult!



Babies are not mere test tubes, and what we do not do is oftentimes more important than what we do.

Claude Bernard says: "When you meet with a fact that is opposed to a prevailing theory, you should adhere to the fact and abandon the theory, even when it is supported by great authorities and generally adopted."

#### DISCUSSION.

DR. EUSTIS: I second almost everything that has been stated by Dr. Fenner. Similar points were brought out by me in a paper read before the Louisiana State Medical Society in 1913. I classify acidosis as two types, exogenous and endogenous. My experience is that the average physician pays more attention to the presence of acetone than to the constitutional symptoms. In regard to the treatment, I find that we can easily clear up the symptoms in a child by giving it a stick of peppermint candy. Lime water is the best agent to neutralize acetone in the system. The administration of honey or glucose will cause the symptoms of vomiting, etc., and the acetone in the urine to disappear.

DR. FENNER (in closing): My object in reading this paper was chiefly to call attention to the fact that all the text-books and many journal writers are recommending soda in large doses in the treatment of these conditions, practically to the exclusion of other, and, to my mind, more rational therapeutics, and to protest against this teaching. I appreciate the suggestion of Dr. Eustis, but I believe that the prompt use of small doses of morphin, with small doses of magnesia, will relieve the nausea, and the symptoms of profound systemic disturbance, and that then honey, or other remedial measures, may be employed to complete the treatment.

## SUBCUTANEOUS TRAUMATIC RUPTURE OF THE GALL-BLADDER.\*

By L. A. FORTIER, M. D., New Orleans.

It has been my good fortune to have operated upon a case of subcutaneous traumatic rupture of the gall-bladder. The comparative infrequency of this injury stimulated me to a search through the Charity Hospital records and other available literature, which caused me to conclude that this is the first case of its kind to be reported in New Orleans.

The history of the case is as follows:

L. G., white female, aged 11 years, was referred to the hospital by Dr. L. Menville, of Houma, La., and was admitted to the service of Dr. H. B. Gessner, on June 20, 1914. Previous history was obtained from Dr. Menville. The patient was always a tall, thin and delicate child. Her complexion was never clear, and upon examination of her blood, she was found to be anemic. Six years ago patient had paratyphoid, from which she made an uneventful recovery. Four year previous to admission she had an attack of jaundice, which disappeared under treatment. Several times since then patient has run temperature, which could not be accounted for in any way.

Present illness dates back to twelve days previous to admission, when patient fell from a mulberry tree upon the back of a bench, in such a manner that she struck her abdomen just below the costal margin. Immediately following the accident she suffered with signs and symptoms of severe shock, marked with pain, tenderness, rigidity, and distension of the abdomen. Vomiting was a prominent symptom during the first four days; no nourishment could be retained. The bowels were first constipated, but moved normally after the second day. After the fourth day patient improved markedly, and from then on was able to retain all nourishment. She never had jaundice nor clay-colored stools. On the day before admission the doctor noticed that the abdomen was distended with fluid, and, after a blood examination, decided that the patient had traumatic suppurative peritonitis.

On arrival at the hospital, patient's pulse was 120, temperature 102° F., and respiration 30.

Examination: She was very much emaciated, and had the appearance of being very ill. There was no evidence of jaundice present. The abdomen was markedly distended; tenderness and rigidity were slight all over, but more noticeable on the entire right side; dullness, present in both flanks and pelvis. Immediate operation was decided upon. A tentative diagnosis of traumatic suppurative peritonitis, with probable rupture of some viscus, was made.

Operation was begun at 8:30 p. m., under ether anesthesia; a median incision from one-inch above umbilicus to pubis was made.

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\* Read before the Orleans Parish Medical Society, August 10, 1914. [Received for publication October 6, 1914.—Eds.]

The abdomen was found to contain about one and one-half pints of bile-tinged, bloody fluid, which was free in the cavity. The peritoneum, wherever it could be seen, was bile stained. The omentum was adherent to the parietal peritoneum in the right upper quadrant. A second incision three inches long was next made in the right hypochondriac region. The gall-bladder was easily found, with a rupture approximately one and one-half inches long, extending longitudinally through the fundus, down the anterior surface. The mucous membrane was very much everted. Strange as it may seem, there were no adhesions or plastic exudate present around the wound in the gall-bladder. The only attempt of nature to close the opening was by producing eversion of the mucous membrane. During this stage of the operation the patient became badly shocked, and an infusion had to be given. A purse string suture was placed around the tear in the gall-bladder, and a Pezzer catheter inserted. The gall-bladder was next anchored to the anterior abdominal wall. Gauze and tube drainage were inserted below the gall-bladder and two cigarette drains placed in the pelvis. Both abdominal wounds were closed with through and through silk-worm gut, on account of the shocked condition of the patient. After returning to the ward, at 9:30 p. m., child's pulse was 140, respiration 48.

For two days patient had a stormy time, but from then on she rapidly improved. All drains, with the exception of the Pezzer were removed on the third day.

The median abdominal incision became infected, and had to be opened on the fifth day. The Pezzer catheter was removed on the ninth day. Bile drained freely along the side of the Pezzer, but very little drained through it.

Five weeks after operation patient was feeling well, in spite of a biliary fistula. She was discharged on July 27, 1914, after having been given instructions to return in two months to the hospital, if the fistula had not closed.

I would have removed the gall-bladder during the first operation, had the patient's condition warranted it. My intention is to do a cholecystectomy on this patient, if the fistula does not close within two months from the time of her discharge from the hospital.

In closing, I would like to thank Dr. Gessner for his kindness in first allowing me to operate upon this case, and also for the privilege of reporting same. I wish to thank Dr. Sanders, the intern of the service, for assistance in procuring the complete history that we have.

## DISCUSSION.

DR. PARHAM: I would ask if Dr. Fortier noticed any signs of bile stain around the umbilicus. This would assist in the diagnosis of the condition.

DR. FORTIER (answering Dr. Parham): I found no such stain in this case.

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**MEDICAL ASPECTS OF HODGKINS' DISEASE.\***

By C. L. ESHLEMAN, M. D., New Orleans.

Since the memorable work of Dorothy Reed, who so accurately described the microscopic pathology which at once signifies this disease, little has been added to our knowledge of it. Within the past year or two, however, experimental studies by Bunting and Yates, in seeking the etiology of the disease, have brought out some interesting facts, which would seem to indicate that the disease is infectious in origin and they have even succeeded in producing glandular changes in a monkey similar in many respects to the changes found in Hodgkins.

This phase of the subject, I am pleased to note, will be discussed for you by the essayist who will follow me, and since the subject, purely from the point of view of the internist, offers one so little latitude, I take it that the chairman of your Committee on Scientific Essays has chosen me with the view that I might refresh your memories regarding the clinical aspect of the disease, rather than with the hopes that I might bring out anything new in symptomatology or diagnosis.

I would remind you that Hodgkins' disease was first recognized in 1832 by the clinician whose name it bears. It is a comparatively rare disease. In the four years from June, 1910, to June, 1914, in a clinic where approximately five thousand two hundred and fifty patients were seen, six cases were met with. The oldest was forty-eight years; the youngest eighteen. It is a disease of young adult life.

In a few words, the clinical picture of the disease is a progressive, painless enlargement of one or more groups of lymphatic glands, accompanied later by anemia and often a moderately enlarged spleen.

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\* Read before the Orleans Parish Medical Society, August 24, 1914. [Received for publication October 6, 1914.—Eds.]

The cervical glands in the posterior triangle of one or both sides of the neck are most often the first group to be involved, and for some time this may be the only sign of the disease, the anemia, fever and loss of weight occurring as a second stage. The most characteristic thing about the glands is that they are painless, soft, but not fluctuating, and show no tendency to ulcerate or break through the skin. Before attaining any great size, each gland can be readily felt and is easily movable, there being no tendency to adhesions or matting together as is so commonly seen in tuberculosis. As the tumors grow in size, pressure symptoms are not uncommon and are dependent naturally upon the group of glands involved. Dyspnea, cough, localized edema, dysphagia, ascites, jaundice, etc., may result

Fever is usually present, varying between 99° and 102°. Several types of temperature charts have been described which are of secondary importance.

The spleen is usually enlarged, but it seldom reaches more than a moderate size. The enormous spleens seen in such diseases as leukemia and Banti's disease are not found in Hodgkins.

The blood picture is that of a simple secondary anemia of the chlorotic type. There is nothing pathognomonic about it. Nucleated red corpuscles are rarely found. A leucocyte count above 20,000 is rare; more frequently it is 10,000 or 12,000. The differential count shows nothing characteristic except an occasional basophilic cell or myelocyte may be found. While, therefore, the blood examination shows nothing characteristic, it is of great value in excluding leukemia.

Loss of weight is not always associated with the glandular enlargement as an early sign. More frequently it appears as a secondary stage in connection with the anemia.

The prognosis, as in cancer, is bad. In acute cases the patient dies in a few months, milder cases may drag on for five or six years; rarely longer than this.

The treatment, as may be surmised, has been unsatisfactory, both medicinal and operative. Arsenic has been the drug of choice and it has been of temporary benefit in some cases. The same may be said of X-ray treatment. Remarkable benefit has been reported at first, but the eventual outcome has been bad.

If future investigations show that the disease is of infectious

origin, hopes may be held out that vaccin or serum treatment will be beneficial.

The differential diagnosis should embrace several conditions:

Leukemia is almost impossible to exclude without a blood picture, which should at once settle the question.

Tuberculous adenitis is more difficult. Suppuration and matting together from adhesions, sinus formation and evidences of T. B. elsewhere, are strong factors against Hodgkins. Microscopical examination is often necessary.

Syphilitic adenopathy must be ruled out. Such glands rarely attain a large size. Previous history of chancre and evidences of recent or active syphilis are important points. The Wassermann test may help, but is not an infallible guide. In the absence of a microscopical examination of the glands, anti-syphilitic treatment should never be omitted.

Lymphosarcoma, lymphadenoma and lymphoma, with which Hodgkins' disease has been said to be identical, are conditions which are to me clinically inseparable. While the pathologist may differentiate, all are malignant.

We are only too well aware that acute glandular enlargement is a prominent sign of plague. If we remember this, we have taken the first step in its exclusion. A bacteriological examination is the next and final step. Under present conditions in our city, should any doubt exist, it should never be omitted.

In conclusion, I cannot but observe that while the recent experiments would seem to indicate an infection origin of the disease, considerable weight has already been added to that side of the scale which would favor a neoplastic origin. The rapidly fatal result, the great similarity of the pathology in many cases to sarcoma, and the tendency to metastasis would seem to the writer evidence of a neoplastic origin difficult to contravert.

#### DISCUSSION.

##### PAPERS BY DRs. ESHLEMAN AND LANFORD.

DR. JAMISON: I was unable to make a clinical diagnosis in two cases. One was diagnosed at autopsy and the other after operation. One case had glandular enlargement. Wassermann reaction was

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(\* Dr. Lanford's paper was not handed in to the Secretary for publication.)

positive. Salvarsan caused decrease in size of glands. Patient died. Post-mortem showed conditions of Hodgkins' disease and lues. In another case, glands at post-mortem showed evidence of tuberculosis and Hodgkins' disease. Examination of blood is worthless. I would suggest removal of glands for the purpose of microscopic examination.

DR. ISIDORE COHN: I recall a case in which the gland removed was examined and found suggestive of Hodgkins' disease. Wassermann reaction was positive. Salvarsan was administered and the patient got well.

DR. C. L. ESHLEMAN (in closing): I was only able to make tentative diagnosis clinically. Positive diagnosis is made by microscopic examination of the glands. I remember a case of Hodgkins' disease with positive Wassermann reaction, in which mercurial treatment was given with benefit.

DR. J. A. LANFORD (in closing): I would recommend microscopical examination of glands for positive diagnosis.

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## EOSINOPHILIA IN ANAPHYLACTIC REACTIONS.\*

By FOSTER M. JOHNS, M. D.,

Laboratory of Clinical Medicine, Tulane College of Medicine, New Orleans.

In commonly expressed terms the response of the leucocytes to chemotaxis is a conservative process comparable to the gathering of soldiers to destroy an invader. This destruction is accomplished partly by means of phagocytosis—actual ingestion of the enemy—and partly by means of chemical substances which the leucocytes produce which, in some way, neutralize the harmful products produced by the enemy, or even to directly inhibit their growth and development in the body. The introduction into the blood stream of certain substances emanating from the foreign growth in the tissues of any of the pyogenic infections not only activates the production of large numbers of neutrophilic leucocytes, but they are also sensitized toward the particular organism in question. Thus also we see that the lymphocytes are stimulated to increased numbers by the sensitization to toxins produced by the organisms concerned in the production of such diseases as tuberculosis and per-

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tussis. In this instance the stimulated cells are non-phagocytic and are probably called forth prepared to form some neutralizing chemical compound or enzyme, harmful to the invading organism. Thus two of the, normally, most numerous white blood cells are increased in numbers in the blood stream and at the site of the disease and are particularly sensitized to produce specific results only after direct specific sensitization.

Until very recently a general cause underlying an increase in the percentage of eosinophiles in the blood was unknown. Many diseases were recognized to be always accompanied by an increase of these cells. Most of these diseases could not be correlated to formulate a rule governing their increase, besides leaving many cases of so-called idiopathic eosinophilia which served to almost discount their usefulness in many laboratory examinations. With the increased attention now being given to the anaphylactic reactions, it has frequently been noted that many of them are accompanied by an increase of the eosinophiles. It is with the idea of trying to correlate some of our well-known eosinophilias with this theory in order to explain the probable cause of at least three cases of unexplained eosinophilias, accompanying a train of anaphylactic symptoms that I have prepared this paper.

The ordinary use of the word "anaphylaxis" is to cover the symptom complex produced by an animal body reacting to a previous sensitization with some foreign proteid which may be either animal or vegetable. The use of this term necessarily covers a great variety of reactions, according to the nature of the proteid employed and the methods of producing sensitization and reaction. It is very probable that all infectious diseases of both animal and vegetable origin, as well as the majority of the protein intoxications, are only various manifestations of anaphylactic reactions.

Anaphylactic reactions produced artificially by pure vegetable proteids never give an increased number of eosinophiles in the blood. In the bacterial diseases, where the proteid element is vegetable, there is no increase in the eosinophiles. If anything, a relative decrease of them, made use of for diagnostic purposes for pyogenic infections, as Simon's septic factor. Anaphylactic reactions produced artificially with any of the animal proteins are always accompanied by eosinophilia. Diseases of the very lowest animal parasites, such as trypanosomes and malaria, are not accompanied by eosinophilia, but the relative decrease shown in the septic factor



are absent. Proportionate eosinophilias to the amount of animal proteid likely to be liberated in the body are found in all of the higher parasitic animal diseases. In trichinosis, where the muscular tissue of the body is filled with trichina, the eosinophilia is the highest, the height of the increase ranging from seventy to eighty-five per cent., and is coincident with the approximate death of the largest number of organisms in the tissues. The scale decreases to those parasites living outside of the body but injecting within varying amounts of proteid containing substances, such as uncinaria and the anemia producing bothriocephalus. In all of these conditions, artificial or actual, the action of the eosinophiles is analogous to any of the other leucocytes, not only increasing in numbers in the blood, but being found in enormous numbers at the site of the anaphylactic lesion.

True bronchial asthma, almost invariably accompanied by a very high eosinophilia, has almost conclusively been shown to have been originally caused in the majority of cases by intestinal animal protein absorption. Emphysema and enterogenous cyanosis are similar in their eosinophilias and are probably individual reactions to the same form of sensitization as that producing asthma. Among the various skin manifestations of disease several are accompanied by eosinophilia. The anaphylactic urticarias of certain individuals, following the ingestion of shell fish, are accompanied by a high-grade eosinophilia, while in the same type of disease from vegetable proteids, such as strawberries, the blood picture remains normal. Pemphigus and psoriasis are also accompanied by an increase in the eosinophiles, and both still have their etiology to be accounted for.

I have noticed in the past few months many individuals presenting the now known typical anaphylactic symptoms of often or occasional coryza, accompanied by violent sneezing. One of these cases I have been studying for a number of years. These studies were based on practically all of the conditions that would influence such a condition, such as atmospheric conditions, extensive changes in locality and altitude, the pathological conditions occurring in the respiratory tract, the inhalations of suspended particles and vapors, the habits, including diet and excretory movements. Five cases under observation presented marked eosinophilia during and just subsequent to each one of these disturbances, which ordinarily occur once or more times during a week.

Two of these cases amenable to treatment for approximate periods of one, two and three weeks' duration presented an absolute cessation of symptoms for the first time in many years, during which time the eosinophile count returned to normal or lower percentages when placed on an almost non-animal proteid diet. Upon resumption of the ordinary animal proteid diet in each instance the symptoms were resumed within twelve to eighteen hours. Fecal stasis, as shown by bowel movements and urinary reactions, have no connection with the process.

In conclusion, it seems to be highly probable that an increase of the eosinophiles is brought about in the majority of cases as a response to the introduction in sensitized animals of the higher animal proteins.

#### DISCUSSION.

DR. JOHNS (closing): No immediate increase in eosinophile results from the injection of large amounts of horse serum—it is seen following a subsequent injection that thus produces an anaphylactic reaction in the sensitized animal.

In trichinosis there is no increase in eosinophiles during the first two or three days when the trichina are penetrating the muscles. During this time sensitization of the animal to their by-products is being accomplished. From this time on the eosinophiles increase.

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### THE SPECIFIC CAUSE AND THE PROMPT SPECIFIC CURE OF PYORRHEA ALVEOLARIS OR RIGG'S DISEASE.\*

By C. C. BASS, M. D., AND F. M. JOHNS, M. D.

Tulane College of Medicine, New Orleans.

In August of this year we found amebæ in a stained preparation of pus from a case of pyorrhæa alveolaris. Struck with the possible importance of the observation, we at once secured and examined specimens from six other cases of the disease in patients in the wards of the Charity Hospital. Apparently the same species of ameba was found in each of the seven cases. Their close resemblance to the entameba of amebic dysentery and the marked specific favorable influence of treatment with ipecac and emetine in amebic dysentery led us to expect that the same effect might be exerted

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on this form of amebic disease also. Up to this time we were not informed on the literature of the protozoa of the mouth and had never read or heard any suggestion that amebæ were pathogenic in the mouth. We were, however, familiar with the fact that ipecac, and, more recently, the active principle of ipecac, emetine, acts specifically against amebic infection of the intestine. We began treating cases as we would amebic dysentery, with emetine, and have since made considerable search into the literature, to learn that pyorrhœa alveolaris was written about more than three hundred years ago, probably the same ameba that we had observed had been described by Grassi in 1849, and many others since, and that emetine, one of the active principles of ipecac, a remedy used for (amebic) dysentery more than sixty years ago, had been applied locally in cases of Rigg's disease, with favorable results, by Barrett<sup>1</sup> in collaboration with Allen J. Smith, in June of this year. So far as we know, ours is the first treatment of the disease by emetine given hypodermatically.

Amebæ in the mouth have been observed and described by many writers since 1849, when Grassi named one species *Ameba gingivalis*. Sternberg<sup>2</sup>, in 1862, described *Entameba buccalis*. This name is retained by Prowazek<sup>3</sup> in 1904.

An ameba (*Ameba kartulis*) was described by Kartulis<sup>4</sup> as pathogenic, and found in suppurating tumors in the mouth in Egypt.

Smith and Barrett<sup>1</sup> announced their belief that "*Endameba*" *buccalis* is pathogenic and present in all cases of Rigg's disease, at the June 30 to July 2 (1914), meeting of the Pennsylvania State Dental Society, and stated that they had obtained favorable results by local application of emetine hydrochlorid. Their paper was published in the August number of the *Dental Cosmos*.

The presence of *Endameba buccalis* in diseased gums was recently published also by Dr. Angelo Chiavaro<sup>5</sup>, of Rome, Italy, in a paper read before the American Dental Society of Europe at Paris, July 30 to August 1, 1914. He found it in every one of twenty-two cases of pyorrhœa and fourteen other cases, not pyorrhœa, out of a total of sixty-eight examinations. He concluded that "the endameba has no pathogenic action; on the contrary, as it feeds on bacteria, it is most probably an adjuvant in the auto-disinfection of the mouth. It is found in the pus of all cases of pyorrhœa alveolaris."

We have examined material from the lesions in eighty-seven cases

of pyorrhœa, and have found amebæ in eighty-five of them. One of the negative cases was a single slide prepared a distance from the laboratory, from the gum of a patient who was convalescing from plague. Pus could be squeezed from her gums, and the diagnosis of pyorrhœa alveolaris seemed indicated. It may be possible that other preparations from other teeth would have shown amebæ. The other negative case was that of a 13-year-old child with acute gingivitis, involving all the gums, of about eight days' duration. Thorough search failed to show amebæ, and we now believe this probably was not a case of pyorrhœa alveolaris or Rigg's disease.

In addition to the eighty-six cases in which the disease was either diagnosed by dentists or was so advanced that no mistake could be made, we have made more than a hundred examinations of preparations made from apparently normal gums and teeth, either in the mouths of patients who had the disease involving other teeth, or in people who appeared to have normal gum margins. We have not been able to find amebæ in a single such instance. We have, however, found them on several occasions in instances where the gum margin appeared inflamed and diseased, but the best that we could determine the disease did not extend to the alveolar margin. Such cases, perhaps, could not be called pyorrhœa alveolaris, but they are probably the beginning of the disease. In several instances we have found amebæ in similarly mildly inflamed and "easy to bleed" gum margins of one or more teeth in patients who had well-advanced Rigg's disease around other teeth. We have found amebæ around teeth in what we have considered to be all the different stages of the disease in the same case, from the slight redness at the gum margin and tendency to bleed easily to the tooth hanging loose in its socket or standing, entirely stripped of gum, on the exposed carious bone.

The technic of examining for the amebæ is very simple. Remember that they are most numerous in the bottom of the lesion. A little material is removed with a suitable instrument (a good toothpick serves the purpose well), diluted on a slide with a little salt solution, saliva (patient's) or water. A cover glass is placed on the diluted material, which should be examined promptly with the high dry lens of the ordinary microscope. By careful search amebæ are found, showing the characteristic ameboid motion. We are not prepared at this time to say whether there is more than one species

to be found. The amebæ we have seen vary in size from about that of a leucocyte to about three or four times this size. No contractile vacuole is recognized, but nutritive particles, more refractile and more prominent in appearance, are observed. The ectosarc is quite clear and is well differentiated from the endosarc.

These amebæ are easily demonstrated in stained specimens. A good method is to make a thin spread of the scrapings and pus from the bottom of the lesion on a slide, allow to air dry, fix with heat and stain with carbol-fuchsin about one-fourth minute, wash, stain with Loeffler's methylene blue about one-half minute, wash, dry, and examine. The amebæ are well stained by this method, and show their inclusions of tissue or cell remains, indicating pathogenicity. We have been unable to demonstrate that these amebæ take up bacteria, though they sometimes appear to do so.

Ipecac has been employed with success in the treatment of amebic dysentery for many years, but on account of its nauseating effect and sometimes impossibility for patients to retain it in sufficiently large doses, there has been more or less dissatisfaction in its use. Vedder<sup>6</sup> found that fluid extract of ipecac was destructive to cultural amebæ in solutions of 1 to 200,000. Rogers<sup>7</sup> experimented with the active principle of ipecac, emetine, and found that it would kill entamebæ in stools in solutions of 1 to 100,000, and began using it hypodermically in 1912 in the treatment of amebic dysentery. It is now very generally employed in this manner for this purpose, and with fairly uniform results. The action of emetine in amebic dysentery is very prompt, striking and specific. Usually the entameba cannot be found in the discharges after twenty-four to forty-eight hours of treatment, and the bloody mucous stools give place to normal formed stools in three or four days. There is considerable tendency to relapse after the treatment has been discontinued for a time, but no doubt a considerable number of "relapses" are, in fact, reinfections.

We have not tried the injection of solutions of emetine into the gum and pus pockets, as Barrett and Smith<sup>1</sup> did, because it has not seemed to us reasonably probable that all the diseased tissues could be reached in this way. Whenever a patient has advanced Rigg's disease in one or more teeth the disease also exists around and between many of the other teeth. The interdental tissue is often soft, spongy, and bleeds readily. Often simply sucking the teeth causes bleeding. Careful examination reveals active motile amebæ present.

The results of our experiments, so far, are most gratifying. We have had sixty-eight cases under observation and treatment from two days to two weeks. The doses of emetine experimented with have been from one-half to one grain. Only one dose was given in a day. Several cases have been given a dose daily for several days. Others were given one or more doses until the amebæ disappeared, after which an interval was allowed to determine how long it would be before they would return, or what other results could be observed. In several instances no amebæ could be found the next day after the first dose was given. In a few, however, they were found the next day after emetine had been given on two successive days. In no case have we been able to find amebæ the next day after emetine had been given on three successive days.

As to the duration of the absence of demonstrable amebæ following the three (or less) doses of emetine, our studies have not been conducted long enough to determine. In one instance we found amebæ on the fourth day after the last emetine had been given. In another instance we found them on the sixth day. In several instances none could be found after seven days or longer intermission of treatment. On account of the wide distribution of this ameba in nature and the character of the lesions of the disease, we do not think it very likely that bad cases of pyorrhea alveolaris will be permanently disinfected by a few doses of emetine given during a few days. The chances of reinfection are so great and the damaged gum, alveolar and tooth structure offer such favorable soil that it must surely be necessary to continue the specific treatment until Nature has had time to fully heal the disease. The length of time necessary for this will no doubt depend upon many factors. Healing and repair of diseased bone is always slow. Whenever the disease involves only the gum, and has not reached the bone (alveolar structure), it is our impression, from observations so far made, that probably the length of time necessary for the gum to heal will not exceed a week. We have observed great change in forty-eight hours, and gums that bleed easily often become perfectly normal in this regard in from twenty-four to seventy-two hours. The results are so striking that there is no doubt in the mind of the doctor or the patient.

Our experiments have not advanced sufficiently to enable us to lay down dogmatic rules as to the treatment, but we are certain that rapid and favorable results may be expected to follow the ad-

ministration of one-half grain of emetine hydrochlorid hypodermatically (in any part of the body) daily for three or four days. In all except the early, mild cases it may be necessary to repeat the treatment, during one or more days, after an interval of three to ten days. In the worst cases no doubt it will be found necessary to repeat the treatment several times before the disease is entirely well. No doubt removal of tartar, scales and other local dental treatment should also be done at the same time. It is quite likely that the injection of a weak solution of emetine, one-half per cent., as used by Barrett<sup>1</sup>, into such lesions as can be reached by it will be found to favor success from the hypodermic treatment with emetine.

- REFERENCES.—1. *Dental Cosmos*, Vol. LVI, No. 8, p. 948, etc.  
 2. *Zeitschr. f. Gegenwartige Medizin*, 1862, Nos. 21 to 24.  
 3. *Arbeit. ans dem Kaiserlich Gesundheitsamte*, 1904, Vol. XXI, p. 42  
 4. *Zeitschr. f. Hygiene*, Vol. XIII, p. 9, etc.  
 5. Reported in the *Dental Cosmos*, Vol. LVI, No. 9, p. 1089, etc.  
 6. *Bull. Manila Med. Soc.*, March, 1911.  
 7. *British Med. Jour.*, June 22 and August 24, 1912; *Therapeutic Gazette*, 1912, XXXV, 837.

#### DISCUSSION.

DR. J. B. GUTHRIE: I saw to-day the first case treated by Dr. Bass, one of my patients. The very next day, after the first dose of emetine, the patient could eat toast, which she had been unable to do before. The gums are now almost normal. I hope Dr. Bass' observation will forever dispose of the notion that pyorrhea is due to a uric acid diathesis or some other constitutional dyscrasia. A prominent dentist, at my instance, two years ago undertook to question his patients regarding the association of pyorrhea and joint pains, and they all gave a positive answer. In infective arthritis we should first investigate the tonsil, and then the condition of the gums. Pyorrhea, in my opinion, is second in importance only to the tonsil as an etiologic factor in infective arthritis. In syphilis we are often held back from giving proper doses of mercury by the condition of the gums. The preliminary emetine treatment where the gums are ulcerated should very much assist in handling the syphilitic.

DR. A. E. FOSSIER: The cure of Rigg's disease is of the greatest importance to the internist. The cases should be treated by the internist and the system put in proper condition; then the chances of cure are much greater. There are many cases of sepsis of obscure or unknown origin in which the cause can be found in the mouth.

This point was brought out by Chassaignac, of Paris. Lehr, in 1895, in his textbook, speaks of dental cachexia. I had a case dying of infection due to Rigg's disease. The patient was treated for seventy-eight days by other physicians, with various diagnoses. Temperature varied from normal to 104 continuously. The patient was treated by Dr. Lerch finally. The heart was small, the systolic blow at the apex slightly transmitted to the left, and the heart was movable. There was no accentuation of the pulmonic second sound. Diagnosis of heart murmur had been made five years before. The patient had general enteroptosis. When seen patient was cheerful, apparently strong and in good condition, but other physicians had given her up as incurable. There was no source of pus found, but the patient had been to a dentist seven or ten days before to have a tooth extracted. He fixed up an apparatus to remove this tooth by the application of a wire, gradually tightened. Dr. Sarrazin examined her mouth and found it full of pockets of pus. The patient died 142 days later.

DR. A. G. FRIEDRICH: Dr. Guthrie raised the point about uric acid diathesis. This has had its day, like everything else. Diabetes has also been considered in the etiology. I took a case to Dr. Bass for experimental treatment. The patient improved very much after three doses of emetine, and is now practically cured. This is the first time I have encountered any treatment so promising in the treatment of Rigg's disease.

DR. S. H. MCAFEE, D. D. S., a guest of the Society: I greatly appreciate having had the opportunity to hear this most interesting report by Drs. Bass and Johns. Of course, I read the report of Drs. Barrett and Smith, of Philadelphia, on the same subject, which appeared in the *Dental Cosmos* for August, spoken of by Dr. Bass, and I tried to look up "endameba"—the term used by Dr. Barrett—but I could find no such thing in any literature available to me. I notice Dr. Bass used the term "entameba," which is given in the dictionaries, in one being defined as "genus of amebas parasitic in man." I would like for Dr. Bass to tell us if the term used by Dr. Barrett signifies anything such as "last division," "end-product," etc. This investigation seems to me to be the most promising of any we have yet had on the subject of Rigg's disease. Of course, there is yet much to be determined, as, for instance, two people have amebæ in their mouths; one develops Rigg's disease, the other does not. What are the conditions, systemic or otherwise,



that make one susceptible, the other immune? As I understand it, amebæ are widely distributed; we are all getting them in our mouths, first or last. Then, too, what about the pockets down one or more sides of roots of teeth? May we expect them to close up? If not, they will still remain as foci of infection, filling with stagnating secretions, and fresh amebæ, perhaps. Patients cannot reach into them to clean them, nor will disinfectant mouth washes cleanse them. The ultimate effect of emetine on these, of course, remains to be seen. They must either be made to grow up, disappear, or they must be, by appropriate local surgical treatment, eradicated.

DR. M. COURET: As Dr. Bass has mentioned, the presence of amebæ in affections of the mouth has been known for many years. Most of the authors mentioned by him have, however, since their original publications concluded that the amebæ played no part in the etiology of these affections. Recently Barrett, working with Allen J. Smith at the University of Pennsylvania, has found amebæ in over forty cases of alveolar pyorrhea, and reports success in the treatment of these cases with local injections of emetine.

Some time ago I had the opportunity to study several cases of Rigg's disease. These cases were referred to me by two local dentists, who wished to determine the value of antogenous vaccin in such cases. Amebæ, along with a large variety of bacteria, ciliates, etc., were found in the largest percentage of cases. In many, however, amebæ were not found after careful search.

The amebæ cultivated from these lesions, along with similar and different species cultivated from the intestinal tract of healthy and diseased individuals, are not pathogenic; when present they are only inoffensive secondary invaders, living and multiplying upon the split protein molecule resulting from bacterial action. This has been amply proven by injecting these amebæ without their bacterial symbionts, subcutaneously, into the rectum, etc., and even directly into the portal vein of susceptible animals.

I do not know to what cause can be attributed the origin of alveolar pyorrhea, but one thing is certain, and that is that bacteria are always present and play some part, either in the production or continuation of the lesion. For reasons not definitely known (possibly faulty metabolism, neglect of cleaning the teeth, or other causes) the vitality of the gums or peridental tissue is lowered. Bacteria, both pathogenic and otherwise, enter these lesions, and an exudative and proliferative inflammation of high or low degree

results. Tissue destruction follows, and amebæ which may be present in the mouth find favorable foodstuff to propagate, and are held responsible for a condition for which they are in no way responsible.

The wide distribution of non-pathogenic amebæ upon fruit, vegetables, water, etc., easily accounts for their presence in these lesions where conditions are favorable for their propagation. I do not question Dr. Bass' statement that he has found amebæ in Rigg's disease, but I question his statement that pathogenic species can be differentiated from non-pathogenic ones because of cell inclusions in the former. This phenomenon has been noted by myself and others in known non-pathogenic amebæ, in their normal habitat and in vitro, and seem to result mostly from unfavorable conditions of food, the reaction of the fluid in which they are bathed, etc.

The presence of pus in alveolar pyorrhea tells us at once that there is at least another organism present than the amebæ responsible for the lesion. Amebæ, both pathogenic and non-pathogenic, never produce pus. In the strict use of the term, pus is represented by over 95 per cent. of polymorphonuclear leucocytes, the remaining fraction being eosinophiles and desquamated cells. This is the character of the pus in alveolar pyorrhea. The so-called liver pus, resulting solely from the amebæ in the abscess, is not of this character. Its composition is over 90 per cent. of autolyzed or partly destroyed liver cells, and the remaining fraction mostly eosinophiles, with a few polymorphonuclear leucocytes. So-called liver pus results from death and disintegration of liver cells, brought about by the amebæ, plugging the blood vessels from within, and by connective tissue overgrowth pressing upon the vessels from without.

The apparent results of emetine in alveolar pyorrhea would seem to add weight to the idea that amebæ are responsible for this condition. It is possible that this is so, but recent experiments carried on in our laboratory at the Charity Hospital indicate that emetine also possesses undoubted bactericidal properties. A one-tenth per cent. solution of emetine hinders perceptibly, in thirty minutes, the growth of a twenty-four hours' culture of diphtheria and streptococcus mucosus. In one hour's time it lessens considerably the growth of *Streptococcus pyogenes*, and in twelve hours' time that of *Staphylococcus citreus*. It kills *B. diphtheriæ* and *Streptococcus mucosus* in one hour, and *Staphylococcus citreus* in twelve hours.

There is no doubt that emetine destroys non-pathogenic, as well as pathogenic, amebæ. Whether the subcutaneous inoculations of this drug, as administered by Drs. Bass and Johns in alveolar pyorrhea are sufficiently strong to kill the bacteria also remains to be seen. There is no doubt, however, that the direct injections of emetine into the lesions, as practiced by Barrett in the treatment of this condition, seems more promising, since stronger doses can be injected by this method than could be safely administered by the subcutaneous route.

DR. WM. M. PERKINS: I am glad to hear of this work, and I think the results justify vigorous investigation. I am glad Dr. Bass brought it up before this body, and I hope he will keep on.

DR. J. R. KNAPP, D. D. S., a guest of the Society: I wish to convey the thanks of the dentists for the invitation to hear this paper. Dr. Bass deserves great credit for his work in trying to add to the etiology of Rigg's disease.

J. J. SARRAZIN, D. D. S., a guest of the Society: Many cases of Rigg's disease, free of systemic complications, and where tissues are highly resistant to all forms of infections, show a tendency to rapid recovery under local instrumentation and home mouth hygiene, which is at times surprising. It requires years of experience to discern such cases at the outset of their treatment from others of a type less responsive to local treatment. Dr. Bass very properly insists on the necessity of scaling roots and of home mouth hygiene. It may be that cases of Rigg's disease under his experimentation have chanced to belong to the responsive class, where systemic vices do not impede the improvement of local tissues. Since it is a safe assertion that a permanent cure of any chronic disorder may only be assured by arterial blood of good quality being supplied in a sufficient quantity to affected parts, wherever they may be, it becomes a question whether an improvement brought about by means not based on this fundamental therapy will not prove temporary and disappointing. Permanency and reliability of results seem better prompted by a treatment aiming to restore normal systemic conditions, backed by thorough local measures, leaving it to the strengthened phagocytes of nature to destroy infectious invaders. Considering the destruction in Rigg's disease pockets of *Ameba buccalis*, it certainly is reliable clinical experience that bacteria of no type can resist intense acidity caused to fill those pockets and penetrate their deepest portions. Perhaps it

may behoove one who has for years waded through all the phases of Rigg's disease treatment, from the erroneous uric acid etiology, with the wonders expected of bismuth paste and of tartar solvent locally, to the later hypodermic vaccins, and after experimenting with all, returning to thorough local measures backed by whatever systemic ones some cases seem to indicate to obtain reliably permanent results, it may be pardonable to conservativeness grown from experimental disappointments and better results obtained on dual lines of local and systemic treatment (where the latter is indicated), to fear the discouragement apt to result from a treatment offering a possible temporary destruction of one type of bacteria without fortifying against others and against systemic morbid conditions, where they may exist. Danger may also lurk in a tendency to neglect thorough local measures, caused by reliance on a specific systemic treatment, thus inviting early recurrence of the same pyorrhæal troubles.

DR. W. H. HARRIS: I cannot agree with Dr. Sarrazin that we should not hasten further experimentation of this work begun by Barrett and Smith; on the contrary, push it as much as possible, but be conservative in drawing conclusions.

I cannot see the logic of injecting emetine beneath the skin in the treatment of Rigg's disease, when the pathological lesion is so readily accessible, and hence injections can be made direct, and also deep, into the gums, thereby obtaining the effect of the drug locally and in circulation. Of course, in extensive destructions we cannot inject into all the lesions, but we can do this to a larger extent, and at the same time go deep enough to procure the general effect. Barrett has, as we all know, been using these alveolar injections in his work for some time, and claims good results. The gastro-enterologist gives ipecac by mouth in order that a certain portion may be applied to the ulcer for its amebicidal effect. As such an accomplishment is very difficult, and much of the results were probably obtained by the absorbed emetine, they resorted to the use of this drug by hypodermic. We must remember, however, that in this instance the lesion was usually over twenty feet from the orifice at which the ipecac was taken in, whereas in pyorrhæa alveolaris it is directly at hand and in full sight.

Chiavarro, like many others, states that amebæ of the mouth are non-pathogenic and have no relationship to Rigg's; in fact, he claims they retard the disease. He claims that, if you allow an

ordinarily thoroughly clean mouth to go uncleansed for three or four days, the amebæ will constantly be found in the white particles at the alveolar junctures, which material he terms "materia alba." Upon cleansing these same mouths the amebæ again disappear, and thus they can at will be made to disappear and reappear.

The phagocytic action on the part of the amebæ, upon which fact Dr. Bass bases pathogenicity, is no evidence whatsoever of its pathogenicity; for instance, the ordinary large mononuclear cell of the body will frequently in the bone marrow phagocytize red blood cells and white blood cells. Again, the ordinary polymorphonuclear leucocytes constitute the greatest phagocytizers of the body, and these cells are, of course, the greatest protectors, and in no way a destroyer of the body tissues. Amebæ as a whole will engulf the particles in their surrounding fluids.

As Dr. Couret has said, we must remember that the action of emetine is that of a germicide, and may play some part in aiding the condition from the standpoint of the bacterial destruction it may produce. The pus in pyorrhea alveolaris is produced by the pyogenic organisms present, as the amebæ is not a pus producer, and hence cannot be the cause *per se* of pyorrhea alveolaris; it might be possible that the amebæ could cause a primary vulnerable site for the bacterial action, but the relationship of amebæ to Rigg's disease has been quite constantly refuted over many years.

The proper solution of the problem is to obtain the amebæ in pure cultures, which is now an accomplished possibility through the work of Williams and of Couret and Walker, and to inject this culture into some animal, for instance, the monkey, reproduce the disease and again recover the amebæ.

I feel that, as Dr. Bass has stated he has only begun the work in the latter part of August, representing only about two weeks of work upon a disease of such long chronicity as Rigg's disease, he cannot feel satisfied as yet with the eventual outcome of this work done in confirmation of that of Barrett and Smith.

DR. WALLACE WOOD, JR., D. D. S., a guest of the Society: I agree with Dr. Perkins in his optimistic view, and, as he has said almost everything that can be said along these lines, there is very little that I can add.

The paper presented by Drs. Bass and Johns is a very able and interesting one, however, and I believe they are working along

proper lines, and it is hoped that their investigations will prove successful. If it does not, it will at least tell us something about pyorrhea that we do not know, as we know very little about pyorrhea alveolaris at present.

There are numerous so-called specifics for this great bugbear, one of which I have not heard mentioned is aspirin. Five-grain doses every two or three hours for several days give good temporary results, but I do not believe it will cure the disease.

To my mind, we are laboring under the fact that pyorrhea is a disease of the alveoli; I believe it to be an inflammation of the peridental membrane and its subsequent decomposition, the cause of which I do not know. It is to be hoped that Dr. Bass in his investigations may be able to prove its true cause.

Regarding the emetine treatment I know very little, but am greatly interested and intend to experiment as soon as possible.

DR. FOSTER M. JOHNS (in closing): In answer to Dr. Couret, I will say that almost without an exception the protozoologists agree that some forms of amebæ are undoubtedly pathogenic. We have tried the culture media recommended by Dr. Couret, both aëroically and non-aëroically, and find that amebæ can be cultivated from both healthy and diseased mouths. We have studied the amebæ found in the diseased areas and those living free in the oral cavity, and on comparison the cultured variety always contained the contractile vacuole and phagocytized bacteria comparable to the free-living, non-pathogenic variety. The pathogenic variety that we find deep in the diseased tissues differ in morphology and staining reactions, have never been observed to possess a contractile vacuole, are without the presence of ingested bacteria, and are undoubtedly living anaëroically. This type of organism has never been found, even in the primary cultures, similar cultures from which a pure culture has to be selected. Dr. Couret's strain of ameba will only live on tissue media autolized by bacterial or other agents. They are cultivated from the lesions of amebic dysentery. Experimentally they only produce liver abscesses when injected in connection with known pyogenic organisms. While some amebic liver abscesses are infected with pyogenic organisms, many are sterile to tests with any of the known cultural methods. Since Dr. Couret's observations are based upon this variety of evidently non-pathogenic amebæ, his conclusions that all amebæ are non-pathogenic hardly seem justifiable. Again, it is more than a co-

incidence that the only two diseases in which amebæ are found different from the ordinary free-living forms both yield to the same drug, which is an undoubted amebicide amounting to a specific.

With regard to the anti-bacterial action of emetine hydrochlorid, dilutions of from 1:100 to 1:100,000 have been tried on all of the ordinary pathogenic organisms growing in blood media without any appreciable result. The same experiment was repeated on as many as fifty organisms obtained from pyorrhæal lesions with the same result. One-half grain of emetine given hypodermically would give a blood concentration of the drug of 1:200,000, which dilution actually and experimentally is sufficient to kill all the ameba which come in contact with the blood serum.

DR. BASS (in closing): It will be indeed interesting to see what will be the result of stopping the long continued drain of blood and pus from cases of pyorrhæa alveolaris. Those who have the disease lose a few drops of blood as a result of traumatizing the gums with picks, food, sucking, etc., daily for a long time. It would seem quite possible that such continued loss may ultimately give rise to a certain degree of anemia. Such hemorrhage stops almost at once as a result of the emetine treatment.

Dr. Couret's experience in searching for amebæ in Rigg's disease and mine are diametrically opposed. It remains to be seen whether our observation that amebæ are present and demonstrable by proper technic in practically all cases of pyorrhæa is correct, or that of Dr. Couret, that they cannot be found in a very large proportion of cases. Further experience should enable each of us to determine the right conclusion.

Unfortunately, the various claims of successful cultivation of pathogenic amebæ have not been confirmed. I quite agree that pure cultures of these amebæ would offer favorable opportunity for many experiments, and hope that we may soon have a convenient, simple technic for their cultivation.

No doubt the pyogenic process in advanced Rigg's disease is largely due to bacterial influence, but apparently when the disease begins in the gums it is due largely, if not wholly, to amebæ. No doubt the bacterial flora and probably other individual influences determine largely the character of the disease process. This is true of many other diseases caused by a specific organism.

While we are waiting to get further definite information on the

subject, I would advise those who have Rigg's disease or who have the responsibility of cases to try the emetine treatment.

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### **CLINICAL REPORT.\***

By PAUL TALBOT, M. D., New Orleans.

#### **Exhibition of a Specimen of Early Miscarriage. Pregnancy Probably of Four or Six Weeks' Duration.**

The patient presented no unusual history. Had missed the regular menses only once. Symptoms were not pronounced. Just about six weeks following the missing of her menses, she began to complain of slight cramps in the uterus, accompanied by bloody discharge. The bleeding was rather profuse for a few minutes. This was followed by the expulsion of several clots, in which was found the specimen shown here. After this the bleeding gradually subsided. This early miscarriage could only be accounted for by a large lacerated cervix, extending well up laterally in the left side of uterus. The specimen is exhibited as a rather rare one, in which the membranes are intact. The fetus and decidua being suspended in the liquor amnii, surrounded very nicely by the decidua vera and reflexa.

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\* Presented before the Orleans Parish Medical Society, meeting August 24, 1914.



# N. O. Medical and Surgical Journal

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### THE QUESTION OF A FEDERAL LICENSURE.

It is no new idea that there should be some national source of a licensure acceptable in all States, Territories, and dependencies of the United States. There have been many suggestions as to the method of attaining the desideratum, but none acceptable has yet eventuated.

The State Examining Boards as constituted have been moving in the right direction, and the federation of many of them means some concert of action. When these State Boards have coördinated interests sufficiently to adopt a working plan providing uniformity of standards, then we shall be even nearer the desired reciprocity idea.

But there are yet remaining some of the United States that will

have nothing to do with reciprocity, and it would seem hard to win them over; and even if most of the States were leavened by some uniform standard, there could be no general plan under State Examining Boards regulation.

The suggestion of the Army, Navy or Public Health Service method is feasible, but unless there were some arrangement through which all three services could be combined in a general board, no one service would be generally acceptable. The fact that there is now no general "Service Board" for the examination of Army, Navy and Public Health Service candidates in one examination gives food for thought, and is bound to provoke the commentary that there is a reason, and that is probably easy to find in the proverbial jealousy between the Navy and Army administrations and the disdainful opinion of the Public Health Service by the other two governmental groups. In the present attitude, the government services will not mix, and each would believe its method the best.

After all, is this country really ready for a true Federal hallmark on medical training?

The demand for practitioners of medicine is still large in spite of the arguments to the contrary, and the mean output of doctors has been about the same for half a century—if the estimate is to be based upon the relative number of doctors to the population. Any civil service method at this time might restrict that output to the harm of the public. The tendency to centralization is great anyway, and this question is yet quite debatable. The adoption of a Federal Board of Examiners, no matter how constituted, would create a spirit of objection at many points.

We have before now adverted to a better plan, which could be really accessory to the developing State Board methods.

If it is desired to have a high standard of licensure which would be acceptable to all States, why not create an academic board of examiners made up of college men, trained in methods of examination? Let such a body be organized of representative men from the leading medical colleges in the country, representing all sections. From the number of teachers in the several branches let an examining board be selected for the different districts, with the provision that the examiners shall examine candidates for licensure outside of the district in which their teaching interests lie. Such boards could meet at set times and set places, and the resultant license would be determined by tried and practised examiners, rather than by individuals who are not from teaching bodies.

The physician receiving a license from such a board should be qualified.

Unfortunately, the method of organization of the American College of Surgeons has precluded this country from following the British system. No other standard than a personal approval prevails in the College of Surgeons, and that body as at present constituted is made up of men representative of the communities in which they live, but without any standard of basic determination of membership beyond the acceptance of credentials by a membership committee.

This College of Surgeons must be always a sort of select club with meritorious rules of membership, but by no means laid on democratic lines, nor open to merit alone, nor determined by examination.

The agitation for universal reciprocity will bring about a solution, and it must be by a concerted action of those interested. The State Boards of Medical Examiners have the right of way, and it seems to us that we must look to them for the lead in the direction of some plan for a general license which may be acceptable in all States.

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### SPECIFICITY OF PYORRHEA ALVEOLARIS.

Since writing our editorial notice of the work of Bass and Johns with Rigg's disease, we have had the privilege of reading a reprint of the original paper of Barrett (*Dental Cosmos* for August, 1914) in which the detail of his work in collaboration with Allen J. Smith, of the University of Pennsylvania, is presented. In this issue the paper of Bass and Johns is given in full and a review of Barrett and Smith's work at the same time would seem both timely and just.

Bass and Johns allow full credit for the work of Barrett and Smith, ascertained by them after their own work was under way, but the corollary importance of both should not be dismissed without discussion. Barrett and Smith, in their conclusion, state that their experiments point to a specific ameba of pathogenic type as more or less responsible for Rigg's disease, and that emetine used locally has a decided if not specific action; they suggest the further test of emetine, *given as in amebic dysentery*, in pyorrhea alveolaris.

They further submit that the presence of other protozoa, at least one flagellate and probably a ciliate, should be considered.

Our former statement that the experiments of Barrett and Smith should be considered as the pioneer work in this subject should be further emphasized and the importance of their earlier conclusions and the cases reported made as generally known as possible.

In forty-six cases examined by Barrett and Smith entamebæ were found, but no specific organism was identified, though Smith and Barrett suspected two different species, *E. kartulisi* and *E. buccalis* being named as among the amebæ found.

Bass and Johns have submitted the results of examination in eighty-five cases and have seemed to have identified the *E. buccalis* (of Prowazek and probably of Sternberg) as the constant organism present. This seems to have furthered the experiments of Barrett and Smith, if the conclusions of Bass and Johns are correct.

The treatment with emetine seems on both counts to be specific and the further employment of this drug by hypodermatic and local methods may demonstrate that both are desirable, either used alone or together and at the same time.

The JOURNAL is glad of the opportunity to call to the notice of its readers, the excellent scientific propositions of Barrett and Smith and to again express its gratification at the splendid work of Bass and Johns in carrying out independent research making practical and probably specific the recommendations of Barrett and Smith.

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### SIMPLE STATEMENTS.

Evidently the shafts of our "Holier than Thou" editorial penetrated deeply, for the editors of the medical journal criticized therein use in retaliation the better part of three pages in their last number, most of which is spent in revamping charges already refuted.

Were it not that the vacation period is over, we might occupy some time and space in pointing out the many illogical and unwarranted contentions contained in those pages regarding our actions, but we have better work to do and at the same time possess insufficient conceit to believe our readers can be interested in a prolongation of the controversy.

However, from the disjointed mass referred to, there stand out with sufficient clearness two accusations of importance enough to justify our attention.

First, the *Pan-American* is grieved because we were enterprising enough to publish a short time after the meeting of the State Society an abstract of most of the papers read at that meeting and the discussions thereof; it most unjustly takes to task the secretary-treasurer of the Society for *our* offense. Mind you, the latter it surely considers serious, for it calls our "procedure" one of "bad faith," also an "obliquity," again an "arrogant, illicit usurpation of its letter patent"; it considers that we had "absolutely no legal or moral right" to publish what we did.

We make the simple statement that no contract made by the Society with an official organ can prevent another medical journal from telling its readers what happened at any non-executive session of the Society. We leave our readers to decide our *moral* right and we court any test of our *legal* right in the premises.

Second, in terms that are almost libelous, the *Pan-American* objects that this JOURNAL "collected from the State Society for the month of May. . . . a sum in excess of two hundred dollars. . . . when, in reality, the *Pan-American* was the official organ for May." Our simple statement is to the effect that the sum involved was sixty-two dollars, while this does not change the principle involved; that the amount was for the subscription of members for the month of May as per official list furnished us by the Society; that the "agreement" with this JOURNAL was "abrogated" only on the night of April 24, when the JOURNAL was in press and all the wrappers for the May number were ready for the mail, as was explained and accepted on the floor of the House of Delegates when we withdrew our proposition to the State Society and advised the acceptance of that of the *P.-A. S. M. J.*; that we had not received notice of the said abrogation when our May number was mailed: that the *first* issue of the *P.-A.* was its *June* number.

Once more, we would welcome the institution of any test as to the legality of the transaction.

## THE PLAGUE IN NEW ORLEANS.

On October 1 the twenty-eighth case of plague died, and on October 19, for the third time since the disease was identified in New Orleans the city was declared free of human plague. Two cases occurred later. In the total of thirty cases recognized eight in all have died, a mortality of about 25 per cent. There has been no official publication of the plague cases in detail, with the character of the disease stated, but for the largest part the cases have been bubonic, with the femoral glands involved. The prompt effect of large doses of serum has been remarked, and the recovery of so large a proportion of cases is attributed to the use and manner of using the serum.

More and more rat-proofing is being done every day, and a thorough clean-up has been accomplished already, but it is projected to do it again, and yet again.

The distribution of rodent plague is still practically within the limits of the district dubbed "infected" by the health officials, with a wide dissemination of foci. Prompt measures of fumigation, deratization, and rat-proofing are applied to the residence or building in which or on the premises of which an infected rat is found.

The *Mus norvegicus* has been found in large numbers, *Mus musculi* in about 25 per cent., the *Mus rattus* in about 8 to 10 per cent. and the *Mus alexandrinus* in less than 1 per cent. of the rodents examined up to October 12, numbering over 112,000. In the 181 rodents infected with plague, 172 were *Mus norvegicus*, 6 *M. rattus*, and 3 *M. alexandrinus*.

The rat-proofing ordinances are being regularly enforced, and throughout the city of New Orleans the work is going on.

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## THE BULLETIN OF THE LOUISIANA STATE BOARD OF HEALTH.

The quarterly bulletin of the State Board of Health dated September 1, and appearing early in October, is full of interest, not only in the presentation of matters relating to the activity of the Board, but in the educational features contained.

The president, Dr. Oscar Dowling, gives a very instructive review of the plague situation in New Orleans since the first case of

human plague was officially noticed on June 27. The concurrence in the invitation to the Public Health Service is related and the present coöperation emphasized. The appeal for the concerted action of all the people of the State in plague prevention is timely and well put. Dr. Dowling says:

“It is extremely fortunate that the present type of plague is mild, also that the use of serum has proved effective in cases where there was early diagnosis. The mortality is probably the lowest ever recorded. But these facts should not give a sense of security. Though the disease is not now virulent, it might become so, and the other forms—septicemic and pneumonic—might develop.

“Until assured that neither human nor rodent cases exist, there is need for the utmost effort by boards of health, municipal authorities and individual citizens to establish conditions which will insure protection.

“So far as known, the rodent infection is confined to certain limits within the city. It is believed within a reasonable time it will be eradicated. For the protection of those outside, all outgoing freight and all vessels are inspected, and, if rat-free, are given a certificate to that effect. These are the only practicable measures which can be put into effect. It remains for each community to make prevention sure. The entire State should assist; each parish, town and city should inaugurate a local campaign against rats and the conditions which foster their perpetuation. There should be, first, a rat survey; rats should be trapped in all sections, and, if any are found sick, they should be sent to the laboratory in New Orleans for examination. Close watch should be kept for sick rats, and if any are seen it should be reported to the proper authorities.

“It is possible that rodent infection may have spread to areas which are yet unknown, and the history of plague shows a record of development of human plague about two years from the date of infection of rats or squirrels.

“The best protection is a knowledge of danger, should it exist; and in so serious a matter no community can afford to be derelict.

“A war on rats and fleas means a fight for cleanliness. Rats and fleas thrive in unclean places. Rats live on refuse and unprotected foodstuffs; therefore, care in the disposal of garbage and in the storing of foods, either in large or small quantities, cooked or uncooked, are of primary importance. This is largely in the hands of the individual—the storekeeper, the housewife and others who sell or handle foods.

“No community which establishes proper measures of sanitation need fear the invasion of plague. The cause of the disease is known; therefore, prevention is possible, or, in case of introduction, control is possible.

“The most essential step toward eradication of the rat is the rat-proofing of all buildings. This may not be practicable in many places without great expense, but a beginning can be made by the passing of an ordinance requiring all new buildings to meet the requirements. This no incorporated unit should fail to put into immediate effect.

“It is deplorable that so many are not convinced of the need of ‘a stitch in time.’ In the safeguarding of public health, which means personal welfare as well, ‘an ounce of prevention is worth a pound of cure.’

“It is also to be deplored that communities do not take more seriously their own health problems. A State department can only suggest, direct and point out danger; it cannot undertake local work, except by way of illustration or in time of an epidemic.

“The law places the responsibility on the local unit—where it should be—and it is only through efficient health officers and well organized health boards that effective work can be accomplished in the saving of lives and the prevention of unnecessary sickness and suffering.”

Such advice should be widespread, for the experience of California has made it certain that every Gulf and Atlantic seaport must be on guard. Philadelphia, among the Northern cities, is already quite active in rat investigation, and it is wise that smaller communities should take time by the forelock.

The *Bulletin* extensively abstracts the article on plague from the publication of Gardiner and Simonds on “Practical Sanitation,” which is a timely contribution. The monograph published by the Public Health Service, however, from the pen of Dr. R. H. Creel, of the Service, is probably the most accessible recent information obtainable, and it may be had by any one from the Washington Bureau of the Public Health Service. Dr. Creel is an authority, and his excellent work in New Orleans in his association with Assistant Surgeon General Rucker will add the personal interest in his brochure.

While Dr. Dowling’s information given on the rat and flea is popular in its presentation, it is graphic and must attract attention. Every householder should read each of these sections of the *Bulletin*, and should also apprehend some of the “suggestions” given, among which we note the following:

Plague is carried by the rat; they suffer both acute and chronic forms.

The infection may be transferred from rat to rat through the agency of the flea.

Rat-proofed buildings are of first importance in a fight against the enemy.

A rat-proof dwelling must have concrete footing; or, if a wooden building, one foot of concrete between the sheathing and lathing.

All water and drain pipes should be surrounded with cement.

Rat holes should be closed with a mixture of cement, sand, broken glass or bits of stone.

The chief refuges of rats in cities are sewers, wharves, stables, provision houses, markets, outbuildings and uninhabited structures.

Modern sewers are highways, not nesting places, for rats.

A scarcity of rat food helps all other suppressive measures.

To leave open garbage cans, or food on the ground or in gutters, invites the rat.

Remnants of lunches in office buildings also offer nourishment for rat occupants.



Rats may be killed with certainty in any enclosed structure by use of sulphur dioxid, carbon bisulphid, hydrocyanic acid gas or carbon monoxid.

The destruction of food, merchandise and property by rats is so great this alone would justify measures of extermination. In the United States alone the losses are estimated from \$35,000,000 to \$50,000,000 annually.

In addition, there is reproduced the newspaper article of Bass, printed August 2 in the *Times-Picayune*, which argues for vaccination against and serum treatment for the plague, and indicates why both are advisable and how they can be done.

The Board of Health has in many ways served as guardian to the public, and in this good work it should be encouraged in every way. The *Bulletin* serves an admirable purpose in bringing the public into relation with sanitary principles and practices, and we have been much pleased at the wide scope covered by these publications of our deserving Board of Health during the past year or so.

There is so much in the current *Bulletin* that deserves notice, we are regretting the limitation of space, which prevents more attention; but we may not pass the revisions to the Sanitary Code instituted at the August meeting of the State Board of Health, and now promulgated. Some of them follow:

Pellagra was added to the list of communicable diseases in Section 12. Whooping cough was added to the list of communicable diseases in Section 12.

There is also printed for the attention of physicians and others the action of the State Board on the following:

Section No. 13 of Chapter 3 of the Sanitary Code was repealed and the following substituted therefor as the new Section No. 13:

It is hereby made the duty of every physician to report to the State Health Officer, or his authorized representative, and to the local board of health of the municipality or parish wherein he practices, any case of communicable disease which he has attended or examined, or for which he has prescribed; and such report, with the exception of gonorrhoea, chancroid and syphilis, shall state the name of the patient, the nature of the disease treated and the place where the patient is to be found; and said report shall be made by the physician within twenty-four hours of the time the physician first visits, examines or prescribes for the patient. (Cards or envelopes will be furnished all physicians so as to save expense of postage.) In cases of gonorrhoea, chancroid and syphilis, the name and address of the patient only shall be omitted from the report to be made. Where conditions warrant the local health officer should wire or telephone the State Board of Health."

The Sanitary Code was amended by adding after Section No. 179 the following as Section No. 179 (b):

"No physician or citizen shall withhold from the State Board of

Health any information coming to him or her directly, or indirectly, concerning any physician or person who has performed, aided or abetted in the performing or producing of an abortion. All information that might lead to the arrest and conviction of a physician or other person guilty of encouraging, aiding, abetting or performing an abortion shall be furnished by the State Health Officer to the District Attorney that he may prosecute."

This last provision for the first time brings abortionists under a specific police power, with authority to push prosecution; the District Attorney may now act under the instruction of the State Board of Health.

The new Health Laws are printed in full, and afford a large function of the health officials in the control of irregular medical or fake advertising, the practice of pharmacy, the character of foods and drugs, etc.

The hookworm campaign in the State of Louisiana is reviewed by Dr. Sidney D. Porter, the official of the Board in charge of this department. The results accomplished to date are interesting, as shown in the following statement:

Number of persons examined by field inspectors.....	49,541
Number of persons infected .....	22,719
Percentage of infection .....	45.8
Parishes surveyed for sanitation.....	50
Number of homes inspected .....	23,557
Number of closets, A B C D type.....	1,334
Number of closets, open surface .....	13,774
Number of homes without closets .....	8,449
Number of parishes making appropriations for dispensaries (1st)	45
Number of parishes making appropriations for dispensaries (2d).	8
Number of persons examined by State Laboratory.....	4,456
Number of persons treated at free dispensaries.....	34,103
Number of treatments given .....	52,395
Physicians reporting treating hookworm.....	543
Number of cases reported treated by physicians.....	13,149
Number of letters sent out .....	47,736
Number of pieces of literature distributed .....	299,847
Public lectures on hookworm and sanitation.....	1,943
Attendance at public lectures.....	236,600

The people of Louisiana, and especially the medical profession, should have large pride in the present position of the State health authorities. For activity no State can show more, and for original conception of the obligation of the Board to the public no State as yet has equaled our own Board.

## Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

HIGH AMPUTATION OF THE CERVIX, COMBINED WITH COLPECTOMY. BOUILLY'S OPERATION IN THE TREATMENT OF PROLAPSE.—(*Jnl. de Chir.*, 1914, xii, *Surger. and Obst.*, Sept., 1914.—The operation consists of a supra-vaginal amputation of the cervix, a colpectomy of the anterior vaginal wall, and a colpo-perineorrhaphy, and is called for where there are cervical elongation and hypertrophy or inflammation. While overcoming the hypertrophy of the cervix, it causes a degree of involution and atrophy of the body of the uterus. The operation also retracts the enlarged vagina, both laterally and antero-posteriorly, as well as reconstructing the perineum.

*First Step.*—The cervix is seized by the anterior lip with traction forceps and drawn down as far as possible outside the vulva, which has the effect of stretching the exuberant anterior wall of the vagina. Four grasping forceps are attached to this anterior wall to mark the corners of flap to be removed; the forceps should be placed carefully. The lower forceps are attached to the cervix itself at the insertion of the vaginal wall near the external os, exactly at the union of anterior and posterior semi-circumference. The two upper forceps are placed directly above them and about a finger's breadth below the urinary meatus. With the point of a bistoury a transverse incision is traced, passing below the two lower forceps; then two vertical incisions are carried upwards from the ends of it, outside of the forceps up to the upper ones, so that a large rectangular flap is marked out, including almost all the anterior wall of the vagina.

This flap is then dissected and separated from the anterior surface of the uterus. The dissection finished, the neck of the uterus is denuded to the isthmus and the flap, holding only at its base, can be lifted; the bladder can be seen adherent to its under surface.

*Second Step.*—The flap is held with the forceps and the bladder separated from its under surface with scissors, care being taken to avoid injuring the bladder. The accompanying moderate hemorrhage is easily controlled by pressure, or, if necessary, by

forceps. When the bladder is completely freed and pushed up, the vaginal flap is cut transversely at its base below the two upper forceps.

*Third Step.*—The cervical branches of the uterine artery on each side should now be ligated. They form a group of three or four small arteries, spreading out in a fan-shape on the sides of the cervix and dome of the vagina; they are the source of hemorrhage when the cervix is amputated. Bouilly and Lowey seize and ligate them only when cut. The former procedure seems preferable. To ligate the vessels, the uterus is pulled toward the opposite side, a narrow retractor inserted, a curved artery needle threaded with No. 1 catgut passed under the whole group of arteries and fibrous tissue which surrounds them, and they are ligated en masse.

*Fourth Step.*—With two cuts of the scissors the cervix is split into halves—an anterior and posterior; then the anterior one is detached by transverse section at the isthmus. If the ligation has been correctly performed there will be only insignificant bleeding, which will be stopped by the suture of the vagina to the cervix, which is to follow.

The anterior cut surface of the vagina is seized with a forceps, applied to that of the uterus and fixed with a suture. The needle passes entirely through the vagina and through the internal half or two-thirds of the cervix. Bouilly and Lowey recommend an overcast suture. Two or more sutures may be necessary, and they should be tied at once and the ends left long for the time being.

*Fifth Step.*—The posterior half of the cervix is seized with forceps and lifted up, while a short, broad retractor depresses the posterior vaginal wall. The extremities of the anterior incision are found on the sides of the cervix and united by a transverse incision at the insertion of the vagina on the cervix. The posterior surface is denuded to the retro-uterine cul de sac, which should not be cut. Should it be cut, sutures must be applied immediately. It is not necessary to resect the vaginal wall here, for a colpoperinorrhaphy is to follow.

*Sixth Step.*—The posterior half of the cervix is now cut across. The supra-vaginal amputation is now finished. The posterior vaginal and uterine surfaces are sutured together, as with the anterior ones. The new cervical orifice is now complete. But there is generally an opening at the angle, where the union should be completed by two or three sutures.

*Seventh Step.*—The uterus is pushed up with a tampon, then the posterior wall of the vagina is stretched out with grasping forceps and one of the classical methods of colpo-perineorrhaphy performed—the author prefers Hégar's—*Internat. Abstract of Surgery.* MICHINARD.

THE RELATION OF THE INTERNAL SECRETIONS TO THE FEMALE CHARACTERISTICS AND FUNCTIONS IN HEALTH AND DISEASE.—(W. B. Bell.)—In discussing first the production of the female characteristics and functions, the author believes that only where the whole endocrinus system is in perfect harmony and acting efficiently may the genitalia become functionally active at puberty, on condition, of course, that these organs are morphologically normal at birth. Thyroid or pituitary insufficiency may cause the genital organs to remain infantile, and diseases of these structures may cause retrogression in the genitalia, even after they have functionated normally. The development of the gonads and uterus causes retrogression in the thymus, and, as a result of the withdrawal of the thymus secretion, the genital organs develop—both theories being thus upheld.

That the ovary alone is not responsible for the changes at puberty or for the integrity of the genitalia is shown by many facts, both experimental and clinical. The pituitary body is undoubtedly of influence here, and Bell regards this body as one organ, though which portion of it possesses the genital influence is not yet clear. Removal of the thyroid in producing atrophy of the uterus reveals a further influence not to be disregarded.

Taking up derangements in the development of the genital organs and their functions, the author first discusses precocious puberty. While in the male this appears in conjunction with diseases of the suprarenal and pineal glands, in the female it is seen oftenest where the ovary is affected. Hence, Bell argues that this phenomenon in girls is associated only with tumors or hyperplasia of the gonads.

Delayed puberty, on the other hand, being due to so many causes apart from the internal secretions, is with difficulty proven to result from ovarian disturbances. Under-development of the ovary is more apt to be a correlated condition. Practically, it appears that the thyroid and pituitary, in association with the ovaries, are the factors most concerned in the final development of the female genital organs. Attention is called, too, to a practical point in treatment that, unless genital activity be aroused during the period

of change, before twenty years, it is impossible to sufficiently control metabolism in order to produce the effect desired.

Under the general heading of derangements of the fully-established genital functions, the question of ovarian insufficiency is discussed at length. While there is no real evidence that ovulation does not occur during pregnancy, or that ovarian secretion, apart from that of the corpus luteum, is in abeyance, Bell suggests that, if such is the case, other organs of internal secretion, as the thyroid and pituitary, may be subjected to considerable strain, the original cause of hyperplasia in these structures. The author strongly favors autogenous ovarian grafts as the only ones of any use; thin, flat pieces, without cortex, being employed. Ovarian transplantation, at best, is only a mitigation of the artificial menopause.

Excessive ovarian secretion is expressed by an increase in sexual activity in certain types and by osteomalacia. It is probable that very soon injections of suprarenal and pituitary extract will be found efficient as controls in such hyperfunction.

Bell does not concur with the theory that eclampsia is caused by thyroid insufficiency.

Pituitary excess is more apt to produce masculinity and amenorrhœa in woman than excessive sexuality, as it does in the male, with a strong tendency towards sterility. Pituitary insufficiency shows expression also in amenorrhœa or scanty menstruation. As far as the genitalia are concerned, this is also the chief symptom in functional disturbances of the suprarenal glands.—*Surgery, Gynecology and Obstetrics*, April, 1914. MILLER.

A COMPARISON OF THE MOST RECENT METHODS IN THE MANAGEMENT OF PLACENTA PREVIA.—Dr. Edward P. Davis contributes to the *International Abstract of Surgery* a collective review on this subject, and sums up in a short space practically the present position of the best-known obstetricians on this subject.

Within the past few years a revision of our knowledge of placenta previa has taken place, resulting largely from the observation that many of these cases resulting fatally die from septic infection, which can be traced to a vaginal tampon. This has led many to abandon the tampon.

For medical purposes, placenta previa may be divided into those cases which are complete or central, and those where but a portion of the placenta is over the internal os and where the membranes can be reached at some point.

There is at present a disposition in all countries to transfer the parturient patient to the hospital for treatment. Many patients, however, cannot or will not enter the hospital, and must be treated in their homes. When a patient is without hospital facilities the suggestion of Döderlein that placenta previa should be treated whenever possible by the free rupture of the membranes, is of practical value.

If the patient remains at home, the danger of septic infection increases in proportion as the attendant is unskillful or lacking in aseptic precautions, and with the method of treatment employed. Discarding the tampon as inefficient, and promoting infection, two methods are available in private houses. The first is Braxton-Hick's method of version, whereby a leg of the child is brought down and pressure made upon the placenta by the lower portion of the child's body. It is essential for the success of this method of treatment that no effort be made at delivery after version. The lower portion of the uterus in placenta previa is so vascular and softened by the abnormal position of the placenta that rapid extraction of the fetus inevitably causes severe and often fatal laceration. Rapid and forcible delivery of the fetus are both forbidden by Pinard, whose warning may be accepted as sound.

A more recent method of treatment available in private houses is the introduction of a dilating bag. The majority of obstetricians introduce this bag through the torn membranes, or through the placental substance into the cavity of the amnion.

Craigin employs the bag without rupture and without perforation of the placenta, believing by this method that the interests of the child are better conserved, without detriment to the mother. The introduction of this bag is not always easy for those who are not accustomed to obstetric manipulations, and in unskillful hands the attempt may separate the placenta extensively and increase hemorrhage.

All observers agree that placenta previa is frequently followed by post-partum bleeding, and that this may become fatal. Some would guard against this by the application of Momburg's bandage at the moment of delivery, and others would rely upon intra-uterine packing with iodoform or sterile gauze. Momburg's pack may, however, become a source of danger, as anuria and albuminaria have followed its use, and severe pain usually accompanies this method of treatment.

In cases where but a portion of the placenta is over the internal os, and dilation proceeds rapidly and uterine contraction requires stimulation, several authorities have found benefit in the use of pituitrin. Care must be taken that the cervix is dilated, or readily dilatable, and that the presenting part is well in the pelvic cavity.

When the patient can be promptly transported to the hospital while in good condition and before efforts have been made by vaginal manipulation to check hemorrhage or bring about delivery, abdominal Cesarean section offers the best chance for mother and child.

Davis has for several years employed Cesarean section in cases of placenta previa brought to the hospital. His operations up to date number eighteen, with no maternal mortality; the fetal mortality ranged from 40 to 50 per cent., many cases being brought to the hospital exanguinated, the babies already dead.

When one compares the results of treatment in private houses with those of cases treated in the hospital, the figures are decidedly in favor of abdominal Cesarean section, if done at the proper time.

The question of the treatment of placenta previa has a wider significance than the mere handling of this condition. The results obtained in complicated parturition will not be improved materially until such cases are considered of equal gravity with ectopic gestation, appendicitis, ovarian tumor with twisted pedicle, and other serious intra-abdominal conditions. The latter cases are almost invariably taken to the hospital, and the comparatively low mortality of these serious conditions under good treatment is acknowledged. When complicated cases of parturition receive similar attention a decided improvement in mortality and morbidity must result. Those who have had experience in abdominal Cesarean section for placenta previa have found that hemorrhage ceases as soon as the uterus is emptied, that the uterus contracts promptly, and that intra-uterine packing with 10 per cent. iodoform gauze carried from above through the cervix and the vagina is an efficient means of checking post-partum hemorrhage and preventing relaxation. These surgical advantages can scarcely be duplicated by methods which the general practitioner can use in private houses.

MILLER.



## Medical News Items.

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LOUISIANA HEALTH ACTIVITIES.—The Health Exhibit Cars for September made an extensive trip through Louisiana and covered New Iberia, Lafayette, Lake Charles, Leesville, Shreveport, Ruston, Monroe, Alexandria, Donaldsonville, Ferriday, Baton Rouge, Hammond, Covington and Bogalusa. An exhibit on plague rats was shown and lectures were given by Dr. W. H. Seemann, State Bacteriologist, and Dr. C. C. Bass, Associate Bacteriologist, with demonstrations by Mr. W. B. Terhune, Jr., Traveling Inspector of the Laboratory Department. Dr. Dowling spoke at various places during the trip.

In connection with the trip, there was a meeting of the Calcasieu Parish teachers at Lake Charles.

Drs. O. W. Cosby, J. J. Menville and Dr. J. W. Lea, Councilors of the State Medical Society, were the guests of the Board on the trip, while in their respective districts. The vice-president of the Board, Dr. A. H. Gladden, was present for part of the trip.

Two parish medical societies were formed during the trip: one at Ferriday, with Dr. C. M. Reeves, Vidalia, president, and Dr. C. H. Burley, Monterey, secretary-treasurer; the other at Bogalusa, with Dr. E. Lafferty, Bogalusa, president, and Dr. Jos. S. Kopley, Bogalusa, secretary-treasurer.

During the trip two meetings were held each night—one for colored and one for whites—with moving pictures and addresses at both.

There were 6,350 visitors to the car; the audience during white lectures was 3,860; colored lectures, 5,060; physicians visiting car, 186; colored physicians, 27; talks, 40.

NEW SUPERIORESS AT CHARITY.—Most assuredly the large majority of the surgeons working in the operating rooms of the Charity Hospital—in fact, nearly all the doctors who have any connection with the Charity—were highly pleased when it was announced that Sister Stanislaus had been appointed as the head of the Sisters of Charity at the Hospital. Sister Stanislaus has had charge of the operating rooms for many years and, while careful and conservative, is alert and progressive. She keeps in touch with advancement and would need only the means necessary in order to

have the newest and especially the best for the operating rooms and the Hospital. While refraining from pronouncing an eulogy, we are inclined to congratulate the Hospital more than Sister Stanislaus on the promotion. The action of those in authority is most intelligent in the premises.

ARMY SURGEONS MEET.—The twenty-third annual meeting of the Association of Military Surgeons was held in Cincinnati on September 29. During the meeting a banquet was given by a number of the civic bodies in Cincinnati, at which military surgeons from all over the United States were present. The business of the meeting was largely attended and a very interesting program was furnished.

PHARMACIST AND PHYSICIAN'S ASSISTANT (MALE).—The United States Civil Service Commission announces an open competitive examination for pharmacist and physician's assistant, for men only, on November 18, 1914. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the United States Penitentiary at Leavenworth, Kans., at \$1,000 per annum, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be principally pharmaceutical in character and will be to fill prescriptions and to administer anesthetics.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

SUBJECTS.	WEIGHTS.
1. Pharmacy and materia medica (theory and practice of pharmacy and preparations of the United States Pharmacopoeia; origin, preparation, and general properties of drugs, physical and chemical, and the physiological action, therapeutics, and dose). . . . .	35
2. Chemistry and administration of anesthetics (general principles of organic and inorganic chemistry, and questions on the leading anesthetics). . . . .	35

3. Experience in dispensing and in administration of anesthetics. . . . .	30
Total. . . . .	100

Applicants must be graduates of a recognized school of pharmacy and must show experience in the administration of general anesthetics.

Statements as to training and experience are accepted subject to verification.

Applicants must have reached their twenty-first but not their forty-fifth birthday on the date of the examination.

Each applicant will be required to submit to the examiner on the day of the examination an unmounted photograph of himself taken within two years. An applicant who fails to present such photograph will not be admitted to the examination. Tintypes will not be accepted.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for application Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board at any place wherever located. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.

**JOURNAL CONSOLIDATES.**—On October 1, 1914, the *Laboratory News* consolidated with the *Medical Fortnightly*. There will be conducted a special department covering all the features that have been covered in the past in the *Laboratory News*. In addition, the *Fortnightly* will contain its regular contributions on general medicine and surgery from the leading men at home and abroad.

**DR. DANNA KNIGHTED.**—Mr. Carlo Papini, vice-consul at New Orleans to Italy, recently announced to Dr. J. A. Danna, formerly house surgeon of the Charity Hospital, that he had been knighted

by the King of Italy in recognition of his services to the New Orleans Italian colony. Ever since his graduation at Tulane University, Dr. Danna has devoted himself extensively to work among the Italian poor.

DENTAL DEPARTMENT, LOYOLA UNIVERSITY.—On October 7, 1914, the dental department of Loyola University was inaugurated at a meeting in Marquette Hall. The first session of the school opened on the following day with twenty-one pupils. There were addresses from Dr. C. V. Vignes, dean of the department; Rev. Father Otis, president of the university, and Dr. Homer Dupuy.

MATERNITY HOSPITAL FOR TOURO.—Through the beneficence of Mrs. Henry Newman, who has donated \$25,000 for the purpose, the Touro Infirmary, New Orleans, will build a maternity hospital. The hospital is to be built in memory of Mrs. Newman's late husband and will be known as the Henry Newman Maternity Hospital.

MEETING OF RAILWAY SURGEONS.—At the annual meeting of the Minneapolis, St. Paul and Saulte St. Marie Railway Surgical Association, held in St. Paul, September 12, the following officers were elected: President, Dr. Alexander J. McCannell, Minot, N. Dak.; vice-president, Dr. John B. Darling, St. Paul; secretary-treasurer (ex-officio), Dr. John H. Rishmiller, Minneapolis. Minneapolis was selected as the next meeting place.

COLORED PRACTITIONERS MEETING.—On September 7 to 9 the Tri-State Association of colored physicians, dentists and pharmacists of Ohio, Kentucky and Indiana, met in Indianapolis and elected the following officers: President, Dr. Wm. A. Method, Columbus, Ohio; vice-president, Dr. Wm. J. Woodlin, Columbus, Ohio; secretary, Dr. Henry W. Armistead, Indianapolis, Ind.; treasurer, Dr. Abram L. Cabell, Terra Haute, Ind. Columbus, Ohio, was chosen as the next meeting-place, to be held July next.

THE SOUTHERN MEDICAL ASSOCIATION will hold its annual meeting, November 9-12, at Richmond, Va. The headquarters for the meeting will be the Jefferson Hotel. More than 1,000 physicians are expected at this meeting. The profession is cordially invited to attend.

THE QUARTER CENTENNIAL ANNIVERSARY OF THE OPENING OF

THE JOHNS HOPKINS HOSPITAL and the twenty-first anniversary of the opening of the Medical School was observed with appropriate exercises on October 6 and continued through the week. Sir William Osler held a clinic on October 6. The Herter lectures for 1914 were given during the week, in connection with the anniversary, by Dr. Thomas Lewis, of the University College of London. Dr. Lewis, who has charge of the heart station at University College, is the first clinical investigator who has filled the position of Herter lecturer.

AMALGAMATION NECESSARY.—Due to lack of clinical facilities in Charlotte, the North Carolina Medical College, Charlotte, has been merged with the Medical College of Virginia, which took effect the beginning of the 1914-1915 term.

INTERNATIONAL CONGRESSES INTERFERED BY WAR.—On account of the war in Europe, the following congresses which were to be held in the late summer and fall have been postponed indefinitely: The Congress on Medical Electrology and Radiology, Lyons, July 27; on Ophthalmology, St. Petersburg, July 28; Conference on Tuberculosis, Berne, September 2; the International League Against Epilepsy, Berne, September 5; on Neurology, Psychology and Psychiatry, Berne, September 7; the Congress on Criminal Anthropology, Budapest, September 14; on Occupational Diseases, Vienna, September 21, and the Congress of International Association for Sexual Research, Berlin, October 31.

GIFT TO AMERICAN MUSEUM OF NATURAL HISTORY.—The American Museum of Natural History has been presented with a replica of the bust of Louis Pasteur by Dubois, through the generosity of Dr. Roux, director of the Pasteur Institute in Paris, and M. Valéry-Radot, son-in-law of M. Pasteur.

FRENCH SURGERY SUPERIOR.—Dr. Alexis Carrel, of the Rockefeller Institute, who is in charge of a hospital at Lyons, has written to Frederick B. Coudert, of Cleveland, Ohio, the following letter: "The French wounded arriving here daily are in good condition. They have no fever and the manner in which their wounds are dressed and the state of the wounds prove that the surgical service at the front works splendidly and in good order. A great number of German wounded are also arriving here. They receive exactly the same care and attention as the French wounded. It seems

certain that the German method of dressing wounds is not so good as the French method, because most of their wounds are infected."

**PHYSICAL EXAMINATION OF TEACHERS.**—It was stated by the Board of Education of Springfield, Illinois, that all teachers in public schools must undergo physical examination and obtain certificates of health before being allowed to take positions.

**SMALLPOX PAMPHLET IN DEMAND.**—Forty-two thousand copies of a bulletin on smallpox was recently issued by the State Board of Health of Iowa and 37,000 copies were asked for during the first week after the issue.

**DISPENSARY OPEN.**—An additional drug dispensary at the Touro Infirmary, New Orleans, was opened recently. This dispensary will be carried on by the Sickles Fund for the dispensing of medicines to the poor.

**PHYSICIANS IN NEW YORK TO REGISTER AT THE DEPARTMENT OF HEALTH.**—Physicians desiring to practice medicine in the State of New York must have secured a license from the State Board of Regents and have recorded this license at the office of the county clerk in the county in which the physician intends to practice. In the City of New York, in addition to the above requirements, Section 160 of the Sanitary Code makes it mandatory for physicians practicing within the city limits to register at the office of the Bureau of Records of the Department of Health in the borough in which they intend to practice. To do this the physician must present his license or the county clerk's certificate. No certificate of death, birth, or still-birth will be accepted from a physician who is not registered with the Department of Health. This has been found necessary in order to prevent the practice of unqualified healers.

**FIFTIETH ANNIVERSARY OF ST. LOUIS COLLEGE OF PHARMACY.**—The semi-centennial of the St. Louis College of Pharmacy will be celebrated on November 10 and 11. All persons who ever matriculated in the college will be invited to participate in the celebration. Interesting souvenirs will be mailed to those on the college mailing list.

**THE AMERICAN PUBLIC HEALTH ASSOCIATION** will hold its forty-second annual meeting at Jacksonville, Fla., November 30 to

December 5. The Southern Health Exhibition will be held in connection with the meeting, which will embrace sanitation, preventive medicine, hygiene, anti-narcotic work, food and drug inspection, fly eradication, and other phases of health work.

NEW HEALTH CODE FOR SAN ANTONIO.—The new health code recently adopted by San Antonio deals especially with the preparation and sale of food products in slaughter houses, in butcher shops, in stores, in restaurants and in hotels. The Board of Health has proposed several new amendments to the code, notably, the wrapping of bread, a more careful report of consumptives, the inspection and stamping of meat killed in the country, the daily placing of stable refuse in fly-tight, water-proof pits or bins, and a very stringent amendment dealing with milk. San Antonio has no milk ordinance which may be enforced and charges against impure milk dealers have to be brought to the County Court.

THE PRUSSIAN ACADEMY OF SCIENCES has offered a prize of 5,000 marks for the best study of "Experience as a Factor in Perception." The articles must reach the academy by December 31, 1916, and may be in German, Latin, French, English or Italian.

DECREASING BIRTH RATE IN GERMANY.—In an article in No. 18 of the *Münchener Medizinische Wochenschrift*, Dr. Von Gruber gives some remarkable facts about the decreasing birth rate in Germany. For thirty years after the war (1870) with France, the population of Germany increased enormously, while that of France remained almost stationary. At the beginning of the new century the birth rate in Germany began to decline and is still declining at a rapid rate. Dr. Von Gruber shows that while the number of marriages in Germany remained about the same (80 per 10,000 inhabitants), the birth rate sank from 370 in 1900 to 310 in 1910. Dr. Von Gruber, in considering the causes of this general decline of the birth rate, thinks that it is principally due to prevention of conception. He thinks, however, that this decrease is unintentional, many of the best families dying out, though children are ardently desired. The cause of this phenomenon are not fully known, but alcoholism and venereal diseases are probably the principal underlying causes. The insufficient increase of the birth rate among the intellectual classes is deplored and the two-children system severely condemned. He proposes severe penalties on criminal

abortion and on the advertisement and sale of drugs and other means for the prevention of conception.

THE TRAVEL STUDY CLUB OF AMERICAN PHYSICIANS, which made a successful study tour of Europe last year, has announced the plans for its 1915 study tour to the A. M. A. meeting in San Francisco, Honolulu, Japan, the Philippines and China, with optional return via Siberia (?), and Europe (?), or via Canada. As this will be the first party of American physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club is anxious to make its enterprise as representative as possible and asks all those interested to communicate with the secretary, Dr. Richard Kovacs, 236 East 69th Street, New York City.

FIGHTING CHOLERA.—One million crowns (\$200,000) has been appropriated by the Municipal Council of Vienna to construct isolation hospitals near that city in anticipation of an epidemic of cholera. Cholera has already been reported in various detachments of the army.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF ARKANSAS opened a Department of Pharmacy on September 14, 1914.

PERSONAL —Dr. Mazyck P. Ravenel, formerly professor of bacteriology in the University of Wisconsin, has been appointed a member of the advisory board of the hygienic laboratory of the U. S. Public Health Service.

Dr. Charles L. Bonifield was elected president of the American Association of Obstetricians and Gynecologists, at the twenty-seventh annual convention, succeeding Dr. Charles North Smith, of Toledo.

Dr. Wm. C. Gorgas was tendered a testimonial dinner by the Business Men's Club of Cincinnati the latter part of September.

Dr. A. K. Steele has been appointed senior dean and head of the department of surgery in the College of Medicine of the University of Illinois.

Dr. Alexis Carrel, of the Rockefeller Institute for Medical Research, is now in charge of a big hospital, where the French wounded are treated.



Dr. Charles W. Eliot, president emeritus of Harvard University, has been elected a corresponding fellow of the British Academy.

Dr. Henry H. Goddard, director of Research Work at the Training School for the Feeble-Minded, Vineland, N. J., has been elected president of the American Association for the Study of the Feeble-Minded.

Dr. N. T. Moore, according to the *Dallas News*, is being held a prisoner in Mexico because he performed an operation upon a man which resulted in his death. Dr. Moore was formerly secretary of the El Paso County Medical Society.

Dr. Huber Work, of Pueblo, Colorado, is a candidate for the nomination of United States Senator on the Republican ticket.

Dr. Daniel M. Gatlin, of Hattiesburg, Miss., recently purchased the Norman residence in St. Charles Avenue, New Orleans, and will make his home in this city.

Dr. E. L. King, of New Orleans, has moved his residence to 1124 Robert Street and his office will be at 416 Medical Building.

Dr. Paul J. Gelpi (New Orleans) has announced that after October 15, 1914, his practice will be limited exclusively to diseases of the genito urinary organs and rectum.

Dr. Ramon Guiteras, 80 Madison Avenue, New York, will hold his office open from September 1 to June 1.

Dr. Hermon C. Bumpus, formerly a professor of Brown University, a member of the Columbia University faculty and business manager of the University of Wisconsin, respectively, has been elected head of Tufts College of Boston, Mass.

Among the New Orleans physicians who have returned from their summer vacations and resumed practice are: Drs. A. B. Gaudet, J. M. Batchelor, H. S. Cocram, Geo. K. Pratt, Jr., John F. Oechner, W. B. Chamberlin, P. B. Salatich, Chas. J. Bloom, Lucien F. Solomon, Otto Lerch, Victor C. Smith, W. Scheppegrell, P. Graf-fagnino, Geo. W. Rembert, Joseph A. Danna, Joseph Conn, F. Temple Brown, John Leake and Joseph Hume.

Dr. M. P. Lane, of the Charity Hospital, New Orleans, was endorsed by Representative Garland Dupré for the position of surgeon in the American Red Cross Society for foreign service. Dr. Lane volunteered to help the Red Cross Society in their European work, and was accepted by them.

Dr. Otto Joachim, a prominent New Orleans specialist, is serv-

ing as surgeon in one of the German hospitals in Landau, Bavaria, but will soon return.

Dr. John G. Adami, head of the Department of Pathology at McGill University, has enlisted as a private in the battalion which is being organized at McGill University for service in the European war.

REMOVALS.—Dr. J. Moore Soniat, from 609 Macheca, to 518 Macheca Building.

Dr. A. McShane, from 609 Macheca, to 702 Macheca.

Dr. Gustav Keitz, from 609 Macheca, to 616 Macheca.

Dr. J. B. Hart, from 609 Macheca, to 702 Macheca.

Dr. E. W. Mahler, from 1204 Maison Blanche, to 734 Audubon.

Dr. J. E. Brierre, from 1221 Maison Blanche, to 35 Cusachs Building.

Dr. F. T. Brown, from 1221 Maison Blanche, to 34 Cusachs.

Dr. A. B. Cannon, from Camden, Ala., to Belleview, Ala.

Dr. E. M. Dupaquier, from 512 Medical Building, to 209 Medical Building.

Dr. P. W. Bohne and Dr. J. J. Wymer, to 620-622 Maison Blanche Building.

Dr. R. J. Mainegra, Jr., to 701 Perrin Building.

MARRIED.—On October 26, 1914, Dr. William Herbert Harris, to Miss Marie Mercedes Friedrichs, both of this city.

On October 14, 1914, Dr. Charles J. Barker, to Miss Aline Coulon, both of Thibodaux, La.

DIED.—On September 16, 1914, Prof. H. P. Hughes, of McComb, Miss. Prof. Hughes was the first in Mississippi to inaugurate in the public schools the domestic science department for girls and the co-operative education for boys.

On September 16, 1914, Mr. Jesse Mercer Battle, president of Battle and Company, Chemists Corporation, St. Louis, Mo.

On September 29, 1914, Dr. Andrew A. Forsythe, mayor of Monroe for sixteen years and one of the best known men in Louisiana.

On September 29, 1914, Dr. H. P. Gilbeau, of Breaux Bridge, La., aged 82 years.

## Book Reviews and Notices.

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

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**Infant Feeding**, by Clifford Grulee, M. D. Second edition. W. B. Saunders Company, Philadelphia and London, 1914.

The appearance of the second edition of this work is welcomed, more particularly, as it contains, as did the first edition, the viewpoint of the European School well presented, and its advance since the appearance of the first edition, with some views expressed before the first edition, but which was not included therein.

Some of the chapters remain unchanged, but most of them are elaborated with the recent advances by reliable investigators.

The work is well arranged, interesting and abounding in information which is readily referred to. This book should find a place on the shelf of every practitioner of the diseases of children. DE BUYS.

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**Diseases of Infancy and Childhood**, by Louis Fischer, M. D. Fifth edition. F. A. Davis Company, Philadelphia, 1914.

In his latest edition Dr. Louis Fischer gives us an up-to-date text, special care being given to treatment in which department the subject of pediatrics has advanced much in recent years.

The classification of gastric and intestinal disturbances is according to the Berlin School.

The new articles added in the fifth edition should be in every work on pediatrics, but they could be more thoroughly considered than in this text.

The work is profusely illustrated with appropriate cuts which, in some instances, demonstrate technics. There are three pages of prescriptions and a table of drugs with doses given. In this table, however, are omitted many drugs which are generally used in the treatment of children.

While this book has its shortcomings, it contains so much of value that it should be freely consulted in connection with diseases of children. DE BUYS.

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**General Bacteriology**, by Edwin O. Jordan, Ph. D. Fourth edition, thoroughly revised. W. B. Saunders Company, Philadelphia, 1914.

Jordan has been a standard text-book for many years. The present edition brings it right up to date and insures that it will continue to hold the position so justly deserved. The new chapter on "The Filterable Viruses" is good and is to be appreciated. BASS.

**Diseases of the Skin, Including the Acute Eruptive Fevers,** by Frank Crozer Knowles, M. D. Lea & Febiger, Philadelphia and New York.

The author's advice in the preface that the student who is just entering on the study of dermatology should first obtain a working knowledge of the common skin diseases is particularly apt at the present stage of this branch of medicine, when even dermatologists are beginning to learn the subject.

Dr. Knowles brings this text, excellent in its make up and finished in its detail, as an expression of a school of dermatology which has stood the best in this field since dermatology became separated as a scientific subject in America. The work throughout shows the imprint of the teaching of Duhring who was at all times a careful observer and a conscientious writer. Dr. Knowles has been bold enough to cast his book in his own way and though the traditional classification is followed, all through the book, original presentation of topics is ventured, without any explanation, which would really be superfluous. There is no attempt at an exhaustive work on skin diseases, but under each heading a practical, clear presentation of the particular disease is given with a precise statement of what is known of it to-day.

No space is wasted by discursive opinions nor by unnecessary argument—the book is a text-book and the subject is adhered to always.

The care in detail is evident, but this may be exemplified in the chapter on treatment where the technic of radium, carbon dioxide and the X-ray is described; the reader is instructed while he is informed of the methods he should follow. The chapter on syphilis is particularly notable for its completeness and for the careful presentation of the methods of laboratory findings of the organism and for the splendid outline of treatment.

The illustrations are excellent and for the most part refreshingly original.

The introduction of even brief discussion of therapeutic measures, at the end of the book, will be welcome to the general reader and will help in the vexing times of debated treatment.

We are glad for the sake of American dermatology that this book of Dr. Knowles has come—bringing to the intelligent student of medicine, in and out of college, a practical and at the same time authoritative text on skin diseases.

DYER.

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**Progressive Medicine.** Vol. XVI, Nos. 2 and 3. Edited by Hobart Amory Hare, M. D., assisted by Leighton P. Appleman, M. D. Lea & Febiger, Philadelphia and New York, 1914.

Such names as Coley, Gerster, Clark (John G.), Stengel and Jackson (Edward) are listed as contributors to the first of the two numbers of this excellent review of medicine and surgery and as usual the material is modern and ample. There is no more welcome publication which comes to the general practitioner than this and each issue brings the current information on the topics discussed.

While the one number discusses Surgery, Gynecology and Ophthalmology with large space given to Stengel's chapter on Diseases of the

Blood, etc., the last number (No. 3 for 1914) gives interesting reviews and commentaries on Diseases of the Thorax and Viscera (by Wm. Ewart), on Dermatology and Syphilis (by W. S. Gottheil), on Obstetrics (by Edward P. Davis) and on the Diseases of the Nervous System (by Wm. G. Spiller).

The complete volume in any year is in itself a cyclopedia of valuable information presented in easy form for ready study. DYER.

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**A Text-Book of Military Hygiene and Sanitation**, by Frank R. Keefer, A. M., M. D. W. B. Saunders & Co., Philadelphia and London, 1914.

This book of some 300 pages covers the ground of military hygiene thoroughly and practically. From the personal hygiene of the soldier to the function of the medical and sanitary officer in the field, the camp, and in barracks, all sorts of detail are set forth, and in an authoritative manner. The book is not only a guide to the medical officer, to the soldier, officer or private, but it is full of such practical ideas on many things of every-day interest in sanitation that the layman could profit in reading it.

The questions relating to the diseases of the camp are discussed in terms which any one may understand, and immunity and prevention are presented excellently. The need of antityphoid vaccination is argued to meet all objection in and out of camp.

We have profited in reading this book of Col. Keefer's and we commend it to all who want to know what military hygiene really is.

DYER.

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## Publications Received.

**LEA & FEBIGER**, Philadelphia and New York, 1914.

**Progressive Medicine**. Edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. September 1, 1914.

**Text-Book of Pathology**, by J. Geo. Adami, M. A., M. D., F. R. S., and John McCrae, M. D., M. R. C. P. Second edition, revised and enlarged.

**A Text-Book of Practical Therapeutics**, by Hobart Amory Hare, M. D., B. Sc. Enlarged, thoroughly revised and largely rewritten. Fifteenth edition.

**Diseases of the Nose and Throat**, by Jonathan Wright, M. D., and Harmon Smith, M. D.

**Pediatrics**, by Henry Enos Tuley, A. B., M. D.

**Nervous and Mental Diseases**, by Joseph Darwin Nagel, M. D. Second edition, thoroughly revised, including selected list of State Board Examination Questions.

**WM. WOOD & COMPANY**, New York, 1914.

**A Reference Handbook of the Medical Sciences**, by various writers. Complete in eight volumes. Vol. IV.

**J. B. LIPPINCOTT COMPANY**, Philadelphia and London, 1914.

**International Clinics**. Volume III. Twenty-first Series, 1914.

**Practical Bandaging**, by Eldridge L. Eliason, A. B., M. D.

**W. B. SAUNDERS CO.**, Philadelphia and London, 1914.

**Manual of Obstetrics**, by Edward P. Davis, M. D.

**The Clinics of John B. Murphy**, M. D., at Mercy Hospital. Chicago. August, 1914. Volume III, No. 4.

#### MISCELLANEOUS.

**Public Health Reports**. Volume 29, Nos. 37, 38, 39 and 40. (Washington Government Printing Office, 1914.)

**The Rockefeller Sanitary Commission for the Eradication of Hookworm Disease**. Second and Third Annual Report and Report of the Administrative Secretary. (Office of the Commission, Washington, D. C.)

**Report of the Bureau of Health for the Philippine Islands**. (Manila Bureau of Printing, 1914.)

**Sanitary Survey of Indiana Industries Employing Woman Labor**, by M. J. White, Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Safe Ice**, by Hugh S. Cumming, Surgeon, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**The Notifiable Diseases**. (Washington Government Printing Office, 1914.)

**Tuberculosis Sanatorium, Fort Stanton, N. M.**, by F. C. Smith, P. A. S., U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Studies on the Self-Purification of Streams**, by Earl B. Phelps. (Washington Government Printing Office, 1914.)

**Eighth Annual Announcement and Catalog of the College of Medicine and Surgery, University of the Philippines**. (Manila Bureau of Printing, 1914.)

**Laboratory Studies of Tetanus**, by Edward Francis. (Washington Government Printing Office, 1914.)

**Fortieth Annual Report of the Touro Infirmiry and Hebrew Benevolent Association, New Orleans, La.**

**Mosquitoes and Malaria**, by Ch. Wardell Stiles, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Quarterly Bulletin of the Louisiana State Board of Health**. New Orleans, September 1, 1914.

**Carcinoma of the Thyroid in the Salmonoid Fishes**, by Harvey R. Gaylord and Millard C. Marsh. (Washington Government Printing Office, 1914.)

**The Twenty-fourth Annual Report of the Eye, Ear, Nose and Throat Hospital of the City of New Orleans**.

**Vital Statistics**, by John W. Trask. (Washington Government Printing Office, 1914.)

**The Chances of Death and the Ministry of Health**, by Fred L. Hoffmann, LL. D. (Address delivered before the Divinity School, Yale University, May 30, 1914.)

**Malarial Fevers**, by R. H. Von Ezdorf. (Washington Government Printing Office 1914.)

**State and Insular Health Authorities**. (Washington Government Printing Office, 1914.)

**Typhoid Fever in Rockville, Maryland**, by L. L. Lumsden. (Washington Government Printing Office, 1914.)

**Diphtheria**, by J. W. Scheserewsky. (Washington Government Printing Office, 1914.)

**Industrial Conditions and Their Relation to Public Health**, by B. S. Warren. (Washington Government Printing Office, 1914.)

**Gaseous Impurities in the Air of Railway Tunnels**, by Atherton Seidell and Philip W. Meserve. (Washington Government Printing Office, 1914.)

**What Is a Safe Drinking Water?** by Allan J. McLaughlin. (Washington Government Printing Office, 1914.)

**Report of the Department of Health of the Panama Canal for the Month of May, 1914.**

**Trachoma in Kentucky**, by J. H. Oakley and Durlop Moore and Lawrence Kolb. (Washington Government Printing Office, 1914.)

**Bulletin of the United States Department of Agriculture.**

**The Reporting of Disease**, by Louis I. Dublin, Ph. D. (Washington Government Printing Office, 1914.)

## Reprints.

**The Etiology of Phlyctenular Ophthalmia**, by Samuel Theobald, M. D.  
**Emetin in Amebic Dysentery**, by John M. Holt.

**School Hygiene**, by A. D. Foster, P. A. S., U. S. P. H. S.

**Chronic Intestinal Stasis; Chronic Intestinal Stasis Surgically Considered; The Significance of Intra-Abdominal "Bands," "Folds," "Veils."**

**A Study of Factors in Parturition**, by Gilbert Fitzpatrick, M. D., F. A. C. S.

**Vesico-Vaginal Fistula and Recto-Vaginal Fistula**, by Henry Marcy, A. M., M. D., LL. D.

**The Use of Picrotoxin, Arsenic and Potassium Bromide in the Treatment of Epilepsy**, by Dr. H. Rodriguez Morini.

**The Suture as Applied to the Surgical Cure of Aneurysm**, by Dr. Rudolph Matas, M. D.

**The Labeling Vice**, by Samuel W. Kelley, M. D., LL. D.

**Sanitary Conditions in Alaska**, by Emil Krulieh.

**Industrial Insurance**, by J. W. Schreschewsky.

**Trachoma**, by Taliafero Clark.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for September, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	5	2	7
Intermittent Fever (Malarial Cachexia).....			
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	1	1	2
Diphtheria and Croup.....	10	5	15
Influenza.....			
Cholera Nostras.....			
Plague.....			
Pyemia and Septicemia.....	1		1
Tuberculosis.....	36	47	83
Syphilis.....	4	5	9
Cancer.....	17	4	21
Rheumatism and Gout.....	2		2
Diabetes.....	3		3
Alcoholism.....	2		2
Encephalitis and Meningitis.....	2		2
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	21	13	34
Paralysis.....	1		1
Convulsions of Infancy.....	2		2
Other Diseases of Infancy.....	8	6	14
Tetanus.....	4	2	6
Other Nervous Diseases.....	2	2	4
Heart Diseases.....	50	18	68
Bronchitis.....		2	2
Pneumonia and Broncho Pneumonia.....	7	14	21
Other Respiratory Diseases.....		3	3
Ulcer of Stomach.....	1	1	2
Other Diseases of the Stomach.....	4	2	6
Diarrhea, Dysentery and Enteritis.....	23	24	47
Hernia, Intestinal Obstruction.....	1	1	2
Cirrhosis of Liver.....	9	3	12
Other Diseases of the Liver.....	4	2	6
Simple Peritonitis.....		2	2
Appendicitis.....	7		7
Bright's Disease.....	26	12	38
Other Genito-Urinary Diseases.....	7	4	11
Puerperal Diseases.....	5	3	8
Senile Debility.....	5	2	7
Suicide.....	6		6
Injuries.....	17	11	28
All Other Causes.....	23	20	43
TOTAL.....	316	211	527

Still-born Children—White, 31; colored, 29. Total 60.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 13.94; colored, 25.07. Total, 16.95.

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

Mean atmospheric pressure ..... 30.01

Mean temperature ..... 79.

Total precipitation ..... 5.05 inches

Prevailing direction of wind, northeast.



# *New Orleans Medical and Surgical Journal*

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DECEMBER, 1914.

No. 6

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## Original Articles.

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

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### THE MEDICAL PERIODICAL AND THE SCIENTIFIC SOCIETY.\*

By FIELDING H. GARRISON, M. D., Washington, D. C.

In 1625, after having spent ten years in writing masques and court entertainments for the pleasure of "Eliza and our James," the old dramatist, Ben Jonson, returned to the stage with the witty comedy of "The Staple of News," which, in the opinion of his critics, is to be regarded as one of his four greatest works. Our present interest in this comedy is, in the words of one of these critics,<sup>1</sup> that in its principal scene is represented "the narrow little nest in which was laid the modest little egg of modern journalism—that bird of many notes and many feathers, now so like an eagle and now so like a vulture; now soaring as a falcon or sailing as a pigeon over continents and battle-fields, now grovelling and groping as a dunghill kite, with its beak in a very middenstead of falsehood and of filth. The vast range of Ben Jonson's interest and observa-

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\* Read at the Meeting of the American Medical Editors' Association, Atlantic City, June 23, 1914.

1. A. C. Swinburne. A Study of Ben Jonson, London, 1889, 76-77.

tion is here as manifest as the wide scope and infinite variety of his humor. Science and warfare, Spinoza and Galileo, come alike within reach of its notice, and serve alike for the material of its merriment. The invention of torpedoes is anticipated by two centuries and a half, while in the assiduity of the newsmongers who traffic in eavesdropping detail we acknowledge a resemblance to that estimable race of tradesmen known to Parisian accuracy as interviewers. And the lunacy of apocalyptic interpreters or prophets is gibbeted side by side with the fanatical ignorance of missionary enthusiasm, with impostures of professional quackery and speculations in personal libel."

The period in which this comedy was written, ten years after Shakespeare's death, was one in which, as in our own time, a vigorous and complex civilization had already become so highly specialized as to be practically in a state of temporary decadence or decay. In poking fun at its foibles it was the whim of Jonson and the other Elizabethan and Jacobian dramatists to be frankly, even outrageously coarse, perhaps, as an improvement on being tamely vulgar. In satirizing the "intelligence offices," which were the originals of our modern newspapers, our dramatist introduces details hardly mentionable "to ears polite," and citation must be limited to his fling at the sensational scientific reporter, whom Butler ridiculed at the end of the same century, and who was already supposed to be as proficient in the gentle art of fabrication as the "snake editor" of a sporting newspaper:

"He's a nimble fellow,  
And alike skill'd in every liberal science,  
As having certain snaps of all; a neat  
Quick vein in forging news to: I do love him."

Out of the intelligence offices, which were originally places in which the business, and even sentimental, correspondence of the unlettered was conducted by scribes, came the seventeenth century newspapers, and from these came the scientific periodical, the pedigree of which is out of the scientific society by the newspaper. Newspapers, in the sense of brief bulletins of daily events, go back to the *Acta Diurna* of ancient Rome; the Peking *Daily Gazette*, now over a thousand years old and still current, originated in the seventh century A. D., and at the beginning of the seventeenth century the Venetians had breakfast-table leaflets, variously styled *foglietti*, *coranti* or *gazetti*. The first European newspaper, in the modern sense, appeared at Antwerp in 1605, and was followed by

some half dozen others, including the solitary "number one" of the Boston *Publick Occurrences* (September 25, 1690). Meanwhile, the Roman Academy of Lynxes (*Accademia dei Lincei*) was founded in 1603, the Florentine Academy of Experiment in 1657, the Royal Society of London was chartered in 1662, the French Academy of Sciences in 1665, and all these scientific societies, in due course, published transactions. From this it was but a step to the first scientific periodical, the *Journal des sçavans*, of Paris (1665), and to the first medical periodical in the vernacular, the *Nouvelles Découvertes*, of Paris, which was started by Nicolas de Blegny in 1679, was translated into Latin and German, and was revived, at intervals, in a spasmodic and sporadic way, under various other titles. Its original editor, de Blegny, was the author of an important work on the medico-legal relations of surgery (1684), and, in the same year, he is said to have made a series of satirical sketches of his contemporaries, the *Mercur savant*. From this was evolved, in 1691, an almanac of some twenty-five thousand Parisian addresses (*Almanac des adresses de Paris*), which was the original city directory.

If one were asked to name off-hand the medical periodicals of the eighteenth century he might at most remember half a dozen: Yet there were no less than eighty of these, of which fifty-five were German, three French, four English, and one American. There were, besides, some twenty-five different transactions of medical societies, and a vast number of these were scrap-books of miscellaneous information, which were the originals of our present year-books and repositories. In considering this long series of medical periodicals we are reminded of Renan's *Résignation à l'oubli*. It is sad to reflect that only such titles as Reil's *Archiv für die Physiologie*, Hufeland's *Journal* or Desault's *Journal de chirurgie* linger in the memory. The reason for our forgetfulness or indifference is simply that the best work of the time in scientific medicine, that which survives in the text-books and medical histories, is, for the most part, contained in the contemporary files of scientific transactions. To realize this, you have only to think of William Hunter's description of arterio-venous aneurism, Heberden's accounts of varicella and angina pectoris, Lettsom's description of drug habit, or John Hunter's operation for popliteal aneurism, which started the surgery of the vascular system. To the credit of the medical periodical be it said, however, that the first published accounts of

pellagra (Thiery, 1755) and the first operated case of appendicitis (Mestivier, 1759) were published in the Parisian *Journal de médecine*. On the social side, Sudhoff believes that a large part of the cultural history of medicine in the eighteenth century could be reconstructed from the files of these now forgotten periodicals.

In the nineteenth century the new feature of social medicine, or the direct employment of medical journalism in the organization and direction of public opinion, became an accomplished fact with the foundation of the London *Lancet* in 1824 by Thomas Wakley, whose life was devoted to vigorous propagandism in many directions. From this time on the periodical literature of medicine flows forward in three ever-broadening channels, which are: the transactions of scientific and medical societies, the periodicals devoted exclusively to original work in scientific medicine, including the specialties; and the periodicals of medico-social character, devoted in part to editorial expression of opinion and current medical information, including historical and humorous gossip. In the light of what we have seen to be the experience of the eighteenth century, the question arises, which of these "streams of tendency" has, in the biological sense, the best survival value, not only for present growth and development, but for future remembrance? For the present, this would obviously be the periodical which best subserves the greatest good of the greatest number in a given country, community or city—for example, the journals which are known to us by such leading names as Berlin, St. Petersburg, Boston, Bristol, Edinburgh, Dublin, Buffalo, New Orleans, etc., taking it for granted that these periodicals will have the local support of their cities so long as the physicians of these cities are prosperous and interested in their future prosperity. But for presumption of survivorship in the future, plainly the strictly scientific periodical, which has no editorial policy whatever, will have the best chance, and the medico-social periodical will be studied only by the medical historian and the "gatherer of unconsidered trifles."

We naturally read what interests us in the columns of current periodicals, but seldom do we consult the back files, unless to verify some scientific question or for some reason connected with historical research. And the experience of a large library shows that the files of purely scientific periodicals are in constant request, year in, year out. In the Surgeon General's Library, for instance, the most badly

dilapidated volumes are those in the early files of such periodicals as Virchow's *Archiv*, Hays' *Journal*, the *Lancet*, the *Johns Hopkins Hospital Bulletin*, and so on. What does this suggest to the medical editor? Clearly, that the best way to make his journal of permanent value, the best insurance for future perusal, is to make it the organ of some scientific medical society of good repute. The crux of the situation, as it seems, lies with the scientific transactions, which are at present the stumbling block of hard-working librarians and bibliographers. Many medical transactions of the present time are, when printed apart, published in the most haphazard and irregular fashion, making it a matter of constant worry to keep track of their separate issues, as well as to index and bind them. Some are printed two, three or more years after the reading of the separate papers, rendering much of this literature defunct, still-born on publication, or otherwise practically worthless. Others are so extensively duplicated, wholly or in part, in various journals, that the publication of the whole series in a separate volume seems a work of supererogation, and is, in many cases, a waste of paper and printing-ink. All this might be obviated, and the reader kept in touch with current material, instead of waiting for it indefinitely, by simply printing the transactions once for all in some good medical periodical, as has been done by the *Journal of Physiology* (London) for the Physiological Society of Cambridge; the *Wiener klinische Wochenschrift* for the old k. k. Gesellschaft der Aerzte; the *Washington Medical Annals* for the District of Columbia Medical Society, or more recently by the *Boston Medical and Surgical Journal* for the Massachusetts Medical Society. It is not held out as a bait to the medical editor that this will be a short cut to journalistic immortality, which is always on the laps of the gods, but the plan has one practical business aspect, which should appeal to all, viz: it will secure to the journal a definite number of permanent subscribers (the members of the society in question), and thus relieve it of some of the ethical and financial difficulties encountered in relying upon advertisements for commissariat. No journal can long remain a going concern without adequate financing, and, over and above this material advantage, the journal which publishes scientific transactions will be welcome "as the flowers in May" to those harassed librarians and bibliographers who have to worry about such matters as collation, indexing and binding.

To go into the causes of the vast outpouring of medical periodicals

in recent times, the impact of which is felt most by those who work in libraries, would lead us too far. But one effect of this proliferation must be apparent: There is a struggle for existence among periodicals just as among peoples, animals and plants, and the race is not always to the strongest. The bibliographer who has to cleave his way through this dense foliage is in the same case with Stevenson's Woodman:

“Thick round me in the teeming mud  
 Brier and fern strove to the blood.  
 The hooked liana in his gin  
 Noosed his reluctant neighbor in;  
 There the green murderer throve and spread,  
 Upon his smothering victim fed,  
 And wantoned on his climbing coil.  
 Contending roots fought for the soil  
 Like frightened demons: with despair  
 Competing branches pushed for air.  
 Green conquerors from overhead  
 Bestrode the bodies of the dead;  
 The Cæsars of the sylvan field,  
 Unused to fail, foredoomed to yield;  
 For in the loins of branches, lo!  
 The cancers of the orchid grow.”

This may seem a bit overstated, yet the pedigrees of medical periodicals, a chapter in itself, tell the story. Some have changed their names by marriage; some have divorced themselves from their running mates and found in re-marriage what Dr. Johnson styled “the triumph of hope over experience”; some have changed their names without Act of Congress, or have merged their past existences into offspring of an entirely different title; and some, after a long series of matrimonial vicissitudes, have come back to the severe simplicity of a maiden name.

Now, nature, biologically speaking, aims to preserve the species at the expense of the individual, and her warfare (natural warfare) is among species of animals or plants, the weakest species and the weakest individuals of the species going to the wall. Man's tendency, on the other hand, has been to preserve the individual, particularly his individual self, at the expense of the species. The ways of nature are broad and inclusive. The ways of man are usually narrow, selfish and exclusive. A military pedant, a monarch bent on holding his throne at any price, a sexual or financial crook, a politician who does not like to “let go” in several senses, a social outlaw of any kind, cares about as much for his species as the

average boa constrictor. Any tears of commiseration he sheds are inevitably "crocodile tears." Plainly, the wisest, sanest line for suffering humanity is to steer a middle course between the extremes of individualism and socialism, and this is also true of the medical journal. In the olden time, the poor man made shoes, hats, clothes, books and other conveniences and luxuries for the rich man, took care of him, transported him from place to place, even fed and buried him. Now the rich man does all these things for the poor man, in some cases does them better, and charges for it in proportion. But a rich medical journal should not aim at monopolizing all things medical, and there is ample room for the smaller periodical of solid merit, particularly the periodical herein specified, which subserves the useful purpose of preserving the transactions of medical societies.

"Nature with equal mind sees all her sons at play."

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## EXTERNAL VACCIN THERAPY.\*

By HARVEY PARKER TOWLE, M. D., Boston.

The writer began his experiments with the method of external vaccin therapy quite independently. Indeed, it was not until immediately before the London Congress of 1913 that he became aware that Dr. F. C. Gilchrist was pursuing a similar investigation.

In the summer of 1912 the writer began to use the method in the skin ward of the Massachusetts General Hospital and, a little later, in his private practice. Because of greater uniformity in handling and a more consistent policy, the material for this communication has been drawn almost solely from 150 cases in private practice. Exceptionally, when some particular point was illustrated especially well, a hospital case has been included.

Roughly speaking, the report is based on three successive series of tests. The object of the first was to determine the practicability of the method; of the second, the technic; and of the third, the results and indications.

Unless it could be shown that a vaccin, used externally, exerted an influence in some degree comparable to that of the same vaccin administered by injection, the probable value would scarcely justify

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further effort. Therefore, during the first period, the cases were scrutinized chiefly from this standpoint. From the outset, the evidences of activity were furnished so consistently and so abundantly that no long series was needed to demonstrate the practicability.

As an example of the results obtained during this preliminary period the following case may be cited briefly: For several years a young man had suffered from a very abundant and painful acne of the back. To the eye, the whole upper back presented an almost continuous sheet of bright redness, in which were innumerable scars of past processes and equally numerous large, domed, abscess-like formations of recent origin. The eruption was very painful. Some evidence of systemic absorption existed. Various forms of treatment had been tried. After the patient was admitted to the skin ward of the Massachusetts General Hospital treatment consisted of ordinary hygienic measures and external vaccin therapy. Morning and night the skin was washed with soap and water. Then followed the inunction of an ointment containing (in 30 grams) boric acid, two grams; stock polyvalent staphylococcus vaccin, 400,000,000; stock mixed acne vaccin, 200,000,000. Three days later the following record was made: General condition greatly benefited. The skin is no longer diffusely red, except, in mild degree, about a few sparse lesions. The surface of the skin has become smooth and level. Nowhere is there visible evidence of pus formation. Tenderness no longer exists. The skin has taken on a pale yellowish-white tone and is somewhat greasy. Large comedones, not previously observed, are now present in moderate numbers.

On the basis of such results, it was decided to undertake the further investigation of the external method of vaccin treatment. In order to render the judgment of results more accurate it was necessary to determine, in advance, how the investigation should be conducted. From experience gained in a series of experiments, made for that purpose, the following rule was adopted: For use in cases under investigation the chosen vaccin is to be mixed in some form of ointment or paste, or, under special conditions, in a liquid preparation containing at least five per cent. of some fatty substance. Lanolin was made an important constituent of most ointment bases, usually with other softer substances whose proportions were varied according to the degree of softening desired. For example, two characteristic and very frequently used formulæ were: (1) *Glycerin*, 4; *Liq. calcis*, 5; *Vaseline*, 6; *Lanolin*, 15. The re-



sulting product is a soft, somewhat sticky mass, which, however, can be rubbed in with comparative ease and rapidity by light friction. (2) *Ol. amygdalæ dulc.*, 4; *Liq. calcis*, 4; *Lanolin*, 22. This is as efficient as the first, and has the added advantage of being a trifle more soothing, and, to many, less disagreeable to handle. In both, the odor of lanolin is distinctly perceptible. By altering the percentages, by subtracting constituents or by adding or substituting other substances from the formulæ given, it was possible to produce at will the softest ointment or the stiffest paste and every variety between. It was constantly urged upon all concerned in the investigation that every prescription should be regarded as a separate problem, and routine writing be avoided.

To obtain maximum conditions for the test, much care was taken to give each patient minute instructions. The application of the vaccin pastes presented no serious difficulty. With vaccin ointments, the situation not infrequently was quite the opposite. Inunction to the limit of absorption was the foundation of all methods of applying vaccin ointments. At the same time the possible harmfulness of the rubbing connected with the method was a constant factor to be reckoned with and met. The hindrances to unrestricted friction most frequently encountered were pain, due to the disease itself or to foreign conditions, and acute inflammations, accompanied by swelling and serous infiltration of the upper layers of the skin. If these symptoms were not too intense it was sometimes possible to accomplish the inunction by first protecting the anointed skin by one or two layers of a hot water compress and rubbing the outside of the compress. Occasionally the previous application of the hot compress for several minutes was found more effective. In one or two cases, in which the localization was favorable to the method, the best results were obtained by first applying the vaccin preparation and then sealing the smeared area with an impermeable dressing, keeping the part covered for hours.

The stock polyvalent vaccins of the staphylococcus, the streptococcus and the acne bacillus and the tuberculin alt (Koch) were used in external vaccin preparations. In the hope of promoting uniformity in test conditions the vaccin products of a single laboratory were invariably used.

The vaccin appropriate to the case in hand was selected on the evidence of the clinical diagnosis. Although scientifically incorrect, this method was considered sufficiently exact for our purposes be-

cause of the precision which the clinician has acquired through much previous laboratory research. In a few instances it was considered wiser to confirm the clinical diagnosis by the laboratory.

A standard method of vaccin prescription was a necessity, but, so far as was known, no data existed from which to construct it. At the outset of this investigation it was the practice to include in thirty grams of ointment mass an amount of vaccin corresponding to the average dose by injection. By administering in divided doses the same average periods as separated the injections, the external method exhibited a total amount of vaccin which, even if completely absorbed, was no greater than the amount injected within a similar period. The essential difference between the two methods was that whereas, by injection, a single massive dose was administered at the beginning of the interval, by the inunction method the same dose was represented by small, frequently-repeated doses distributed over the entire period. It seemed theoretically possible also that, in the presence of interference with free circulation, a successful inunction might transport to the seat of the disease an absolutely, as well as a relatively, larger dose than the injection. It soon developed, in fact, that smaller doses—*i. e.*, less frequent inunctions and longer periods—were quite as efficacious, and the early standard was altered accordingly. But as yet it has not been possible to formulate the relation which the external dose bears to the internal, under all conditions.

Below are given brief summaries of representative cases treated by external vaccin therapy under the conditions just described. The histories demonstrate more clearly than any academic description the types of disease, the methods of handling, and the results obtained.

In view of the greater and more consistent success of internal vaccin therapy in cases of infection by the staphylococci, there was a special interest in comparing the effect of external vaccins upon similar cases.

In the treatment of boils, the conclusion was reached that the external vaccin therapy was less effective than the internal. The unfavorable comparison was not unexpected, as, owing to the great depth of the suppurative process, the vaccin should more easily reach the disease by way of the circulation than by way of external inunctions. The failure of the external method to affect favorably such deep-seated suppurative processes indicates that its value is affected by the difficulty of penetrating deeply.

The following cases illustrate: A man with a half-dozen deep, hard boils was given, twice daily, polyvalent staphylococcus vaccin 400,000,000; boric acid, 2; liquid cold cream, 10; cold cream ointment, 20, and ordered to repeat in three days if progress was not satisfactory.

A second case had relapsed after an apparent cure by means of vaccin injections. The above prescription was given in this case. Neither patient returned, probably, experience teaches, because the vaccin treatment was ineffective.

In the more superficial staphylococcus processes, however, the tale is quite different. A young boy had been poisoned by ivy about ten months before. The lesions had quickly become secondarily infected. In spite of continued treatment, the infectious process had persisted and had spread until, when seen, the boy was absolutely helpless because of the tremendous swelling and pain of both arms from the elbows to the tips of the fingers. He was discharged well four weeks after beginning to use a paste-ointment containing, in 30 grams, 2 grams boric acid and 1 c. c. (400,000,000) of a polyvalent staphylococcus vaccin, in conjunction with soakings in weak antiseptic solutions. A young man with a very extensive impetiginous eruption, covering both buttocks and the upper parts of both thighs, was practically well in three days, not more than five lesions retaining even slight evidences of activity.

Several cases of rather acute pustular affections of the bearded face were very favorably influenced by external vaccin therapy. In one, the disease had existed for two years. The cheeks and chin were swollen and bright red from ear to ear. Subjectively, the burning and itching were unbearable. In this case a dose of only 200,000,000 polyvalent staphylococcus vaccin was prescribed in 100 c. c. in a fluid cold cream with 2 per cent. boric acid. The remedy was rubbed in thoroughly, but with care, morning and night, after a preliminary use of soap and water. The burning sensation was promptly allayed. Next, the swelling began to disappear, and then the pustules. After ten days there was no swelling, no pus and no tenderness. All that remained of the former severe affection was a very narrow zone of pale redness around a moderate number of hairs. When seen six months later nothing was visible.

Even more striking was the case of a man who had been bitten in the right palm eight months before. Infection followed, and spread until it reached to the outer limits of the palm, under-

mining the epidermis and leaving behind great dangling strips of epidermis. Thirty grams of an ointment were prescribed, in which were 400,000,000 of polyvalent staphylococcus vaccin, 1 gm. of boric acid and 2 gms. of calamin. Five days later the exposed, raw surface of the palm had been covered over by new tissue and the symptoms of violent inflammatory infection had disappeared. There were visible only a mild redness and an unbroken, desquamating tissue. After eighteen days the patient was discharged.

A few cases of eczema also were treated by external applications of a polyvalent staphylococcus vaccin. In chronic and sub-acute cases the results were very irregular and, on the whole, unsatisfactory. On the other hand, the effect of the external vaccin salve upon the infected eczema with acute inflammatory symptoms was most excellent. The following case exemplifies well both facts: For two years the eczema had been present in fluctuating intensity. During long periods of exacerbation, itching and burning had effectually prevented sleep. An ointment containing a staphylococcus vaccin was prescribed. The intolerable itching was so promptly relieved that, on the very first night following the application, the patient was able to rest. Within seventeen days the vaccin ointment, used in combination with the usual measures, had so reduced the eruption that it retained but a small part of its former intensity and spread. The patient enthused over the treatment.

The same power of allaying inflammation and the subjective symptoms of irritation was most strikingly manifested in a case of psoriasis with severe secondary infection, and also in a case of facial seborrhea with intense urticaria, and with mild symptoms of secondary infection. Both patients were nervous and high-strung, suffering disproportionately to the cause. The first had a psoriasis for ten years which involved both buttocks. The misdirected zeal of both doctor and patient had produced a dermatitis of the buttocks, which had soon become infected. Eventually the severe septic dermatitis spread from the buttocks to the perineum, creating a continuous sheet of swollen and crusted, inflamed skin. The consequent insomnia rendered the patient almost desperate and was rapidly breaking him down. Four hundred million of a polyvalent staphylococcus vaccin was prescribed in the form of a paste. Thirteen days later the acute symptoms had subsided. The patient reported that he had not had a single uncomfortable night. The second patient had had a facial seborrhea for years. For years also

he had suffered from pruritus and urticaria. During this period his face was accustomed to swell and itch at intervals, usually after some indiscretion. At such times sleep was impossible. Usually, scratching produced a more or less intense infection and an aggravation of the subjective symptoms. Ordinary measures had never given more than partial and temporary relief. An ointment containing 400,000,000 staphylococcus vaccin, included because of the secondary infection, and 200,000,000 mixed acne vaccin, never failed to cause the subjective symptoms to disappear entirely within a few minutes and to relieve the objective symptoms.

A number of experiments were made with stock-mixed acne bacillus vaccins alone and in combination with a polyvalent staphylococcus vaccin. In most instances the affections were associated with manifestations of seborrhea of face or scalp. In the earlier cases the acne vaccins were used without the staphylococcus. In the later cases the two were almost invariably combined in one prescription.

When used alone, the mixed acne vaccin seemed to have a very limited usefulness. The doses ranged from 50 million to 200 million. On the alopecias, associated with a dry, finely desquamating scalp, the uncombined acne vaccin seemed to have little effect and the method was soon abandoned. Upon the oily seborrheas of scalp and face, its action was better, but still very mild. A diminution of the oiliness was produced up to a certain point, after which further progress seemed to be unattainable or a relapse to former conditions occurred.

In some cases of falling hair attended by accumulations of fatty matter and epithelial debris scattered in small or great profusion, over the scalp, a combination of the mixed acne and polyvalent staphylococcus vaccins seemed to have a most excellent effect. A woman, over forty, in poor general health, complained of excessive loss of hair. The hair had been greatly thinned. The scalp was covered by heaps of crusts and scales. She was given a prescription of 100 million of a mixed acne vaccin and 400 million of a polyvalent staphylococcus vaccin, to be applied, the first week twice and in the succeeding weeks once. One month later the patient reported that she had never used a preparation so efficient. She continued the vaccins two months longer when she stopped them. After a month of no treatment, the patient reported that her scalp was in better condition than it had been for months.

The good influence of the combined acne and staphylococcus vac-

cins upon seborrheic processes with suppurative acne lesions is demonstrated by the following case. Little progress had been made in the treatment of a thickened, muddy looking, oily skin upon which were many comedones, acne papules and acne abscesses. A preparation containing the vaccins was prescribed. Improvement was rapid. The inflammation and suppuration disappeared, but the muddy appearance persisted for a considerable time thereafter when it, too, disappeared.

Papular acne was sometimes greatly improved by external vaccin therapy. Comedones were not affected.

External staphylococcus vaccin therapy was tried, empirically, in two cases of inveterate psoriasis, but with no result. On the other hand, two cases of recurrent guttate eruption, both following tonsillitis, were greatly improved. In one the eruption had almost disappeared within a month; great improvement was noticed at first. Later the eruption returned.

Tuberculin ointments were tried in erythema induratum, lupus vulgaris and in lupus erythematosus with varying results. The strength ranged from 0.001 to 0.1 grams of tuberculin exhibited in 30 grams of ointment.

In one case of erythema induratum the pain was relieved and slight improvement occurred in the objective symptoms, such as increased tendency of the ulcer to heal and to be resorbed, for a few weeks after which the tuberculin seemed to lose its potency.

Tuberculin ointment (0.1 gram tuberculin) seemed to act more vigorously in lupus vulgaris and to be effective for a longer time than in erythema induratum.

In one case of lupus vulgaris the disease involved the left side of the tip of the nose, the extreme outer portion of the left nasal vestibule, the adjoining rim of the ala and the upper lip. Nose and lip were intensely red and greatly swollen. For two or three weeks at the outset heliotherapy was the sole method of treatment. During this period improvement was shown by a reduction of all the symptoms. The discharge from within the nostril steadily grew less; the redness decreased; the nose and lip grew smaller. Discouraged by continued adverse weather conditions, an ointment (one milligram of Koch's tuberculin alt to an ounce) was substituted for heliotherapy, massaged in freely morning and night. The response was immediate. Whenever weather favored, sun exposures were added. Under this combination of external tuberculin therapy

and of heliotherapy, the rate of progress was more rapid than with either alone. When circumstances finally forced cessation of all treatment, the nose presented an almost normal appearance. The only visible disease remaining was in an area about the size of a French pea. The lip was of normal thickness.

In a second case, the tubercular disease was manifested in a single round area, about as large as a nickel, outside the angle of the mouth on the left cheek. The process was deep-seated, firm and infiltrated. Several nodules, secondarily infected by pus germs, were tender, swollen, and elevated above the general level. On incision, a considerable amount of pus and pultaceous tissue was evacuated. An ointment base, containing 0.01 gram of tuberculin and (on account of secondary infection) 400,000,000 polyvalent staphylococcus vaccin, was ordered to be applied by injection twice a day. Within a week a smart local reaction occurred, manifested by a primary increase in the redness, followed by swelling and twenty-four hours later by abundant, closely crowded vesicles of small size, with clear serous contents. The fluid escaping from the easily ruptured vesicles dried into large crusts, greatly exceeding in breadth the disease beneath. When the reaction had quieted and the overlying crust had been removed, the lesion seemed to extend less deeply into the tissues beneath, the infiltration to be less marked and less firm, and the previous tenderness to have grown less severe. The tuberculin staphylococcus ointment has been applied since the reaction but twice a week, a boric ointment filling in the intervals.

Four cases of lupus erythematosus, in all of which there were multiple, disseminated lesions on face and scalp, were treated by the external application of a tuberculin alt (0.1 gm.)—mixed acne bacillus vaccin (200,000,000) ointment.

In two the disease was more extensive and more acute than in the others. The eruption of this acute type was a bright and angry red; the lesions and the surrounding tissues were markedly edematous; the exquisite tenderness was a prominent symptom. The lesions in the acute cases were smaller than in the chronic forms, but more abundant and with less tendency to atrophy.

Nothing in the whole course of this investigation created such surprise and such interest as the rapidity and the degree with which these acute forms of lupus erythematosus responded to the external tuberculin-acne vaccin treatment. This was especially true in regard to the pain and tenderness. In one case the symptoms were entirely

relieved, in the other very greatly. The effect of the applications upon the swelling and redness was only a trifle less theatrical. The result in one case in particular invited comparison with the method of carbon dioxid snow refrigeration. After one week's use of the tuberculin-acne vaccin ointment, the swelling had entirely disappeared; the bright redness had been replaced by the dingy tone familiar in the last stages of a bruise; in many lesions no perceptible infiltration was found; in other and larger plaques the centers were smooth and clear, and the peripheries broken into small fragments; and the previous tenderness, so severe as to constitute a serious hindrance to proper performance of treatment, was no longer present. The effect of the external treatment on the second acute case was similar in kind, but less in degree.

The two chronic cases were very much less affected by the external tuberculin-acne vaccin treatment, with one very noticeable exception in the symptom of tenderness. In the one chronic case in which this symptom was of importance, the relief afforded was quite as pronounced as in the acute forms of this disease and in the banal infections. In the second case neither the tenderness nor the pathological processes were greatly influenced.

A second surprise was encountered in an extensive and intense affection of the bearded face by the *Trichophyton megalosporon*. From ear to ear the swelling was tremendous. Cheeks and chin were fiery red and covered by closely crowded pea to plum-sized tumors, from which there poured an abundant purulent sticky discharge. As an experiment, an ointment containing 800,000,000 polyvalent staphylococci vaccin was prescribed, to be spread on cloths and applied twice a day after first massaging some into the affected area. Forty-eight hours later the redness was minimal, the swelling was nearly gone and the discharge had almost ceased. Within a week the symptoms had so far abated that there remained only a few hard, small nut-sized nodules beneath the jaw and the megalosporon could no longer be discovered by the microscope.

Impetigo contagiosa has been left to the last because the favorable results with staphylococcic vaccins were so obviously to be expected from a therapy which acted so favorably upon sycosis. It is not a cause for wonderment, therefore, that external vaccin therapy acted promptly and efficiently upon the superficial lesions of impetigo.

The object of this investigation was to determine, in a general way, whether external vaccin therapy might not have a clinical



value. Although its methods are open to much criticism in regard to their accuracy, it is, nevertheless, believed that they were sufficiently correct to render an affirmative conclusion acceptable. The finer questions of actual value, of dose and methods and of indications were not considered. If it has succeeded in showing what external vaccin therapy does of, as yet, undetermined degree, it will have fulfilled its purpose.

### TRIGGER FINGER, WITH THE REPORT OF A CASE.\*

By E. D. FENNER, M. D., New Orleans.

On April 10, 1914, Miss Margaret M., the daughter of one of my friends, was brought to me by her mother on account of a painful condition of the ring and little fingers of the left hand, which proved on examination to be a typical example of "Trigger Finger."

The history was as follows: About the first of April she had begun to take lessons in golf. Being robust and ambitious to learn the game, she had practiced assiduously. About the fourth lesson she began to experience a pain and sensitiveness in the palm of her hand, in the hypothenar region. This was attributed by her teacher to the fact that "she was using the proper muscles," and she was encouraged to continue, in the belief that the pain was simply due to the unaccustomed fatigue of the exercise. In about two days more she noticed that when she closed her hand, as in grasping the golf stick, she was unable to open the ring and little fingers of the left hand, which remained flexed at about a right angle at the second phalangeal articulation. With the aid of her other hand the fingers could be easily released, with a slight click or snap. Associated with the trigger action, there was some tenderness and slight pain. As the trouble did not improve, I was consulted about the tenth day, with a view of obtaining relief.

I at once interdicted the golf lessons, and put the fingers upon a splint to secure rest. After a few days, on removal of the splint, the trigger action seemed to have been relieved, but on leaving off the splint the condition promptly returned in the little finger. The photographs show very nicely the amount of flexion present after the hand had been closed. The finger was again put upon a light aluminum splint, and several hot air baths given. The young lady then went away on a round of social visits to neighboring towns, but continued the use of the splint for perhaps a couple of weeks,

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after which she discarded it, as the trouble seemed to be relieved. But, being tempted to play golf again, the condition immediately returned. Rest once more was followed by relief. However, at intervals, and especially upon any attempt to resume the exercise which seemed to be the exciting cause, she has experienced a temporary relapse.

The condition known as "Trigger Finger," called in French "*Doigt a Ressort*," is by no means extremely rare, but it is sufficiently so to be beyond the experience of many surgeons. A quite considerable literature exists upon this condition, of which the most accessible and instructively complete for the American surgeon is the article by Robt. F. Wier (*Jn. A. M. A.*, October 5, 1907), whose interest in the affection was stimulated by the necessity of undergoing an operation for the relief of a trigger finger in his own left hand. It is interesting to note Dr. Wier's statement that at the time neither Dr. Robt. Abbe, who performed it, nor himself, nor any of their colleagues in New York, had ever operated for such a condition.

This affection was first described by Nélaton under the title of "*Doigt a Ressort*." On attempting to open the closed hand, the patient finds that one or more fingers remain flexed. If by greater effort or by passive force the flexion is overcome, the finger flies to full extension, and the release is attended by a sudden jerk or snap. In certain cases the same snap occurs on closing the extended fingers. In most cases there is some tenderness and pain, but the chief disturbance is in the function of the finger.

The disorder is one of adult life, as a rule, occurring between 30 and 40, but Tubby has seen three cases where it was congenital, and it may occur at any age. All the statistics show a preponderance in women. Carlier found in 98 cases, 58 in women, and 40 in men. In 139 of Begoune's cases, 77 were women, 32 were men. C. Hamilton Whitford (*Brit. Med. Jn.*, January 31, 1903) claims that it is three times as frequent in women as in men.

The relative susceptibility of the hands and of the individual fingers is indicated by the following tables:

Bergoune, in 179 cases, found

	Right Hand 117.	Left Hand 62.	Totals.
Middle finger .....	41	20	61
Ring finger .....	27	22	49
Thumb. ....	31	31	62
Index. ....	11	2	13
Little finger .....	7	7	14

Robel, in 154 carefully analysed cases, found the distribution to be:

	Right Hand 99	Left Hand 55.	Totals.
Middle finger .....	34	13	47
Ring finger .....	21	23	44
Thumb. . . . .	28	13	41
Index. . . . .	11	1	12
Little finger .....	5	5	10

In spite of the positive statements of Tubby, Whitman, and others that the middle finger is most often affected, these statistics would not indicate that the thumb is more exempt.

It appears to be the opinion of all observers that the locking of the fingers is due to a disproportion between the tendon and its sheath. Either the tendon is enlarged, at one part, or the sheath is constricted. Necker, after analysing 121 cases, gave the etiology as being rheumatism in 52; trauma in 13; occupation in 47; congenital in 2; undetermined in 7. Schmidt sets down "work causing special fatigue" as the chief cause, and we might with fairness consider the occupation cases as instances of that type of trauma so often referred to by writers on hypertrophic arthritis as "repeated small insults" to the tissues. The influence of "work-effort," as in seamstresses, mattress makers, has impressed all observers. And in the case here reported by me, as well as in one recorded by C. Hamilton Whitford (*Brit. Med. Jn.*, January 31, 1903), golf playing was the exciting cause.

Treatment, for long, consisted in rest, massage, and similar measures. Even to-day retention upon a splint, with massage, dry heat, etc., may suffice for milder and recent cases. The first operation for the cure of trigger finger is attributed by Wier to Leisrinck, <sup>weir</sup> in 1884, and Wier remarks that not many repetitions of this treatment were met during the next fifteen years. The paucity of experience even among metropolitan surgeons as late as June, 1906, has already been indicated in connection with the effort of Dr. Abbe to relieve his friend. At the present time there is no difference of opinion as to the advisability of operating in severe or persistent cases. All the authorities recommend that where a nodule can be felt, or where the condition is chronic, an incision be made over the tendon, and a deliberate search instituted for the spot where the locking occurs. If there is a nodule or thickening it is cut away; if there is a constriction it is incised. Permanent relief has fol-

lowed in the majority of cases, and while it is true that in a good many of the reported cases a good deal more was done, the probability is that simple free incision of the sheath of the tendon would have sufficed, and should be the operation of choice.

Quite recently (*Med. Record*, March 7, 1914) Dr. Robert Abbe, whose active interest in the surgery of the hand has extended over many years, has opened what may prove to be a new chapter in the treatment of this annoying condition. As a result of his experience in the case of Dr. Wier, and from subsequent study of the anatomy of the parts, Abbe concluded that the site of the obstruction lay at the level of the distal palmar crease. He believed that it was due to a band of fascia located at the distal ends of the metacarpal bones, exactly at the last palmar crease, and that a simple subcutaneous section of this band through a mere skin puncture would afford relief. The opportunity arising in the person of an artist, whose work was interfered with by a trigger finger, Abbe put his theory to the test, and had it confirmed by instant disappearance of the locking. Should further experience confirm this single brilliant result, the surgery of trigger finger will have been simplified to the last degree.

#### DISCUSSION.

DR. E. S. HATCH: I have seen several of these cases, the most recent one was referred to me by Dr. Clark. The patient was a doctor from a nearby city, and he dated his trouble from driving an auto.

The condition was in the little finger of the left hand, and the doctor was most comfortable with the finger in a semi-flexed position; in other words, when he fully extended the finger it suddenly relaxed with a snap and was painful just as it did when he tried to fully flex it.

This is unusual, the X-ray showed a hard nodule in the flexor tendon that gave a very dense shadow, much different from the shadow cast by sesamoid bones. Operation was advised in this case.

DR. ALLAN EUSTIS: I would like to ask Dr. Fenner whether or not there is any relation between Dupuytren's contraction and trigger finger. I am interested in this as a question of preventive medicine. A relative of mine some years ago presented symptoms of a trigger finger; this condition was allowed to continue untreated, and to-day he has a well marked Dupuytren contraction. It is of inter-

est to determine whether trigger finger is a forerunner of Dupuytren's contraction.

DR. E. D. FENNER (in closing): As far as I know trigger finger is not a forerunner of Dupuytren's contraction. There is no resemblance between the two conditions. The characteristic of trigger finger is that the hand is perfectly free to close and then one or two fingers remain closed and cannot be extended by the action of the muscles, but can be extended by passive motion, when a little click is noted. We might also confuse with this the condition of mallet finger, which is permanently flexed. Dupuytren's contraction may be due to some disorder of the fascia, leaving a permanent deformity, maintaining the finger in a bent condition.

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## THE USE OF CLAMPS IN RESECTION OF THE BLADDER, WITH REPORT OF A CASE.\*

By CARROLL W. ALLEN, M. D., New Orleans.

My object in reporting this case is to call attention to a valuable emergency expedient in resection of the bladder and to record an unusual pathological feature.

The treatment of malignant tumors of the bladder is, in the great majority of cases, a difficult and unsatisfactory undertaking. Simple growths, particularly of the papillomatous type, promise to yield good results when treated by the high frequency current, but further time is needed to definitely settle to what extent this treatment can be depended upon. In malignant growths this treatment is not indicated and we must depend upon operative means for its relief.

If seen early by the surgeon these cases of malignancy offer a fair prospect of ultimate cure, depending upon the type of growth, its location and extent. Occasionally the development of some symptoms, such as profuse or continuous hemorrhage, compels an emergency operation, such as was necessary in the case which I wish to report.

Mrs. M. W. Age 45, admitted to Touro Infirmiry March 8, 1914, in an exsanguinated condition with frequent, profuse and bloody urination. She gave the following history: Had seen a trace of blood in her urine for the past six months, about two months ago blood became more pro-

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fuse, associated with some pain and the passage of clots. During the past week this bleeding had been excessive with much nausea and vomiting. At times was unable to void at all and when catheterized only a small amount of blood was obtained.

Physical examination showed a rather stout, very pale and nervous woman. Beyond sensitiveness over the bladder there was nothing of note.

Family history and early personal history negative.

Immediately following cystoscopy, which was performed by Dr. Walther, and was unsatisfactory, owing to the profuse hemorrhage, but he was, however, able to demonstrate the presence of a growth, operation was performed.

Abdomen opened in the median line, exposing a large and distended bladder which felt quite boggy; a catheter was unable to withdraw any of its contents; aspiration likewise failed.

The abdominal cavity was now well packed off and patient placed in Trendelenburg position and the fundus of the bladder opened, revealing a large mass of clots. These were removed and amounted to about two double handfuls. The bladder was then swabbed clean, bringing into view a round pedunculated tumor, slightly more than one inch in diameter, situated on its base near the orifice of the right ureter. There seemed to be no infiltration around the base of this growth and the rest of the bladder was normal.

Undoubtedly the best method of procedure would have been the resection of that portion of the bladder surrounding the growth, but in view of the patient's weakened condition and extreme exsanguination it was out of the question to perform this by the usual method. With rapid and feeble pulse and shallow respirations she was threatening to collapse on the table, consequently a more rapid yet effective method of dealing with the situation was demanded. I was accordingly enabled to put into effect an idea which I have had in mind for some time past. Two stout clamps having a curve at right angles to the shank were selected. These were tested to determine their dependability. The tissues on each side of the base of the growth were now caught by Ochsner clamps and pulled up into the field for some distance. This ridge of tissue was now grasped in opposite directions and below the bite of the Ochsner clamp by the curved clamps. Their application, as well as the infolding of the bladder wall, was guided by one hand beneath the bladder. When both clamps were securely in position and well clasped, with their tips in contact, the mass of tissue within their grasp and to which the growth was attached was now cut away with the actual cautery.

A Pezzer catheter was now passed through the urethra into the bladder, the incision into the bladder closed, except at the fundus, where an opening was left through which protruded the handles of the clamps. The abdominal incision was now closed up to the bladder, which was sutured to the posterior sheath of the rectum. The patient was quite weak following this ordeal, but rallied well. All nausea and vomiting ceased and there was no further hemorrhage. Remarkably little discomfort was occasioned by the clamps in the bladder; one was removed on the third day and the other the day following. There was no hemorrhage or other symptoms following their removal. The patient left the hospital in three weeks with instructions to report for examination in two or three months.

Examination of the specimen removed showed it to be a papillary carcinoma.

In considering the use of clamps in the above manner it may, on first thought, seem a rather hazardous and unsurgical procedure, but we have ample precedent for the use of the clamp in other fields of surgery, notably along the alimentary canal, where the reliability of the Murphy button has been amply demonstrated; the button cutting its way by pressure necrosis through the stomach or intestinal wall; and again we make use of the clamp in the Bodine method of intestinal anastomosis in the two stage operation. As proved by this case, when judiciously applied, there seems to be no particular risk attached to the procedure, especially in that part of the bladder wall covered by peritoneum.

The great advantage claimed for this method is the rapidity with which it can be applied, hardly consuming one minute's time, which in emergency operations may prove a life saving factor.

Patient returned for examination about the middle of September, having enjoyed good health and felt no further symptoms. She was referred to Dr. Walther for cystoscopic examination. Dr. Walther reported that there appeared to be a recurrence of the growth at its former site. As she was not then prepared to enter the hospital immediately, Dr. Walther suggested that the time be utilized in applying the high frequency current. Accordingly, several treatments were administered and, while some effect was accomplished, it was evident that it would prove inefficient. He reported at this time that both kidneys were working normally.

She re-entered Touro Infirmary, October 9, and was operated

next morning under ether anesthesia. The abdomen was opened in the mid line through the scar of the previous incision, with the patient in the Trendelenburg position. The pelvis was cleared of intestines, which were packed off in the upper abdomen and the surrounding parts protected by pads. The fundus of the bladder was then opened in the median line and its walls retracted, permitting a thorough examination of its cavity. The site of the former growth was recognized by a depressed scar lying near the ureteral orifice; this scar appeared perfectly healthy as well as the surrounding walls, as far as could be determined by examination. What effect the high frequency current had had in producing this condition cannot be stated, but Dr. Walther felt quite sure that before its application there was evidence of recurrence.

The most striking feature about the case was the appearance of the ureter which resembled a sausage. It was distended to the size of the index finger. The distention began at its attachment to the bladder wall and extended up above the brim of the pelvis. Palpation of the ureter showed this distention to be caused by some solid material; little doubt existed in our minds regarding its nature or the steps necessary, if benefit to the patient was to be expected. As no glandular enlargement could be detected and no extra ureteral or vesical involvement could be demonstrated, it was decided to remove a section of the bladder around the ureteral orifice, together with the ureter and kidney.

Accordingly, about one-fourth of the bladder was removed, including the old scar and ureteral orifice. The much distended ureter was dissected up towards the kidney, ligated and divided about three inches below this organ. The closure of the bladder and repair of the wound left by the rather free dissection in the surrounding parts was not easy, owing to the scar tissue and adhesions, the results of the previous operations. A satisfactory closure, however, was finally accomplished. As about one hour and a half had been consumed in this operation and the patient, none too strong, was showing its effects, it was thought best to defer the removal of the kidney to another sitting; the wound was accordingly closed with drainage.

The patient made a good recovery, the left kidney, at first scant in its secretion, soon excreted a fairly normal amount of urine. Her progress was satisfactory and uneventful. We felt it advisable, however, to delay the removal of the right kidney a few days until we



were assured that the left kidney was thoroughly competent to stand the additional shock to the system. It was also thought advisable to perform this second operation under local anesthesia, as it would greatly lessen the possibility of complications from the other kidney.

October 23, under local anesthesia the right kidney and stump of the ureter were removed. It was necessary to resect the last rib, as the kidney was much enlarged and cystic, with its pelvis and calices dilated with purulent urine. This change must have taken place since the previous operation when the ureter was ligated. The stump of the ureter showed no evidence of malignant change. It was evident that the previous division of the ureter had been above the limits of malignant invasion. The removal of such a kidney under local anesthesia presented some technical difficulties, but I will reserve a discussion of this procedure for a later time, when I will discuss it with other operations upon these organs under local anesthesia.

The patient stood this second ordeal splendidly. There was no shock and practically no change in the force or frequency of the pulse following operation as compared with its condition before hand. During the operation, when ligating the vessels, however, there was a decided acceleration when the pulse rate went to 150, but as this was not associated with pain, shock or other symptoms no significance was attached to it and it resumed its normal before the operation was completed.

Her convalescence was rapid and uneventful, the left kidney showing no disturbance in its function.

A section of the diseased ureter when laid open showed it to be packed with papillary-like growths, which grew from all parts of its mucous lining, distending the ureter like a sausage, and examination of a section showed it to be carcinoma.

Whether involvement of the ureter had occurred at the time of the first operation, I am unable to state, but it was not apparent. It appears to me, however, that as thorough a resection of a limited portion of the bladder is possible by the use of clamps, when its walls can be freely mobilized, as is possible by other methods. If desirable an external or peritoneal row of sutures can also be applied.

#### DISCUSSION.

DR. H. W. E. WALTHER: Cases of bladder tumor are of great interest to the cystoscopist. The diagnosis of a tumor within this viscus—as to whether it be benign or malignant—can never be made

with certainty by mere visual examination through the cystoscope. A tentative diagnosis only can be rendered the surgeon. In this particular case, which I had the pleasure of seeing with Dr. Allen, the pictures seen in the bladder appeared to me that of malignancy. The pathologist's report confirmed my diagnosis.

A point I think we should all remember is that in bladder tumors hematuria is oftentimes the only symptom noted by the patient. Frequently we can get no history of either pain, urinary frequency or tenesmus. Every case of hematuria should, therefore, be cystoscoped and a positive diagnosis made at an early date, if we are to get results in these cases. The patient in this case had been passing bloody urine for *three years* without a diagnosis. Internal medication was all she had received for her hematuria. It is therefore probable that even now she has come too late. It is possible that metastases have already extended to other pelvic organs.

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## THE NECESSITY OF MORE CAREFUL STUDY OF RENAL FUNCTION PRIOR TO OPERATION.\*

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

A paper based on the fact that ether irritates the kidneys might appear to be superfluous were it not for the fact that experience demonstrates that we are prone to disregard this occurrence very often in routine hospital work. This is best proved by a few examples; therefore, I will report briefly five deaths from post-operative suppression of urine which have come under my personal observation, within the last five years. There have doubtless been many others here during that time which have not been reported.

**Case I.** White, male, about 48 years old. Was admitted to the Charity Hospital with a diagnosis of gall stones. The urine showed albumin and casts, so he was treated for about a week until the urine was negative. Cholecystostomy was then performed under ether. Post-operative specimens of urine showed albumin and casts, but patient convalesced nicely for about a week. Then one night he suddenly developed a weak, rapid pulse, with cold, clammy skin, and thirst; in fact, all the sign of hemorrhage, and the condition was thus diagnosed by the house staff. The next morning the patient had not voided and no urine was obtained by catheter, nor was any obtained on later attempts. He died in the afternoon and a partial autopsy disclosed no sign of hemorrhage.

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**Case II.** Colored, female, aged about 30. Emergency operation for intestinal obstruction, due to a small sponge left in the abdomen two years before. The urine was not examined before the operation. The next morning the patient was comfortable, but the skin was cold and clammy and the radial pulse could not be felt. No urine was obtainable by catheter and patient died that afternoon, in spite of treatment.

**Case III.** White, male, about 50. Operation, gastro-enterostomy for cancer of pylorus. Urine showed a few casts and a trace of albumin before the operation. Urinary secretion was deficient for the first twenty-four hours after operation, but not to an alarming extent. He then became rather restless, but he did not present the pulseless, depressed appearance of the first two cases. Morphine did not seem to quiet him. He did not void, however, and catheterization was fruitless. Death occurred in a few hours.

**Case IV.** Very similar to Case III. White, male, 55 to 60 years of age. Operation, gastro-enterostomy for pyloric cancer. The course of the case was similar to that of Case IV, death occurring about thirty-six hours after the operation. In these three cases ether was also used.

**Case V.** White, female, about 40. Operation, pan-hysterectomy for carcinoma of the cervix. Anesthetic was gas and ether, about two or three ounces of each being used. The patient slowly developed deep jaundice, no doubt due to fatty degeneration, and suppression of urine. Ureteral catheterization showed the ureters to be patulous, but no urine was obtained. Patient died about three days after operation.

In addition to these cases, many others have been seen which narrowly escaped like fate, their good fortune no doubt being due to the fact that their kidneys were originally in better shape than those of these unfortunate patients. We should bear in mind the fact that in 35 to 40 per cent. of cases with normal urine before operation, or rather *negative* urine, we will find albumin, or casts, or both, after an ether anesthesia of average duration. Not all of these cases with negative pre-operative urine are *ipso facto* free from renal disease, however, as will be seen later.

The text-books, so far as I have investigated, are very unsatisfactory on the matter of post-operative suppression of urine. Keen's Surgery<sup>1</sup> merely mentions the condition. Crandon and Ahrenfried<sup>2</sup> do no better. Da Costa<sup>3</sup> gives twelve lines to the subject. Dudley's Gynecology<sup>4</sup> does not mention it. Keyes<sup>5</sup> says a few words on this subject under the head of "Urinary Toxemia." Gwathmey<sup>6</sup> says nothing on the subject. Hewitt<sup>7</sup> reports one case of death from urinary suppression in New Zealand. He does not seem to have any personal knowledge of such a case. Naturally there is practically nothing to be found in the works which we usually consult regarding the symptoms and diagnosis. It is apparently simple enough—no urine, hence suppression. *But*, we try to avoid

post-operative catheterization as much as possible, for very good reasons; hence the patient may go twelve to fifteen hours with suppression and the fact may not be known. These patients do not all present the same picture, but the clinical picture of an operative case, with a cold, clammy skin, a feeble pulse, who complains of restlessness not readily yielding to morphin, should suggest suppression and it is in order to catheterize. Herrick,<sup>8</sup> in Osler's Modern Medicine, said: "The toxic condition, due to simple anuria, when there is suppression of urine, as from obstruction, due to a calculus or *following anesthesia*, presents some difference from that toxemia, due to pure uremia, i. e., nephritis." . . . . "There is commonly less headache, less pain, less intractable vomiting, but rather a gradually increasing restlessness, anxiety, sleeplessness and general weakness. The pulse grows weaker. There is early tendency to stupor and little delirium, except towards the last, when the slight mental wandering finally merges into a condition of unconsciousness."

The prognosis is extremely bad. As Da Costa<sup>3</sup> says, this complication is almost invariably fatal. The usual treatment is, as a rule, of no avail and the same authority recommends bilateral incision of the kidney capsule.

Prophylaxis is thus of prime importance and this consists in determining conclusively the presence or absence of renal disease and in carefully estimating the degree of impairment of the kidneys when they are diseased. This is especially important in patients past middle life, more especially when they have even slight arteriosclerosis or any degree whatever of hypertension, as it is in just such cases that the urinary findings from a *single* specimen of urine hastily examined the morning of the operation, as is the custom in every hospital in this city, will often be negative, while the patient is really suffering from a severe chronic nephritis. The question of kidney integrity cannot thus be quickly and easily settled. To quote again from Osler's<sup>8</sup> Modern Medicine:

"Hasty examination, examination of a single specimen of urine instead of the twenty-four hours' urine, the failure to study the heart and the blood pressure or to examine the eye grounds, permit a case that should be easily diagnosed to go to the autopsy table with no suspicion of renal disease, while the pathologist finds marked changes." . . . . "The anatomist may find evidence of pathological, even acute inflammatory, change in the kidney, although no urinary or other evidence of disease has been present, all the clinical evidence of acute nephritis may have passed away and there still be left anatomical lesions. We must

remember, too, that all are agreed that nephritis, both acute and chronic, may exist with albuminuria." . . . "Failure to examine with thoroughness and not ignorance is, as in the case of many other diseases, the commonest cause of error in diagnosis; at least, the error of overlooking entirely the existence of chronic interstitial nephritis. He who carefully examines his patient will seldom miss the urinary and cardio-vascular evidence of disease of the kidneys."

Even then, granting that a careful clinical study, supplemented by several urinary analyses, shows the presence of chronic nephritis, we may be unable to settle this question: "Can the patient's kidneys stand etherization for an hour or two?" Says Wood<sup>6</sup>: "The casts and the albumin evidently furnish no accurate quantitative measure or the efficiency of the kidneys." Here we should call to our aid the study of renal function by the use of one or more of the various methods now at our command. Those most used are: 1, the study of the nitrogen elimination; 2, of the freezing point of the urine or the blood; 3, the use of dyes injected intramuscularly or intravenously, such as methylen blue, indigocarmin or phenolsulphonphthalein; 4, the use of various drugs, such as phloridzin, or potassium iodid; 5, experimental polyuria. These are the chief tests, but there are many others, and all have their uses and limitations; hence Stevens<sup>12</sup> recommends the use of three tests simultaneously, viz., the urea, phloridzin and phenolsulphonphthalein used successively at the same sitting. Experience has shown that the use of one of the tests mentioned will, as a rule, give very reliable evidence as to the functional ability of the kidneys. Fisher,<sup>10</sup> however, questions this on theoretical grounds and Ware<sup>11</sup> thinks that the PST. test is practically useless. A great majority of those who have worked with the phenolsulphonphthalein, however, are of the opinion that its evidence is reliable and valuable, as it is easily applied.

The technic of this test is simple and the apparatus is inexpensive. All that is needed is a good Luer syringe, a few test tubes, one or two 1,000 c.c. cylinders, a colorimeter, the PST., and some 10 per cent. sodium hydroxid solution. The drug is injected, preferably intravenously, the time of appearance in the urine is noted, and the excretion for the first two hours after this time is estimated by the use of the colorimeter. This should be from 65 to 75 per cent. of the amount injected, in a patient with normal kidneys. In case there is marked diminution in the amount excreted, operation should be deferred, if possible, until a more careful study can be

made or some other form of anesthesia should be used, not ether. At any rate, the surgeon and the patient or his family could know before hand that the risk is increased on account of the renal trouble and thus disagreeable surprises and embarrassing explanations would probably be avoided.

In conclusion, I would stress the point that all patients should be more carefully examined, especially the middle aged or elderly patient, in order to discover unrecognized renal disease. The blood pressure and the cardio-vascular apparatus should be studied. The functional tests can be easily applied and should be used in all questionable cases. The single urinary examination the morning of the operation performed hastily by an overworked intern is practically valueless. Even though these precautions should be useless in 499 cases, they would probably save the 500th, and the labor would thus be well worth while.

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  3. Da Costa, "Modern Surgery."
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  5. Keyes, "Genito-Urinary Diseases."
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  8. Osler, "Modern Medicine," Vol. vi, pgs. 187, 188, 194.
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  10. Fisher, Nephritis.
  11. Ware, *New York Medical Journal*. February 28, 1914.
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## A CASE OF MUCOSUS MASTOIDITIS.\*

By ISAAC ERWIN, M. D., New Orleans.

H. M., age 19. Admitted to Charity Hospital August 15, to the service of Dr. Landfried, and with his kind permission I operated on August 16.

**History of Family:** Negative.

**Patient's History:** Has had the usual diseases of childhood, otherwise always healthy. Present trouble began about two months previous to his admission to Charity Hospital. Patient had a cold and afterwards became partially deaf in the left ear. Heard noises in the ear. No pain. No discharge at any time. Three weeks later the patient experienced pain over the mastoid process, especially at night. This pain increased a week previous to his coming to the Charity Hospital. There was quite a swelling behind the ear.

Examination showed, to be brief: Drum membrane, normal; hearing for conversation, twenty-five feet.

Over the mastoid process was a fluctuating mass. Tenderness on pressure over the mastoid.

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OPERATION: Incising to the periosteum found a fistula just posterior to the spine of Henle. Upon opening the mastoid, found extensive necrosis of the bone, necessitating the exposure of the sinus from the knee to the jugular bulb. Sinus wall was diseased, but was not incised. Packed with iodoform gauze and closed. Cultures showed: *Streptococcus mucosus* in pure culture.

This case I thought might be of interest to all, as it serves to illustrate a fairly frequent clinical picture, which may be encountered by anyone doing general practice work. I understand also that this is the first mastoid infection due to *Streptococcus mucosus*, reported from the Charity Hospital.

It is frequently seen in big clinics for ear treatment, and is recognized as showing distinct symptoms. This form of mastoiditis is interesting in that it occurs without perforating the drum membrane. It is usually not secondary to any disease, as measles, or scarlet fever, and comes on insidiously after an acute coryza. At first there is a slight tenderness over the mastoid, and at no time is there usually much tenderness.

The drum membrane may be somewhat red or there may be a bulging of the posterior superior wall of meatus. If a paracentesis is made, no secretion will come from the middle ear. This infection is most common among growing people.

As to the cause of acute middle ear inflammation, statistics of Kümmel:

60% are due to *Streptococcus pyogenes*.

17% are due to *Lanceolatus*.

13% are due to *Streptococcus mucosus*.

6% are due to *Micrococcus pyogenes*.

53% of *Mucosus* cases come to operation.

There are also cases due to *Proteus vulgaris*, and diphtheria bacilli. There has also been reported a case of middle ear inflammation due to gonococcus. *Streptococcus erysipelatus* is found in conjunction with other organisms in about 25 per cent. cases. The *Pneumococcus* plays a certain role in acute middle ear inflammation, but does not end in bone destruction, but when it does produce mastoiditis, it resembles *mucosus* mastoiditis very much. The only difference is that there is usually much more pain in pneumococcus mastoiditis. The *Streptococcus mucosus capsulatus* and the *Pneumococcus*, morphologically resemble each other. A point to be

noted is that deep-seated brain abscesses, due to capsulated cocci, have a lining membrane which makes them more favorable to drain than those due to *B. pyogenes*. *Streptococcus mucosus* is the most important organism in acute mastoiditis, since it produces such extensive destruction and is so often productive of intracranial complications, and it gives such little warning.

So when a patient tells you "That a month ago I became a little deaf in this ear and now have some pain on the mastoid region," you should be inclined to investigate further.

The most practical point in knowing with what infection one is dealing in acute mastoiditis has to do with the primary closing of the skin and periosteum after the removal of the diseased cells.

In 1911 Dr. Bondy wrote a paper on primary closure over a pack of iodoform gauze, which gauze was removed after five days through a small opening which closed immediately. Thus it differs from the so-called blood clot method of Blake, of Boston.

Dr. Bondy found the method by accident. He operated on a patient and the gauze was removed on the fifth day by someone else (he being away at the time). No bad results followed, so it has since been tried on several thousand cases with uniform success. In mucosus cases we drain longer. I have seen about a thousand so treated, and have employed the method in quite a number of cases operated by myself.

In the last issue of the *Wiener Monatsch. für Ohrenheilkunde* Dr. Bondy showed a section of mastoid operated upon in 1911; the patient died recently of other cause, and there was shown new bone formation in mastoid. However, when the infection is a mucosus infection, it is considered safer to drain for about ten days.

To give you an idea how long it usually takes, by usual open method, in a report of 200 cases by Royal Edinburgh Infirmary, the average closure was forty days.

#### DISCUSSION.

DR. W. T. PATTON: This infection is very hard to get rid of. I cannot agree with Dr. Erwin as to the early closing of the mastoid wound. When we open the mastoid, one of our main purposes is to thoroughly drain the middle ear; if wound is closed, we defeat this purpose and the secretion are again dammed back into the middle ear, and it is often necessary to open up the drum membrane and drain through auditory canal. We may close wound early in sec-



ondary mastoid operations where there is often little drainage necessary. I prefer to leave wound open in all operations for acute mastoiditis.

DR. DEPOORTER: A tympanotomy, when the middle ear is intact, is inviting a possible infection. For cosmetic reasons the partial closing of a mastoid wound following the operation is advisable.

DR. ERWIN (in closing): I do not report this case as a rarity, but because many men to whom I have spoken regarding this case had not heard of one produced by this organism. This is the first case at the Charity Hospital, in which this particular organism has been obtained in culture from the mastoid. I have seen many mucosus cases and have operated several cases previous to this one.

In a big ear clinic these cases are recognized as distinct, clinically, and are usually diagnosed before operating. As to the closure: it was the practice in the clinic in which I served to close all cases as mentioned. Something like twelve hundred operations a year are performed. This method is peculiar to this clinic and gives good results; the advantages are too obvious to mention.

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## A CASE EXEMPLIFYING THE VALUE OF PYELOGRAPHY.

By MAURICE J. GELPI, A. B., M. D., New Orleans,<sup>4</sup>

From the Department of Gynecology of Tulane University.

Mrs. H. B. complained of periodic attacks of pain in the right kidney region for three years. She said that during these attacks she was not conscious of having fever, but she was quite positive that each attack of pain was accompanied by the presence of a tumor in the right kidney region. When she went to bed, as her symptoms usually required her to do, the pain would gradually disappear, as would also the tumor. She attempted to demonstrate this tumor to several physicians, but she says that invariably, when they arrived, they could never determine its presence. She even mentioned calling in her country physician, and paying him \$15 mileage, only to see him come in after the tumor had gone away. Two years before we saw her, she was operated upon for plastic repair of the cervix and perineum. Nothing was done for the supposed kidney tumor, as the mass could not be demonstrated at this time. When

she recovered from the operation she was advised to remain until the condition could be investigated, but she returned home.

In July, 1914, she consulted Dr. Henry Cocram, who referred her to me for cystoscopic examination.

The patient was a frail looking woman, 29 years old, well developed, but only moderately well nourished. The abdomen was negative except for a tumor the size of a large grape fruit, occupying the right kidney region. This tumor was roughly globular in shape, quite firm in consistency and somewhat movable. It was not very sensitive except to deep pressure. It could be distinctly palpated with one hand lifting it up posteriorly and the other hand on the anterior abdominal wall. We noticed a certain gurgling on palpation of this tumor which suggested that it might be connected in some way with the bowel. When the patient was lying down, the lower border of the tumor extended to about five inches below the costal margin. Vaginal examination was negative, and we had no difficulty in deciding immediately that the tumor was not pelvic in origin as the uterus and both adnexa were distinctly palpable.

Cystoscopic examination revealed a normal bladder and normal ureteral orifices. Both ureters were catheterized for the sake of comparison. No obstruction was met on either side. The bladder urine was negative for pus, bacteria, or red blood cells. Urine from the left side was negative except for a few epithelial cells, leucocytes and traumatic red blood cells. The right appeared in larger quantity and contained a few epithelial cells and leukocytes. Phenol-sulphonaphthalein test, made at the time the tumor was palpable, was as follows:

Time of appearance from the left kidney, ten minutes after intramuscular injection. There was no appearance from the right kidney fifteen minutes after the injection.

Excretion:

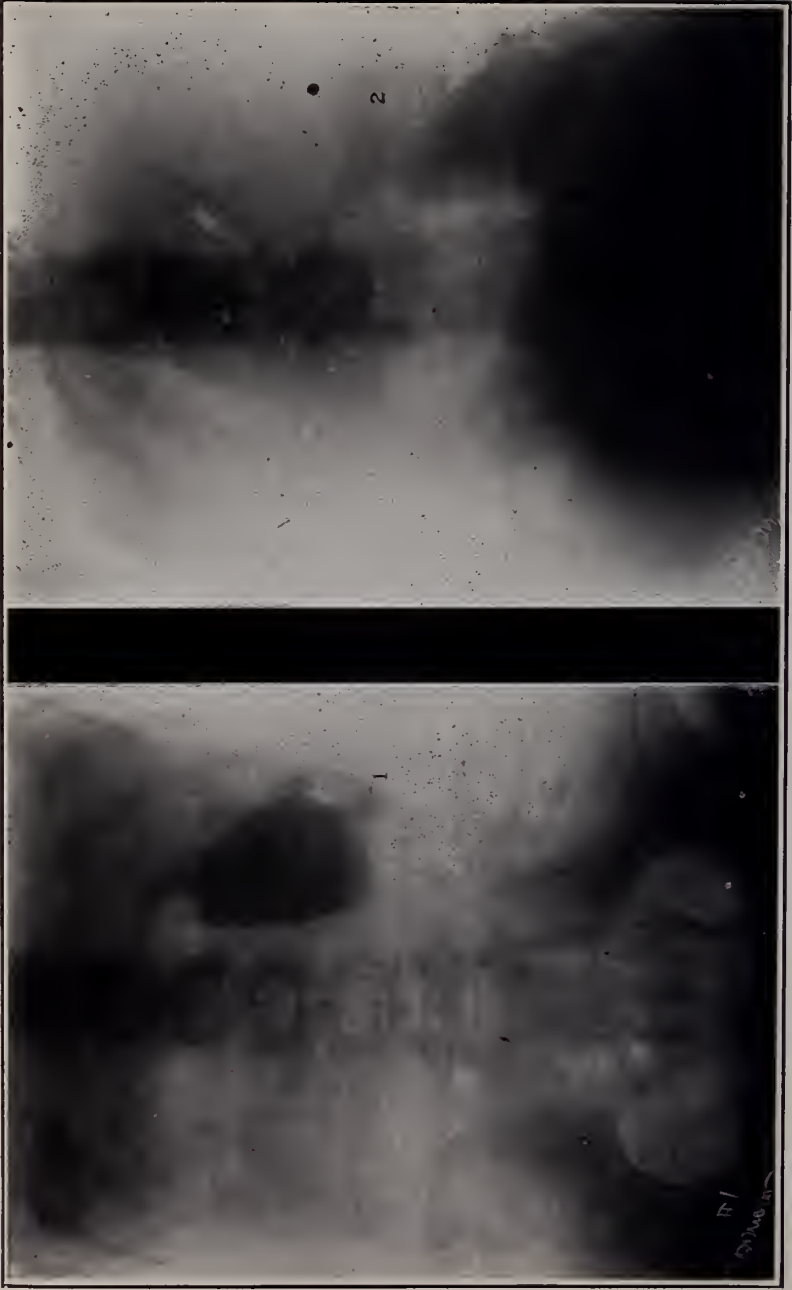
Right kidney, 1st hour,	10 c.c. urine; phthalein,	1.5%
Right kidney, 2nd hour,	7 c.c. urine; phthalein,	1.0%
Left kidney, 1st hour,	56 c.c. urine; phthalein,	10.0%
Left kidney, 2nd hour,	4.5 c.c. urine; phthalein,	1.0%
Right side for two hours,		2.5%
Left side for two hours,		11.0%

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Total for two hours, 13.5%

When I called in to see the patient the next day she was in bed,





ILLUSTRATING PAPER OF DR. M. J. GELPT.

but perfectly comfortable. No tumor could be palpated on the right side, nor could the right kidney be felt. The patient tried to make the kidney come down by coughing and by sitting up, but this was of no avail. Three days later I catheterized the right ureter and with the patient in moderate Trendelenberg position, I injected very slowly and gently 128 c.c. of 15 per cent. collargol solution through my ureteral catheter. The patient complained only of very slight pain when the full amount was reached. The catheter was then removed and an X-ray plate was made of the right kidney region with the patient lying down as described. This exposure is shown in Figure 1. The patient was then allowed to stand up and the exposure shown in Figure 2 was taken. Study of these plates showed us distinctly that we were dealing with a large hydro-nephrotic kidney caused by kinking of the ureter, resulting from ptosis. The complete excursion of the kidney is plainly shown in the plates.

Nephropexy was suggested with the special object, not only of suspension of the kidney, but of thorough drainage of the dilated pelvis and entire kidney. With this end in view, the usual incision for the Edebohls suspension was made and a very large, soft, edematous kidney was exposed. It was so water-logged that the capsule almost separated of itself. By means of the capsule, the kidney was anchored in such a way as to make the pelvis and ureter the most dependent parts, without kinking them or the vessels. The patient made an uneventful recovery. Seven days after operation, the patient felt perfectly well and no tumor could be palpated.

In order to estimate the effect of the operative procedure on the functional capacity of the kidney, a phenolsulphonephthalein test was made at this time, with the following results:

Time of appearance, twelve minutes after intramuscular injection.

Excretion:

Second hour, 425 c.c. urine; phthalein, 30.0%

First hour, 64 c.c. urine; phthalein, 40.0%

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Total, 489 c.c. urine; phthalein, 70.0%

## Clinical Report.

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### A SPECIMEN OF CHINQUAPIN WHICH HAD BEEN INSUFFLATED INTO THE TRACHEA BY A NINE-YEAR-OLD GIRL.\*

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

The patient was suspended by the Killian apparatus and, under cocain anesthesia, using author's special speculum, the vocal cords were separated and the body was removed in a few minutes.

The child, nine years old, showed marked evidences of dyspnea with beginning cyanosis, the body was impacted just below the vocal cords, and could be seen very nicely when the suspension apparatus was in place.

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## Translations.

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### THE OPERATIVE TREATMENT OF ELEPHANTIAC EDEMA.

By DR. EMM. KONDOLEON, Head Surgeon of the Clinic.

(From the University Surgical Clinic of the Municipal Hospital at Athens, under Professor Phocas.)

*Translated from the original in the Centralblatt für Chirurgie, No. 25, 1914, by Hermann B. Gessner, M. D., New Orleans.*

The therapy of elephantiasis given in the classical manuals has no successes to record. Elevation of the leg, pressure bandages and massage can bring about improvement in recent cases, but cannot compass a radical cure of the lesion. The pioneer in the operative treatment of the edema in such cases was Mikulicz, who obtained favorable results by multiple, extensive, cuneiform excisions.

Lanz and Handley more recently have undertaken the treatment of elephantiac edema by conducting away the lymph.

Lanz attempted, in a case of elephantiasis of the thigh, to produce a collateral circulation by turning strips of fascia into the medullary cavity of the femur and cutting numerous small openings in the fascia lata.

Starting out with the observation that the sclerotic edema of the upper extremity, which occurs in advanced mammary carcinoma, is the result of complete obliteration of the lymph channels of the

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\* Exhibited at the September 28 meeting of the New Orleans Parish Medical Society.

axilla and arm, Handly employed a number of thick silken threads to give the retained lymph an exit. These threads were laid down between the wrist and the loose subcutaneous tissue of the thorax below the axilla.

In a case of sclerotic edema, following a crush injury, I applied the method of Lanz, modified to the extent of laying the fascial strips down among the muscles and leaving open the ends of the fascia incisions. The patient made a complete recovery, now dating back a year.

This piping off of the lymph by means of fascia strips, which accomplished a communication between subcutaneous cellular tissue and muscle, I applied in other cases of elephantiasis. In the course of operations which I performed in these old cases of genuine elephantiasis I made observations which convinced me that neither Lanz's technic nor Handley's could be serviceable in such cases.

In every case of old elephantiasis, regardless of the cause which produced the hard edema, I found constantly—in addition to the well known changes in the skin and subcutaneous tissue—the deep fascia markedly thickened up to 3 c.m. ( $1\frac{1}{2}$  in.), infiltrated, firmly united with the surrounding tissue, especially with fatty tissue between the skin and the fascia. The external surface of the aponeurosis was irregular, of milky appearance; the internal surface, in contact with the muscles, presented normal density and a glistening appearance. In some cases I was able to dissect the fascia from a connective tissue layer which lay between it and the subcutaneous fat; in other cases this layer could not be separated from the aponeurosis. The greater part of the retained lymph came from about this thickened fascia. The microscopic examinations of the excised strips of fascia, kindly undertaken by Dr. Katsaras, showed that they consisted of thick, fibrous tissue, which presented in various localities a separation of the fibers by edema and a small celled infiltration. The underlying muscular tissue, examined macroscopically and microscopically, was normal in all the cases operated on by us.

These anatomic changes, together with the failure, which at first followed my use of the fascial strip technic, and the observation that in the old elephantiac edema cases, the lymph accumulation, was principally about the fascia, led me to think of the excision of the altered fascia in these cases, in order to secure a broad communication between the subcutaneous tissue and muscular tissue. I

had previously convinced myself, by experiments on dogs, that the muscles could readily absorb the lymph. Naturally, it is not possible to extirpate in toto the thickened fascia of an elephantiac leg. The intervention would be too extensive, and the operative technic too prolonged. I had to content myself with the removal of about one-half of the aponeurosis.

The technic is as follows: When the leg alone is involved, two longitudinal incisions are made, one internal, the other external, along the entire length of the leg. In cases of involvement of the entire extremity, four incisions are made, two in the thigh, two in the leg. The skin edges are retracted with broad hooks; the infiltrated fat covering the fascia is excised and the aponeurosis exposed. Through each incision a strip of fascia is removed, of the length of the incision and as wide as three or four fingers. The muscles at once protrude. Hemorrhage is carefully arrested. The skin is sutured without drainage.

Up to this time I have operated on six cases of elephantiasis; two of them were operated on more than once. In one case of thirty years' duration, in the right leg, I operated three times, employing each time a different technic. At the first operation I placed strips of fascia between the muscles, without success. The second operation consisted in making numerous skin incisions (2 inches to  $2\frac{1}{2}$  inches) 5 to 6 c.m. long, and excising through these small portions of the aponeurosis. The consequent improvement was substantial, but not sufficient. When I operated for the third time, a month later, I found excised pieces of aponeurosis in every instance replaced by thick connective tissue, a condition which explained the recurrence. At this operation I excised a strip of fascia, 15 c.m. long and the width of three fingers, and got a very good result.

In the second case, one of elephantiasis of the right leg of twelve years' duration, I did two operations. The first consisted in making a long external incision, splitting the aponeurosis and leaving it open. The result was very good; the edema disappeared and the skin became thinner and soft. But as the patient still had a sensation of weight in walking, I operated a second time, forty days later, making two incisions and excising two large pieces of fascia. Complete cure of the patient followed the second operation.

In the remaining four cases I carried out the excision of the fascia described above, and was very well satisfied with the result.

The excision of the fascia was followed by no disturbance of



gait. The edema disappeared either entirely or to a great extent; the onetime hypertrophic skin could be lifted in folds; the entire leg, which previously had been hard to the touch, became soft after the operation.

The etiology of the operated cases varied considerably. The causes of the elephantiasis were as follows: In two cases purulent inflammation of the foot, in one repeated attacks of erysipelas of the leg; in another an old cured knee tuberculosis, followed by a considerable hyperplasia of the connective tissue around the knee; in a fifth the complete extirpation of the inguinal glands—in this case the aponeurosis was not thickened—and in the sixth case (one of enormous elephantiasis of the entire right lower extremity), no cause whatever was evident.

In one case two months have elapsed since operation, in two cases six weeks, and in the rest a month.

The lapse of time is not sufficient to permit a final judgment of the efficacy of the treatment. However, the results so far encourage us greatly to test the method further. A detailed description of the operative cases will appear later.

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## TOLERANCE OF THE TISSUES TO FOREIGN BODIES, PARTICULARLY CAOUTCHOUC.

By P. CHASTENET DE GÉRY, in *Gazette des Hôpitaux*, April 28, 1914.

*Translated by A. McShane, M. D., New Orleans.*

Foreign bodies are divided into two categories, according as they are absorbed or not—or resorbed, to use a current term. This distinction is simple, practical, and sufficiently exact. However, it should be remarked that resorbability does not, theoretically, constitute a precise differential character; it is a phenomenon that varies according to differing conditions referable to the chemical composition, or the physical condition of the foreign bodies, and the organic environment of those bodies, or the time that they remain in their position. Interesting examples could be given. Thus, the resorbability of certain hydrocarbons, of the series  $C^n H^{2n+2}$ , which are derived from the distillation of petroleum, seems to depend on their fluidity at the temperature of the body. Oil of vaselin is resorbed more slowly. Vaseline is not absorbed unless mixed with more or less oil of vaselin; in the pasty state it is absorbed with

great difficulty. Paraffin undergoes no change. The pasty vaselin that Roving injected into articular synovial membranes remains there for years without losing its properties as a lubricant. If fluidity be a favorable condition, it is probably because it permits, in the midst of the tissues, a minute division of the substance, which thus comes within reach of the leucocytes.

The influence of the physical state is, perhaps, still more striking in the case of the metals. Gold and platinum, for example, which are not attacked in the organism in the solid form, are rapidly resorbed in the colloidal form.

When the foreign body is slightly alterable by the liquids of the body, its volume and its sojourn in the tissues assume a great importance. This is the case with regard to iron. It is practically unabsorbable; however, after a sufficient lapse of time, it is corroded and partially destroyed in the organism.

Finally, the power of absorption certainly varies with the tissues. For my part, I have verified the fact with organic threads: serous membranes and muscular tissue absorbed much more rapidly than cellular tissue. Starting from that point, it may be asked if certain tissues cannot absorb substances which are elsewhere not affected. That was the hypothesis employed by Menci re to explain the following experiment: Having replaced a tendon of a dog's paw with a skein of silk thread, he could not find a trace of the silk, at the end of six months, in the reconstructed tendon. It would seem, according to Menci re, that, at the encounter with other tissues, the tendinous tissues can absorb the silk threads and substitute themselves for the silk.

It is necessary to make these reservations on the principle of a well marked demarcation between foreign bodies that the organism can and those that it cannot destroy. But what becomes of the latter? They are, generally speaking, tolerated when they are aseptic, and cast out when they are not aseptic. But the facts do not always agree with such a simple formula. It is to be borne in mind that the word tolerate is used in an anatomical sense, for a foreign body may provoke serious functional disturbances, pain, for example, without any tendency to spontaneous elimination.

Sterilization of the foreign body as well as its environment, is an indispensable prerequisite to tolerance; the elimination of a septic foreign body by means of an abscess is a familiar phenomenon. Aseptic elimination may also take place. Some objects, like

needles, can, by their form, move about very easily in the tissues, and can appear some day under the skin or find their way into some internal organ, which afterwards expels them. Other bodies come forth in a different manner. They use the tissues progressively and more or less rapidly, according to the amount of pressure. This is exemplified in certain cases of prothesis of the cranium and the nose. Finally, the elimination of the foreign body seems to be due to a rarefaction of the surrounding tissues, such as is observed when an obstinate suture works its way through the cicatricial tissue.

If the foreign body be tolerated, it becomes encysted, to use a classical term. The encystment is regarded as the normal and inevitable reaction of the tissues in the presence of a heterogenous element which, being incapable of assimilation, is thus isolated and put to one side. But encystment is only the natural defense of the organism against a foreign body.

In order that a foreign body may be tolerated, it is not only indispensable that it be aseptic, but it should also possess certain useful properties, whether morphological, mechanical or physico-chemical.

The part played by the shape, and, above all, the mechanical relations of the foreign body, with the surrounding tissues is well known. A rounded body, or one with smooth surfaces, is generally less irritating to the tissues than one with a rough, jagged surface. This explains why bullets, pieces of glass, or prosthetic appliances, are so easily tolerated. Also, an immovable foreign body is better tolerated than one that irritates by its frequent movements.

Lemerle, in his experimental researches on prothesis, used silver, platinum, gold, tin, aluminum, and copper; and he obtained good results with all of them. although iron, copper and silver emerged from the tissues of a dog at the end of a year, slightly altered. But silver attracted his attention in a particular manner. It seemed, he says, to enjoy something more than tolerance. It is, in a way, adopted by the tissues. The connective tissue actually adheres to the surface of the silver.

The affinity shown by the tissues for caoutchouc is chiefly of a physical nature. Caoutchouc is the coagulated latex, the composition of which is analogous to that of negative colloid; the majority of the colloids of the serum are negative. It may be asked if the coagulum has not preserved some of the properties of the latex from which it was derived. In any event, the caoutchouc prevents

a peculiarity which is unusual in a raw material; it undergoes changes less rapidly when its elasticity is often exercised. Furthermore, whilst it does no damage to the tissues, these latter keep it intact for a long time, no doubt, by guarding it against light and changes of temperature.

We have said that tolerance depends not only on the properties of the foreign body, but also on the nature of the surrounding tissues, which vary greatly in the degree of their susceptibility.

The blood is certainly one of the most alterable tissues, scarcely tolerating contact with any body except the vascular endothelium without coagulating. The blood might thus be used as a touchstone to determine the innocuousness of a foreign body. There are two substances, contact with which does not cause coagulation of the blood, or cause it so slowly that is practically nil. These substances are paraffin and caoutchou membrane.

The frequency of bony prothesis and synthesis makes it desirable to know how bone and periosteum react in the presence of foreign bodies. The experimental researches of Lemerle teach us that these tissues are remarkably tolerant, provided that the foreign body be absolutely immovable and fixed by means of sections that are very clean and do not crush the bone. Thus, condensing osteitis may occur at first, and rarefying osteitis would really depend only on the manner in which the foreign body has been incorporated with the bone.

Recently, Fieschi and Delbet have written on the tolerance of the tissues to vulcanized elastic caoutchou, which is adopted to replacing missing soft tissues. Roussel (of Geneva) was the first to discover, thirty years ago, one of the most important properties of caoutchou from a physiological standpoint. In practicing transfusion, he needed an apparatus made of a substance that did not cause coagulation of the blood; and found such a substance in caoutchou.

An operation by Tuffier, in 1909, demonstrated in another manner the innocuousness of caoutchou at the same time that it ushered in the era of repair of tissues with caoutchou. Tuffier was operating on an aneurism of the aorta when he found himself face to face with a large perforation of the aorta which it was impossible to close with sutures. In order to close it, he used one of his thin rubber gloves rolled up into a plug, and held in place by sutures, passing through neighboring planes of tissue. The subsequent history was good until

the fourteenth day, when a sero-purulent discharge caused Tuffier to fear that the caoutchouc plug might become detached; consequently, that tampon was removed, and another put in its place. Death occurred two days later, without hemorrhage. There was no coagulation on the surface of the caoutchouc.

But the experiment of Tuffier and Carrel, in 1910, has a greater import. A piece of the wall of the abdominal aorta, two centimeters long and one wide, was resected from a dog, and replaced by a thin layer of caoutchouc, carefully sutured. This patching of the aorta had no bad effects, whether immediate or remote. Fifteen months later the circulation was still normal; there was neither dilatation nor stricture at the level of the patch; and, finally, the thickened wall at this point had repaired itself so that it covered the outside as well as the inside of the caoutchouc. Thus, the caoutchouc had at first acted as a part of the arterial wall itself, and then served as a guide to the new arterial tissue that grew and vegetated at the line of contact with the foreign body.

In 1909, Sullivan (Chicago) made quite a different use of caoutchouc. In casting about for a means of repairing a destroyed common bile duct, he succeeded in grafting in a dog a tube of caoutchouc between the hepatic duct and the duodenum. Wilms and Brewer applied the same procedure in man, with success. But the majority of the cases thus far published report failures. It must be noted, however, that these grafts, though extremely interesting, had a fatal defect; they were placed in a septic environment, and we know that in this condition a foreign body is invariably eliminated.

Delbet made two caoutchouc grafts in man under different conditions. In the first case an extensor tendon was adherent to a phalanx; a thin lamina of caoutchouc was placed between the bone and the tendons; there was restoration of function, which still continued eight months after the operation. In the second case the collapsed wall of a hernial canal was restored with a thick layer of caoutchouc; the immediate result, at least, was satisfactory, and, possibly, this remained permanent.

Finally, the "nuova carne" (new flesh) of Fieschi is also a prothesis of caoutchouc, but it is used in an original manner.

Fieschi incorporates a porous caoutchouc with the tissues, counting on the sympathy that exists between these and the "caoutchouc sponge" to bring about their fusion by the penetration of the living

elements with the cavities of the inert substance and the building up of new tissue. Experiments and clinical results both show the correctness of this view. Some fragments of sterilized caoutchouc sponge, introduced into the peritoneal cavity, or placed in the muscles of dogs and rabbits, have been enveloped and penetrated by a granulation tissue without setting up any unfavorable reaction. In two operations for femoral hernia, the closure of the ring was accomplished simply and effectively by means of a tampon of caoutchouc sponge. At the end of a year the patients continued cured, and the radiograph showed that the tampons had not moved from their positions.

One of the most important results of the intimate union which is established between the tissues and the porous foreign body is the fixity which the latter acquires, and which could not be obtained from any amount of suturing.

What is the future of caoutchouc grafts? We can only conjecture, for the method is still only in its infancy. Fieschi hopes that his method will permit at least the partial restoration of important organs. That is expecting a great deal. The "new flesh" can be usefully employed as a substitute for fatty or aponeurotic grafts, and some muscular grafts or autoplastics. Leaf caoutchouc, doubtless, has other indications arising from its elasticity, its smooth surface which renders it unirritating to the blood, and invaluable as an interposing material, and for sliding.

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## Miscellany.

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### BY THE WAY.

Routine, while conducive to detailed success and concentration, requires its Hegelian twin, vacation, of mind, as well as of body, to bring us moments of broader view, and if one may dare to say, without "suggesting," to mention without making a pronouncement, each month, seen from the standpoint of another's eyes, may offer an opening of thought which will not obtrude, although interesting. For, in the strictly formulated discussion of a scientific question, there could not be room for the sidelights which, nevertheless, are fundamental, as shown in the historical progress of the subject.

Abdominal surgery illustrates this, in its intestinal work. For,

when operators found the ease with which the gut-tube could be incised, or excised, it required a Cannon, and a Lewis, to show that the arrangement of muscle bands did not present an equal choice of selection in site. The studies of these men, and of others, are still upon the shelf, so far as general application goes. And many a young operator, convinced of his technic, feels no hesitance in opening an abdomen, without any definite knowledge of the basis of contraction waves, anatomically. So we see the question of the moment has been that of infection. To obtain healing cleanly has been the need. But when this has been mastered, the science will attack other and higher problems. Just as philosophy proceeds by stating one side, and then opposing it, and finally resolving the opposition by a synthesis, science puts all its attention upon one-sided details, and then disproves or accepts the principle, to pass beyond.

This view is scarcely recognized in our teaching. We do not admit to students our own transitional feeling. And many of them never enter the movement, but accept what is what and merely apply. Yet, in this analysis, we see the grades of workers. Some open arrangement of these would greatly clarify affairs in the profession.

Even text-books are content to state matters without a clear presentation of the difficulties to be overcome. And few men have, or have access to monographs.

Philosophy collects ideas in such a way as to exhibit their maturation. But in our science, the position of yesterday is unmentionable. The student in a medical school does rarely, if ever, look up the history of a surgical or pathological question. We assume that sufficient for to-day is the evil thereof, and allow him to forget that a new position to-morrow may be founded upon a discarded notion of some time ago. The surgery of Heister is good reading yet. The pathology and the physiology of Lotze, as well as the general science of Oken, are recommended even yet. They stimulate to broader and basic conceptions, and the reader will find developed in their pages many of the flashlights which have come to him as he waited some night thinking in his office over a complicated case, or a disturbing emotion, reflex of a crucial situation.

Some one now feels the imminence of new pre-medical studies. Are we to add one year more to the over-burdened student? Not at all. Such philosophic reading is better used after than before experience.

The surgeon who finds plain the epochs of Hunter, of Lister, and of the succeeding asepsis, three rapid versions in the delivery of our present ideas, will agree that good, clear "thinking" and philosophy are not to be neglected.

But who can quote Lotze, Oken, or Heister?

And in our monthly meetings would some digest of writers as thoughtful as any of these be more welcome than the stereotyped case, with its one-sided conclusion?

Medical reading matter is not easy to obtain. Throughout the country few men can obtain more than scattered notions of the vast flood of speculation now being poured upon the basic notions of our science, and relatively, monism, and metaphysic are working their way in and out of our chemistry and our pathology, scarcely perceived by the practitioner. Yet these notions become absorbed in our therapeutics and so applied.

When the great library of New York City, at Fifth Avenue and Forty-second Street, throws up its hands, and in its card catalogue of current literature disclaims the attempt to possess our journals, but refers readers to the files of the Academy of Medicine on Forty-third Street, open to non-members only in the morning, and when in Philadelphia, the County Medical Society feels it advisable to supplement the number of scientific periodicals on the city's bookshelves, adding journals of its own selection, and when, probably, in Brooklyn is the only large collection of books and journals of our science open to the public all day and in the evening, conditions are such as to warrant comment. Are we too busy to think?

But who would think of reading Oken?

Yet Erdman says that anyone who limits his study to one viewpoint probably says something worth while, and he says further that Oken will be of great service to those who base their thinking (philosophy) on nature. Read Oken, and you will perceive the lack of spirit. But our science does not need spirit. Where is the fault? Can you attack Oken? Well, then, you can attack modern science, but can you attack Oken, and at the same time accept modern science? You may have to call upon our conception of the "Will to Believe."

Although Oken taught the vertebral character of the skull bones, and his work upon this appeared in 1807, his mode of thought is illuminating.

Every national upheaval is historically correlated with new think-



ing, and to-day calls for readjustment. How it will come, and what its form may be, will be stated in terms of physics and chemistry. But the month will see only a new placing of Auaximander, of Heracleitus, or of Tao, when all is said and done, and unless we look into it, we will not even see this.

All this from the suggestion of a laparotomy. But that is the inevitable, if we plunge *in medias res*.—[R.]

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## SOUTHERN MEDICAL ASSOCIATION, RICHMOND MEETING.

Reported by ISIDORE COHN, M. D., New Orleans.

The meeting of the Southern Medical Association at Richmond, Va., November 10, 11 and 12, was the most successful in the history of the organization. Out of a total membership of 3,900, there were 962 registered.

The surgical program proved interesting and instructive.

Dr. Le Grand Guerry discussed "Gunshot Wounds of the Abdomen." He advocated prompt surgical intervention.

Dr. J. C. Bloodgood, of Baltimore, in a paper entitled "What the Civil Surgeon Can Do for Military Surgery in Time of Peace," advised every civil surgeon to become familiar with "first-aid" packets and methods of transporting wounded. He was advised, in the discussion, that Tulane had been teaching its students these things for twelve years.

Dr. Tyler, of Greenville, South Carolina, read a paper on the "Importance of Destruction of Cervical Mucosa in Subtotal Hysterectomy as a Cancer-Preventing Measure." He did not advocate a particular method, but rather indicated the number of carcinomata of the cervix which had developed as a result of neglecting this detail. Dr. Wm. Kohlmann, in discussing the paper, stated that he had seen five cases of cancer of the cervix follow subtotal hysterectomy in which the mucosa had not been destroyed.

Dr. Budd, of Richmond, discussed "Tetany Following Partial Thyroidectomy." Indiscriminate clamping, interfering with the bloody supply to the parathyroid, is considered by the author as frequent a cause of tetany as actual removal.

Dr. Carrol W. Allen, of New Orleans, discussed "The Use of Clamps in the Removal of Bladder Tumors."

R. W. Knox, of Houston, showed simple, light plaster splints which he uses in ununited fractures.

"The Repair of Fractures from an Experimental Viewpoint" was discussed by Isidore Cohn. Lantern slides were used to illustrate callus formation.

"The Operative Treatment of Fractures" was discussed by Drs. J. W. Long, of Greensboro, North Carolina, and Hugh Trout, of Roanoke, Virginia. The papers were particularly interesting as to the different methods used. Dr. Long has used with success Lane's plates and nails, and Dr. Trout has used the inlay autogenous bone graft. His specimens were excellent.

Dr. Mitchell Hoke showed moving pictures illustrating the improvement which can be obtained by properly-done tendon transplantation and muscle exercises in cases of atrophy following infantile paralysis.

Dr. Hazen, of Washington, D. C., called attention of the Association that the X-ray can do for cutaneous cancers all that radium can do.

Dr. E. H. Terril, in discussing "Early Diagnosis of Cancer of the Rectum," stressed the importance of proper local examination being done early.

"Acute Surgical Diseases of the Abdomen" were discussed by Drs. F. W. McCrae and J. Graham.

Dr. J. Shelton Horsley illustrated with lantern slides a method of intestinal suturing.

Dr. Southgate Leigh, of Norfolk, discussed "Safeguarding the Prostate." Anoci methods are used by the author. Proper drainage first, and followed at the proper time by a suprapubic prostatectomy is the method advocated.

Dr. H. B. Gessner, of New Orleans, discussed his experimental work on the circulation of the testicle.

Dr. F. G. DuBose, of Selma, Alabama, showed photographs of *full-term twins*—one, the result of an extra-uterine, and the other an intra-uterine pregnancy. The mother and children are well. The doctor showed several other equally interesting anomalies.

Dr. Wm. Kohlmann, of New Orleans, showed a method of round ligament fixation for uterine displacements.

Dr. W. A. Bryan, of Nashville, presented the results of hare and cleft palate operations. The results obtained won much favorable comment on the doctor's work.

Dr. W. W. Crawford, of Hattiesburg, discussed "Cesarian Section in Eclampsia."

At the conclusion of the meeting the section officers for 1915 were elected, as follows: Isidore Cohn, New Orleans, chairman; J. H. Blackburn, Bowling Green, Kentucky, vice-chairman; Dr. Griffith, of Asheville, North Carolina, secretary.

# N. O. Medical and Surgical Journal

## Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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- ROY M. VAN WART, M. D., Lecturer on Diseases of the Nervous System, Tulane Univ. of La.
- ESPY M. WILLIAMS, M. D., Patterson, La.

### ADVANCED CIVIC SERVICE IN MEDICINE.

Among our exchanges we have found a news item which announces the proposed plan in Chicago of organizing the various hospital clinics, under the auspices of the local Chicago Medical Society, with a view to providing a service, free of charge, to physicians visiting Chicago in search of knowledge.

This is far in advance of anything yet undertaken in this country. In Paris, for many years, the hospitals were free to reputable physicians under simple formalities. In Paris this privilege at one time opened up even laboratory opportunities under an expense which was only nominal. Many large cities in Europe have offered like opportunities, and the exceptions have been chiefly in those places where

the visiting physicians came in such crowds as to make it impossible to conduct instruction on a free basis.

Many of the hospitals in New York have been liberal in the privileges accorded physicians visiting New York for the purpose of witnessing surgery or of following special fields. The commercial instinct has obtained to a degree in all places, and Chicago has for many years offered postgraduate instruction at a price.

It is all the more gratifying to have the initiative come from this great city of the Middle West, demonstrating altruism of the finest in proposing that the function of the hospital in medical education should be put upon the same basis as its other charitable functions.

The greatest good to all may be attained under such motives, and the example should be contagious. To be really efficient, clinical instruction should be free and the purveyors should be inspired, as they were a century ago, when the master walked the wards of the hospital, with groups of students, in and out of college, listening and looking and profiting by the wisdom filling the discussion of the cases encountered.

The future of postgraduate study should contemplate just such opportunities, and the city and State should seriously consider the purpose of the hospital to this end.

Only a fragmentary note has come to us regarding the purpose of the Chicago Medical Society and the hospital clinics, but that note has let us dream of a broader conception of the modern interpretation of that Hippocratic injunction:

“I will keep this oath and this stipulation—to reckon him who taught me this art equally dear to me as my parents \* \* \* ; to look upon his offspring in the same footing as my brothers, and to teach them this art, if they shall wish to learn it, **without fee or stipulation**; and that by precepts, lecture and **every other mode of instruction**, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine.”

When the physician comes into the new guild of humanitarian practise and such high calling that we may be in reality priests of sanitation and true servants of the sick, there may be a response in the public mind and public purse which will let such purposes become general—and for such we devoutly wish and labor.

### FOOT-AND-MOUTH DISEASE.

An inquiry from a subscriber as to the danger to human beings from foot-and-mouth disease suggests the propriety of refreshing the memory of our readers concerning this disease, which is now widespread in some sections of the United States. No cases have as yet been discovered in Louisiana, and, as the authorities are now on the alert, there is no likelihood of any great prevalence here, even if the infection should be introduced.

The disease is of great gravity in stock and cattle, but is not serious in human beings. As it has been rare in this country, even among cattle, there are few recorded cases in human beings. It causes elevation of temperature, sore mouth, dysphagia, an eruption on the face and hands, but the general disturbance is usually slight and rarely of any seriousness.

There are two known methods of transmission: actual contact with an infected animal, and the ingestion of contaminated milk. The measures of prevention follow as a natural corollary: quarantine against diseased animals, and the pasteurization of suspected milk.

According to a bulletin of information recently issued by the United States Department of Agriculture, experiments made in Denmark and Germany have demonstrated that thorough pasteurization of milk will serve as a safeguard against foot-and-mouth disease; the milk must be heated to 145 degrees F. and kept at this temperature for a half hour.

We imagine that if there is any ground for suspicion the milk will very generally be let alone until all doubt is dissipated.

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### SUPER-GRADUATE DEGREES IN MEDICINE.

Upon the accomplishment of added periods of study, at least two universities now offer advanced degrees: Western Reserve gives the degree of A. M. in medicine, and the University of Minnesota offers the degree of Doctor of Science. At the University of Minnesota the degree is applied to a limited number of subjects, as surgery, ophthalmology, etc.

In commenting upon this step the *Journal of the A. M. A.* editorially (October 17, 1914) compares these degrees with those in

tropical medicine and in public health as offered at the University of Pennsylvania, Tulane and Harvard. The move meets with the approval of the organ of the A. M. A., which believes that it opens up great opportunities in medical education.

The analysis of the situation might suggest a different line of thought, and perhaps lead to an entirely different conclusion. On the face of it, there is an acknowledgment that the regular courses for the medical degree are inadequate, and that, to be really scientific, it would need one or more years to qualify. Harvard met this situation several years ago by making the work of the senior year elective, in order that the graduate might be specially trained in the branches of preference, without neglecting or disregarding the main subjects leading to the M. D. degree.

Might it not be better to undertake the serious consideration of the curriculum of the medical school with a view to making the course long enough to meet the needs of medical education? The students of medical education in this country, working at the pedagogic side of the question, have long ago observed that the present four years of study are entirely inadequate to properly train the intending physician, and that, in order to arrange a schedule of hours at all satisfactory, the adjustment of tabloid forms of instruction in most of the special branches has been undertaken, with the idea that this may inspire the student to later interest. Diseases of the nervous system, skin diseases, diseases of the eye, ear, nose and throat, orthopedics, etc., are so far from adequately scheduled that the teachers are always dissatisfied with the teaching opportunities and with the results. The student gives these subjects scant study, and altogether they might be omitted from the usual schedule, for all the good accomplished in the present application to the curriculum.

The student gathers the final impression that most of these things are more or less exotic and foreign to the practise of medicine as demanded. The result is obvious—a few years after graduation the physician, lacking the foundation which might have come in undergraduate work, decides to become a specialist by the short method; he gathers a few months of practical instruction, and the country is now full of half-baked “specialists” of all sorts.

It is true that, by affording systematic instruction in special fields, the university or college of medicine may compensate by training the few men who will take such courses; but is this the

solution? A fifth year of concentrated work in the specialties would make every graduate a better physician and would leave less opportunity for the half-trained specialist, while it would create a larger demand for the really scientific expert, prepared to be called on in extraordinary cases, outside the scope of the average man's training.

Might it not be better to make our methods of medical instruction more secure, before venturing too far into new and more or less alluring fields of superlative education?

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### THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS RESPONDS.

In a number of the United States, where State universities dictate the regulation of medical education, the minimal requirement of education preliminary to the study of medicine is fixed at two years of college courses; some States are satisfied with one year of required college work, while the majority of the United States still believe a high-school education is all that the State Examining Boards should require.

The new era in medical education has not yet established a wholesale confidence as to its merits; it is really on trial. No one is prepared to contest the argument that the highest type of physician is the one who has matured as a student before he begins to study medicine, and that he is the best physician who is matured as a graduate in medicine in hospital experience and postgraduate study. The fact remains, however, that probably ten per cent. of the young men anxious to follow a medical career may be able to satisfy this ideal.

All the terms of the preparation entail time and money. A gravitation of standards will probably take place in time, and some of those really fit to follow medicine, now deprived by circumstances, may satisfy their careers.

The State which bears any relation to the educational institutions should protect them, even if it does not support them, and, where the State institution is the head of education, it should dictate the rules; where the State institution has established moral standing the State likewise should support its standards.

It is, therefore, a decided step forward for the Louisiana State Board of Medical Examiners, in announcing that with June 1,



1915, the candidates for licensure in Louisiana, in addition to high-school graduation, shall be required to submit evidence showing the completion at an approved college or university of one full year of work in the branches of biology, physics and chemistry, and in one modern language. Such has been the requirement at the Tulane University of Louisiana since 1910.

It is entirely fit that the State authorities in medical education should have no standard which would cheapen the educational basis of those institutions standing for the highest possible standards in the State.

This action by the Louisiana State Board of Medical Examiners will have the additional effect of influencing the standards of States now reciprocating, but with lower requirements; it also will maintain reciprocal relations, on the part of Louisiana, with those States having like standards.

In such matters, State Boards should hasten slowly, as our Board has done. One year of college work is a reasonable requirement, and one which can be now met by students of the South; a few years ago this would not have been likely.

The action by the Board again shows its enterprise in the interest of State medicine, and the members should be thanked by the profession for this step onward.

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### FRAUD BY LAW AND SOME PROTECTION.

Dr. Harvey W. Wiley, often quoted in matters of food adulteration, is now represented as proposing that the new revenue law should supplement the Pure Food law by levying a tax on all adulterated foods, drinks and patent medicines. The Pure Food law provides for proper labeling on the packages of adulterated goods, and, if a sufficiently large tax were put on such, it might help to dispose of them altogether.

The medical profession is especially interested in the patent medicine side of the question; foreign countries regularly tax such preparations, so it would be no new idea to do it in this country. It has been pointed out that the proper dissemination of the meaning of a tax of this sort might educate the more intelligent public as to the uselessness of the stuff falling within the limits of such taxation.

Under date of October 18, 1914, the Department of Agriculture

promulgates a group of ideas covering the interpretation of fraudulent and misleading labels on medicinal preparations. The publication aims at affording information to manufacturers who are seeking to obey the Pure Food and Drug Act.

Says the Bureau of Chemistry of the Department of Agriculture :

“A preparation cannot be properly designated as a specific, cure, remedy, or recommended as infallible, sure, certain, reliable or invaluable, or bear other promises of benefit unless the product can as a matter of fact be depended upon to produce the results claimed for it. Before making any such claim the responsible party should carefully consider whether the proposed representations are strictly in harmony with the facts; in other words, whether the medicine, in the light of its composition, is actually capable of fulfilling the promises made for it. For instance, if the broad representation that the product is a remedy for certain diseases is made, as, for example, by the use of the word ‘remedy’ in the name of the preparation, the article should actually be a remedy for the affections named upon the label, under all conditions, irrespective of kind and cause.”

To an honest manufacturer this would seem fair enough, but to the “cure-all” tribe there will be at once a long list of exceptions taken.

Further the Bureau goes on :

“Not only are direct statements and representations of a misleading character objectionable, but any suggestion, hint or insinuation, direct or indirect, or design or device that may tend to convey a misleading impression should be avoided. This applies, for example, to such statements as ‘has been widely recommended for,’ followed by unwarranted therapeutic claims.

“Representations that are unwarranted on account of indefiniteness of a general, sweeping character should be avoided. For example, the statement that a preparation is ‘for kidney troubles’ conveys the impression that the product is useful in the treatment of kidney affections generally. Such a representation is misleading and deceptive, unless the medicine in question is actually useful in all of these affections. For this reason it is usually best to avoid terms covering a number of ailments, such as ‘skin diseases, kidney, liver and bladder affections,’ etc. Rheumatism, dyspepsia, eczema and the names of many other affections are more or less comprehensive, and their use under some circumstances would be objectionable. For example, a medicine should not be recommended for rheumatism unless it is capable of fulfilling the claims and representations made for it in all kinds of rheumatism. To represent that a medicine is useful for rheumatism when, as a matter of fact, it is useful in only one form of rheumatism, would be misleading. Such statements as ‘for some diseases of the kidney and liver,’ ‘for many forms of rheumatism,’ are objectionable, on account of indefiniteness.

“Names like ‘heart remedy,’ ‘kidney pills,’ ‘blood purifier,’ ‘nerve tonic,’ ‘bone liniment,’ ‘lung balm,’ and other terms involving the names of parts of the body, are objectionable for similar reasons.

“Testimonials, aside from the personal aspect given them by their letter form, hold out a general representation to the public for which the party doing the labeling is held to be responsible. The fact that a testimonial is genuine and honestly represents the opinion of the person writing it does not justify its use if it creates a misleading impression with regard to the results which the medicine will produce.

“No statement relative to the therapeutic effect of medicinal products should be made in the form of a ‘testimonial’ which would be regarded as unwarranted if made as a direct statement of the manufacturer.

“Statements on the labels of drugs guaranteeing them to cure certain diseases or money refunded may be so worded as to be false and fraudulent and to constitute misbranding. Misrepresentations of this kind are not justified by the fact that the purchase price of the article is actually refunded as promised.”

While most of the above is uttered as advice, it becomes, at the same time, more or less judicial as emanating from the source of information and instruction in interpreting the law. If these suggestions are supported by Federal activity and procedure there is a considerable cause for congratulation in the hope that the old stand-bys in patent medicines will soon die a much-deferred death.

There has been, at one and another time, considerable criticism of the Government, because of failure to act in the matter of flagrant pretense to cure in patent medicines known to be worthless.

That there has been no intention to overlook these things is now evident in the communication quoted above; the Government has simply taken its own time to work out a line of action in which a very strong opening attack is now on. The results remain to be seen.

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## Miscellany.

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RADIUM IN URETHRO-VAGINAL CANCER.—Under the title of “Cure of an Inoperable Urethro-vaginal Cancer by Radium-therapy,” Legueu (*Bull. et mém. Soc. de Chir. de Paris*, February 17, 1914) gives in detail the history of a case which remained apparently cured for two and a half years after treatment. The case was referred to him fifteen months after the first appearance of symptoms. The patient, aged 26, then presented a carcinoma involving the urethra from the meatus to the neck of the bladder, the anterior wall of the vagina, and the anterior halves of the labia minora. The whole mass appeared to be intimately adherent to the symphysis pubis. There was no obvious enlargement of

lymphatic glands. A portion of the growth removed for examination showed typical squamous-celled carcinoma, with rudimentary cell nests. It was considered that an attempt at a radical cure by operation would entail severe mutilation, and afford little hope of a cure. Treatment by radium was instituted in collaboration with Chéron, and continued at intervals for six months. Full details are given as to the method of application. At the end of the course of treatment the posterior wall of the urethra and the corresponding portion of the anterior wall of the vagina had disappeared; the neck of the bladder opened direct into the vagina, and there was, therefore, complete incontinence. The mucous membrane of the remains of the urethra, of the vagina, and of the vulva appeared everywhere smooth and free from recurrence. The patient, before the institution of treatment, had been thin, feeble, and in constant pain; she was now apparently in flourishing health. Two and a half years later she presented herself again, under the following circumstances: She remained perfectly well, to all appearance, both generally and locally. She wished to get married, and insisted upon an operation being performed, whatever the risks, in order to relieve the distressing incontinence. Legueu advised against operation, but finally consented to perform implantation of the ureters into the intestine, which he considered was the only feasible operation. The patient died of peritonitis. The parts which had been involved in the growth, together with the inguinal and lymphatic glands, were exhaustively examined by Verliac, and no trace of carcinoma was found anywhere. In the course of the discussion which followed the communication, Savariaud and Faure (*Ibid.*, February 24, 1914) each reported the result of radium treatment of a case of carcinoma of the cervix. The latter's patient was deemed inoperable in March, 1910, and treated by radium. Three and a half years later she was seen, and declared herself as feeling perfectly well. She was 18 pounds heavier; in the interval there had been no discharge of blood or pus. The cervix was transformed into a cicatricial mass. Savariaud's patient appeared to be near death in August, 1912, when she was given radium treatment, after curettage of a soft mass of growth from the cervix. One and a half years later she appears to be in good health, and has gained 30 pounds in weight. The cicatrized remains of the cervix can be seen beyond a mass of scar tissue at the upper end of the vagina. There is nothing to indicate recurrence of the growth. Delbet counseled

caution in estimating the value of radium treatment in cases of cancer of the cervix. He points out that those with most experience are the most diffident in giving a prognosis in any case of cancer. The rate of growth of any tumor is most irregular, and varies in a manner which we are at present unable to explain, and this variation in the rate of progress of a growth may occur, whatever the treatment adopted, or even in the absence of any treatment. A graphic tracing showing the evolution of a malignant tumor would hardly ever be a straight line or a regular curve. In former days, before the attention of surgeons was so exclusively directed as it is now to attempting surgical cure of cancer, surprising results were sometimes achieved in advanced cases of carcinoma of the cervix by energetic curettage and cauterization. The penetrating power of a tube of radium containing 5 cg. is not more than 1 in. It is, therefore, difficult to see how radium can effect a cure in the case of cancers which have penetrated to any depth. Growths which have not penetrated deeply, although they may be very exuberant, may, however, be very naturally benefited, or perhaps cured, by radium. The number of cases of the cervix which conform to these conditions must, unfortunately, be rare. As a matter of experience, of the cases of cancer occurring in his clinic which had been treated by radium, all those which he had been able to follow up for an adequate period had terminated in death.—*Btsh. Med. Jour.*

RADIUM IN DERMATOLOGY.—A. F. Holding, New York (*Journal A. M. A.*, August 29, 1914), says that for two purposes one must acknowledge that radium has greater possibilities than any other similar agent used at present, namely: (1) in diseases of faulty metabolism, in which the radium emanations may be used; (2) in malignant lesions of cavities, where the neoplasm is inaccessible or difficult to expose to direct application of Röntgen rays, such as the esophagus, rectum, vagina, urinary bladder and fauces. Its use for benign growths, he thinks, is unnecessary, since they could be more quickly controlled with less expense by the electric desiccation method of Clark, or massive doses of the Röntgen ray. One fact in its favor is that the most penetrating Röntgen rays in use represent the output of from a 60,000 to 100,000-volt current, while it is estimated that from 600,000 to 1,000,000 volts would be needed to produce Röntgen rays of as great penetration as the most penetrating radium rays. With the use of the new Coolidge tubes more success can be expected in the future, Holding says. Since the

employment of radium emanations by the use of capillary glass tubes, its field of usefulness has been greatly increased. Radium treatment in any case is the most costly, but, other things being equal, radium is more easy to apply than any other agent. It also consumes more time, but, like the Röntgen ray and ultra-violet ray, it is painless and gives the best cosmetic effects. In superficial skin conditions other methods are generally more available. Psoriasis, eczema and skin diseases due to faulty metabolism should be treated first by systemic measures, including radium emanations if available. For deeper and malignant conditions of the skin the following therapeutic program should be adopted: 1. Massive Röntgen deep therapy or massive radium deep therapy. 2. Complete radical operation, preferably by bloodless methods, such as thermopenetration, electrocautery or massive caustics (Ströbel). 3. Effulguration (de Keating-Hart) into the wound. 4. Post-operative Röntgen deep therapy or massive radium deep therapy. In hopeless malignant skin conditions the patient's symptoms can frequently be much ameliorated by massive deep Röntgentherapy or radiotherapy.

THE USE AND LIMITATIONS OF RADIUM IN DERMATOLOGY are treated of by F. E. Simpson, Chicago (*Journal A. M. A.*, August 29, 1914). Everything depends, he says, on proper equipment and technic. He uses various applicators of different types, and says their chief advantage over other styles is the uniformity of their action over their entire surface. He commonly uses screens of aluminum or silver, covered with from five to ten thicknesses of black paper to absorb the secondary rays, the whole apparatus being then enveloped in rubber tissue and applied to the skin by adhesive tissue or rubber bands. Radium reactions in the skin are generally more benign than those in the Röntgen ray, and this is especially true of the beta rays, though even severe gamma-ray reactions are milder than the correspondingly severe Röntgen ones. Up to the present he has treated about forty cases of epithelioma. In two of the cases the success was only partial, and the general experience leads to the belief that certain epitheliomas are more resistant than others. As regards the relative efficiency of the Röntgen ray and radium in epithelioma, any conclusions would be premature, but he believes both have their fields of usefulness. Epithelioma can be cured by radium treatment with or without a screen. Without a screen an epithelioma two or three inches in diameter and not too deep may be healed with a one-fourth screen applicator in five or

six treatments of an hour each. With a screen of 0.1 mm. of silver eight hours may be required. Simpson has used screens more often of late to limit the inflammatory reaction and because it has been shown that the deeper parts can be probably better reached. An epithelioma can also be healed by a single massive dose, but he prefers to use fractional ones, because medical results are equal, if not better, than with other methods. As regards internal cancers, the general opinion of the profession is conservative as to radium treatment. It may be of great value before and after operation, and inoperable cancers may be relieved, and perhaps life prolonged by it. A few inoperable cancers have been made operable by it, and a few have apparently recovered. Twenty cases of lupus erythematosus have been treated by Simpson, with encouraging results on the whole. In selected cases he has been able to obtain complete involution, though relapses may occur, but these, so far, have yielded to persistent treatment. Experience has led him to prefer screened radium. He now uses in the average case a one-fourth or one-half strength applicator, screened with 0.1 mm. of silver, and treats each patch from about four to six hours in the course of two weeks. The inflammatory reaction is less severe than when naked radium is employed. His experience in certain types of birth-marks is better than that obtained with any other method. In a certain number of angiomas, radium is the only practical method of treatment. Deep port-wine stains can be treated with good cosmetic result by giving just enough raying to produce a pronounced erythema with a marked desquamation. Elevated papillomatous angiomas must be treated with slightly stronger doses to level the surface and bring about decoloration. With a one-fourth applicator unscreened an exposure of from two to four hours may be given in fractional doses, and, when the reaction subsides, repeated if necessary. In certain types of cavernous angiomas in children reduction and leveling can sometimes be produced without visible inflammatory reaction. For best results, infinite attention and care of details are needed in angioma, and in selected cases an almost perfect result can be obtained.

RADIUM AND RÖNTGEN-RAY THERAPY.—W. S. Newcomet, Philadelphia (*Journal A. M. A.*, August 29, 1914), points out the analogies and differences of the Röntgen rays and radium as bearing on their therapeutic uses. From a physical point of view, the differences are observed between the Röntgen ray and the gamma-

ray of radium as used. First, the ray is different in penetration. Second, it is possible that the high beta-rays from the radio-active substances play a very active rôle, and consequently differ in quality. Third, the relation of the radiation to the surface and the separate planes of tissue is materially altered. Another point, brought out by Bayet, is that the dosage of these radio-active elements can be much more exactly measured than that of the Röntgen rays, and the idiosyncrasies that exist to both forms of radiation are more important than the slight variation in dosage. It may also be said that the effect on tissue is different. The radio-active salts have a little more intense reaction, usually confined to a limited area, and in turn followed by a fairly rapid restoration of the part, while the same amount of reaction from the Röntgen ray may be more widespread, the damage more uniform and the healing very slow; therefore, it is possible to use the radio-active elements with less danger of harm following. The variations of susceptibility also seem to be greater in proportion than those to the Röntgen ray, and the fact the Röntgen-ray burns have been healed by radium treatment illustrates the wide difference between them. It would seem that it would be better to employ both forms in certain cases and get the good results of both. The radio-active elements can be applied in cavities where it would be imposisble to use the rays without penetrating the intervening tissue, and better results have been observed in cancer of the uterus than from any other treatment, which, while not permanent, give greater comfort and alter the course of the disease. There are also cases of cures in some conditions by the Röntgen rays, as shown by cases quoted. In superficial epithelioma both forms have done good work, and radium is not specially recommended over the other. In deep cancer, the choice is still an open question, but in the treatment of nevi the radio-active elements displace the other as more effective and less dangerous. From this short analysis Newcomet concludes: "1. Both forms of radiation have wide ranges of usefulness that differ materially under certain conditions of disease, individual idiosyncrasy and adaptability of usefulness to the affected part. 2. There is, however, a wide middle ground in which the two forms of radiation overlap, their employment being a matter of convenience. 3. The use of both forms of radiation will in some instances yield results, when one alone would fail. Therefore, those employing these radio-active elements should have a knowledge of Röntgen radiation. Experience is also neces-



sary with either form to obtain results, and, furthermore, to guard against untoward effects that are too commonly seen."

RADIUM IN THE TREATMENT OF UTERINE HEMORRHAGE AND FIBROID TUMORS.—H. A. Kelly and C. F. Burnam, Baltimore (*Journal A. M. A.*, August 22, 1914), report their experience. Elaborate tables are given of their cases, and they feel sure that radium offers a marvelous means both for the control and for the doing away of uterine hemorrhages in the classes of cases where they have used it, and is also perfectly suited for the cure and disappearance of fibroid tumors. When it fails we still have the operation to fall back on if needed. It is simpler in application than the Röntgen ray, and acts less on the ovaries. They insist that the fibroid itself should receive the major radiation in any case, and claim that radium can bring about a complete amenorrhea with the absence of menopausal symptoms in half of the cases and with mild symptoms in all of them. They insist on the intra-uterine application in contradistinction to the vaginal or cervical, but think it quite possible that suitable abdominal radiation with radium or the Röntgen ray may add to the rapidity of the results. In their tables they give the amount of radiation and the duration of the application, showing wide variation in both. The technic advised is filtration through glass, 0.5 mm. of platinum; 0.5 mm. of zinc foil, and 0.3 mm. of rubber. This apparatus, suitably shaped, is carefully introduced directly into the uterine cavity. The time of duration of application seems to have ranged from five to twenty-four hours or a little more. This and the amount of radium used are all stated for each case in the tables.

MEDICAL EDUCATION STATISTICS FOR 1914.—The *Journal A. M. A.*, August 22, 1914, the annual Educational Number, contains statistics for the year ending June 30, 1914. There were 16,502 students studying medicine this year, 513 less than in 1913. These are divided into 15,438 in the non-sectarian colleges, 794 in the homeopathic colleges, and 270 in the eclectic colleges.

There were 3,594 medical graduates this year, 387 less than in 1913, and 889 less than were graduated in 1912. The non-sectarian colleges had 3,370; the homeopathic had 154, and the eclectic had 70. This is the lowest number of graduates since 1890.

There are six less colleges than in 1913, the total now being 101, consisting of 87 non-sectarian, 10 homeopathic and 4 eclectic colleges.

Since 1904, 85 medical schools have been closed, 49 of which were merged into other medical schools and 35 became extinct. During the same time, 24 new colleges were organized, making a net reduction of 61 colleges. This reduction in the number of medical schools is not restricting the opportunities of students to study medicine, but is insuring them a better training. The large oversupply of medical schools in this country is giving way to a more normal supply of better equipped colleges. Of the 85 colleges which closed, 62 had been rated in Classes B and C by the Council on Medical Education of the American Medical Association. A large majority of those closed, therefore, were inferior colleges.

Women students constituted 3.8 per cent. of all students, and of all graduates 3.4 per cent. were women. Statistics show that college terms are being gradually lengthened. In 1901, 100 colleges had annual sessions of only 23 to 28 weeks each. Now only two colleges have such short sessions, and about 95 per cent. have sessions of from 31 to 36 weeks. In 1902 only 42 per cent. of the colleges had sessions of 31 or more weeks.

Tabulated statistics of college fees, including matriculation, tuition and laboratory fees, show that 14 colleges charge \$100 or less for each student per year, 66 colleges charge between \$100 and \$175 per year, and 21 charge \$175 or more. Among the colleges charging fees of less than \$100 are several strong State university medical colleges. On the other hand, 11 colleges listed by the Council in Class C charge fees from \$100 to \$175 per year for each student. Considering the fact that diplomas from Class C colleges are reported as not recognized as a qualification for a license by thirty-one State licensing boards, it would be poor economy in fees to attend one of these colleges because of the slight difference in fees charged. In some cases it is a fact that in the same time and for even less money the student could attend one of the best equipped colleges, the diplomas of which are recognized in all States. Financial reports from 65 acceptable medical schools show an average actual expenditure for each student for one year of \$435, while each student paid on the average in fees only \$122. This shows that, to furnish an adequate training, medical schools must have more income than is derived from students' fees, in the form of either State aid or private endowment.

Of the 101 existing colleges, 84, or over 83 per cent., now require one or more years of work in a college of liberal arts for admission,

and several others have announced the higher requirement to take effect in 1915. Of this number, 34 require for admission two or more years of collegiate work. That marked progress in this respect has been made, is shown by the fact that in 1904 only four colleges (less than 3 per cent.) required any collegiate work for admission. Twenty State licensing boards have established the requirement for preliminary education of one or two years' work in a college of liberal arts, thereby supporting the better class of colleges which have adopted that standard. Seven of these require two years of collegiate work, the equivalent to that required by university medical schools for the six-year combined course for the B. S. and M. D. degrees.

Of the 3,594 medical graduates in 1914, 807, or 22.5 per cent., were also graduates of colleges of liberal arts, as compared with 19 per cent. last year. This shows a decided improvement in the qualifications of those who are to practice medicine.

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## Medical News Items.

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THE SOCIETY OF AMERICAN BACTERIOLOGISTS will hold its annual meeting in Philadelphia, December 29-31, 1914, under the presidency of Prof. Chas. E. Marshall.

THE SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION will hold its annual meeting at Richmond, Va., December 9-12.

THE NATIONAL ACADEMY OF SCIENCES will hold its autumn meeting at the University of Chicago on December 7, 8 and 9.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its annual meeting in Jacksonville, Fla., from November 30 to December 5. There will be a Southern health exhibit at the meeting, showing material of special importance to the South, such as hookworm, malaria, pellagra, etc. Bubonic plague will occupy an important place in the exhibit. It is the first time in the history of the Association that the meeting has ever been held in one of the Southern States.

THE AMERICAN COLLEGE OF SURGEONS held its third convocation in the Memorial Continental Hall, Washington, D. C., November 16, 1914.

MEETING OF PAN-AMERICAN PHYSICIANS.—At a meeting of the Pan-American physicians, held in Cincinnati, October 28, the following officers were elected: President, Dr. Charles A. L. Reed, Cincinnati; secretary, Dr. Ramon Guiteras, New York City, and treasurer, Dr. Henry L. E. Johnson, Washington.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The Mississippi Valley Medical Association held its fortieth annual meeting in Cincinnati, October 19-21. The following officers were elected: President, Dr. Hugh Cabot, Boston; vice-presidents, Drs. Willard J. Stone, Toledo, and Albert H. Freiberg, Cincinnati; secretary, Dr. Henry Enos Tuley, Louisville (re-elected); treasurer, Dr. S. C. Stanton, Chicago (re-elected), and chairman of committee arrangements, Dr. Carl L. Wheeler, Lexington, Ky. Lexington, Ky., was selected as the next place of meeting.

THE LOUISIANA VETERINARY MEDICAL ASSOCIATION extends a cordial invitation to the members of the medical profession of Louisiana to attend the sessions of the American Veterinary Medical Association during its fifty-first annual meeting, which will be held in New Orleans, December 28 to 31, inclusive, at the Hotel Grunewald. This invitation is extended through W. H. Dalrymple, M. R. C. V. S., president of the Louisiana Veterinary Medical Association.

DR. DOWLING SUMMONED IN LIBEL SUIT.—Whilst in Chattanooga, Tenn., last month, with the Louisiana Health Exhibit Train, Dr. Dowling was summoned to appear before the Circuit Court of Tennessee the first Monday in January to answer to the charge of libel in a damage suit of \$25,000 preferred against him by the Chattanooga Medicine Company. The news of the charge spread rapidly, and all of the many visitors that crowded the car during the afternoon commended the exhibit and the effort which it represents.

NEW ORLEANS POST-GRADUATE MEDICAL SCHOOL OPENS.—On October 26, 1914, the recently organized New Orleans Post-Graduate Medical School opened, with a large faculty of men well known in the several branches covered in the school's announcement. The school is situated in one of the buildings previously used as a residence at 135 South Rampart street. The building has been remodeled and fitted up for the school's purposes. The officers and directors of the school are: Drs. Homer Dupuy, president; William

Kohlmann, vice-president; Joseph A. Danna, secretary; Oscar Dowling, A. Nelken, C. G. Cole, J. M. Elliot, O. L. Pothier and T. J. Dimitry. The faculty of the school comprises Professors Joseph A. Danna, surgery; Homer Dupuy, laryngology and rhinology; Charles A. Borey, professor of pediatrics; Henry Blum, ophthalmology; Otto Joachim, otology; William Kohlmann, gynecology; A. Nelken, genito-urinary diseases; T. J. Dimitry, ophthalmology; J. W. Newman, obstetrics; O. L. Pothier, bacteriology and pathology; J. Numa Roussel, dermatology; J. P. Wahl, dental and oral surgery. The clinical professors are: Drs. Jacob Barnett, gynecology; C. G. Cole, clinical surgery; M. J. De Mahy, neurology; L. De Poorter, rhinology and laryngology; Joseph Elliot, medicine; M. Shlenker, medicine; P. B. Salatich, obstetrics; C. V. Unsworth, neurology; C. A. Weiss, laryngology; Arthur Weil, oto-laryngology; E. H. Walet, gynecology. Adjunct professors to serve in the various branches are: Drs. J. G. Dempsey, C. A. Dorrestein, Jacob Gorman, James Henderson, C. P. Holderith, A. L. Levin, Jas. T. Nix, Jr., J. F. Points, C. S. Tuller and Solon G. Wilson. The instructors are: Drs. E. F. Bacon, M. P. Boebinger, P. Graffagnino, J. S. Hume, J. S. Hebert, J. G. Hirsch, E. S. Keitz, J. B. Larose, Maud Loeber, H. J. Lindner, R. J. Mainegra, Sara Mayo, H. F. Nicolle, J. Signorelli, J. W. A. Smith, E. F. Salerno and P. T. Talbot. The clinical assistants are: Drs. G. J. Hauer, J. M. Hountha, E. A. Jurgelwicz, A. H. Letten, E. H. Nelson, E. S. Scharff, T. J. Walshe, T. R. Burt, L. Canepa, C. J. Bordenave and A. S. Yenni.

DR. SIMON FLEXNER HONORED.—On October 16 a dinner was given at Delmonico's to Dr. Simon Flexner by the past and present members of the scientific staff of the Rockefeller Institute for Medical Research, in celebration of the tenth anniversary of the opening of the laboratories of the Institute under his direction. Dr. S. J. Meltzer presided, and there were speeches from the following: Dr. W. H. Welch, Mr. F. T. Gates, Mr. John D. Rockefeller, Jr., Dr. Peyton Rous, Dr. Hideyo Noguchi, Dr. F. R. Fraser, Dr. Jacques Loeb, Dr. Rufus Cole and Dr. Flexner.

HOSPITAL FOR "TWILIGHT SLEEP" TREATMENT.—The first hospital in the world to be devoted exclusively to the "twilight sleep" treatment of maternity cases is to be built in New York City. The hospital will be known as the Twilight Sanitarium, and will differ materially from other hospitals. A large number of patients will

undergo treatment at the same time, and the room for the purpose will be arranged so as to be absolutely free from noise and strong glare of light. The hospital will be only three stories high and will be fitted with the latest surgical and medical equipment and appliances. The Twilight Sanitarium will be backed by a number of physicians who have followed the tests of the treatment at the Jewish Maternity, Bellevue, and Long Island College Hospitals.

**ANTHONY N. BRADY MEMORIAL.**—Plans for the new pathological laboratory of the Yale Medical School, in connection with the New Haven Hospital, have been approved by the corporation of Yale University. The building is a gift of the Brady family and is to be called the Anthony N. Brady Memorial.

**FELLOWSHIP FOR WOMEN.**—The Baltimore Association for the Promotion of the University Education of Women has again offered a fellowship of \$600 for the year 1915-16, available for study at an American or European university. Applications must be in the hands of Dr. Mary Sherwood, chairman of the committee on award, before January, 1915.

**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 Senor Alvarenga, amounting to about \$250, will be made on July 14, 1915, provided that an essay is deemed worthy by the committee on award. Essays may be upon any subject in medicine, but cannot have been published. They must be typewritten, and, if in a language other than English, they should be accompanied by an English translation, and must be received by May 1, 1915, by the secretary of the college, Dr. Francis R. Packard. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition that the successful essay, or a copy of it, shall remain in possession of the college. Other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1914 has been awarded to Dr. H. B. Sheffield, of New York City, for his essay entitled "Idiocy and Allied Mental Deficiencies in Infancy and Early Childhood."

**ALCOHOL FORBIDDEN IN GERMAN ARMY.**—At the time of the mobilization of the army, strict orders were given that no one should

offer to sell any of the German troops any alcoholic drink. No liquor of any kind was sold at the stations. It is reported that in 1870 floods of beer were offered to the passing troops at Munich, on their way to the front, and discipline suffered in many instances.

**SURGEONS AND PHYSICIANS NO LONGER NEEDED IN WAR ZONE.**—It has been announced by the First Aid War Department of the American Red Cross that no more physicians and surgeons are needed in the European war zone, as it already has on file 2,000 applications from reputable physicians and surgeons—far more than can be utilized at present. The department suggests that no more applications be submitted for some time.

**RADIUM FOR JEFFERSON HOSPITAL.**—Twenty-five hundred dollars' worth of radium has been purchased from the Lucy Henderson Fund of \$5,000 recently presented to the hospital for the establishment of a department for radium treatment. It is reported that a radium department will be opened at the hospital in the near future.

**TYPHOID AT LEHIGH UNIVERSITY.**—Typhoid fever broke out during the month of October among forty students of Lehigh University, South Bethlehem, Pa. Investigation by the State Department of Health revealed the fact that a kitchen employee of the university was a typhoid carrier and the probable source of infection.

**CHICAGO CLINICS.**—The hospitals of the city of Chicago have been requested, by the Committee on Medical Education of the Chicago Medical Society, to hold stated free clinics, open to medical and surgical practitioners of the United States, and to publish a daily bulletin of such clinics under the auspices of the Chicago Medical Society, and to hold special medical and surgical courses outside of the free clinics. This plan has been followed for some time in New York, with much success.

**BULKLEY LECTURES.**—The annual course of lectures by Dr. L. Duncan Bulkley has been announced by the New York Skin and Cancer Hospital. The lectures will be given Wednesday afternoons at four o'clock, preceded by a half-hour clinical demonstration of dermatologic cases.

**HIGH DEATH RATE IN TORONTO.**—The death rate among babies in the city of Toronto is twice as high as among soldiers in actual

war, according to the statement of Dr. Hastings, medical officer of health for Toronto. Dr. Hastings says that it is more dangerous to be a baby in Toronto than soldier on active duty.

**TUBERCULOSIS FEE FOR PHYSICIANS.**—For every case of tuberculosis reported to the local Bureau of Health, the physicians of Syracuse, N. Y., after January 1, will receive \$1.

**KEEPING CHICKENS IN NEW YORK.**—Considerable antagonism has been evidenced because of an attempt recently to put certain restrictions on those keeping chickens in the City of New York. Modifications were considered, and at a recent meeting of the Board of Health it was ruled that roosters must not be kept in the city; that runways and coops must be whitewashed and sanitary, and that the chickens must not be kept within twenty-five feet of any inhabited or public building other than that of the owner, and none may be kept in tenement houses.

**BEQUEST TO WESTERN RESERVE UNIVERSITY.**—One-sixth of the estate, less fifty thousand dollars, of the late Liberty E. Holden, a trustee of the university, has been left in trust to the Medical School of the Western Reserve University. The estate of Mr. Holden is appraised at from three to six millions. The income of this amount is to be devoted to research on problems relating to the cause and cure of disease.

**DR. NICHOLAS SENN HIGH SCHOOL.**—The dedication of the Nicholas Senn High School, Chicago, took place the latter part of the summer, and appropriate ceremonies marked the occasion. Addresses were delivered and a bronze bust of Dr. Senn, which had been presented to the school, was unveiled.

**RÖENTGEN'S MEDAL GOES TO RED CROSS.**—According to a statement from a Berlin paper, Prof. Röntgen has given the English medal, presented to him by the Royal Society in recognition of his discovery of the X-ray, to the Red Cross. The medal contains \$250 worth of gold.

**THE AMERICAN COLLEGE OF SURGEONS.**—At the meeting held in Washington, November 16, many Louisiana men had the degree of Fellowship conferred on them. Those present at the convocation were: Drs. Matas (re-elected vice-president), Wm. Kohlmann, H. N. Blum, Russell E. Stone, P. J. Kahle and Isidore Cohn, of New Orleans; J. G. Martin, of Lake Charles, and J. L. Wilson, of



Alexandria. Those from Louisiana who also received the degree, *in absentia*, were: Drs. J. Barnett, C. N. Chavigny, C. W. Groetsch, J. Hume, J. F. Oechsner, L. H. Landry, W. T. Patton, P. B. Salatch, Marion Souchon and A. I. Weil.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for epidemiologist, for men only, at a salary of \$4,000 a year. The duties of this position will be to make laboratory and field investigations of the diseases of man in relation to prevalence, causation and methods of control, and to conduct field studies of public health matters. It is desired to secure persons thoroughly qualified to do laboratory and field research work in epidemiology, and to organize and conduct such work in the field. Competitors will not be assembled for examination, but will be rated on (1) education, (2) experience and fitness, (3) publications. Graduation with an A. B. or B. S. degree from a college or university of recognized standing, and graduation with an M. D. degree from a medical school of recognized standing, and at least five years' experience in epidemiological research, including field studies and laboratory technic, and at least five years' public health service under Federal, State or municipal authorities, are prerequisites for consideration for this position. Applicants must have reached their twenty-fifth, but not their fortieth, birthday on the date of the examination. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for Forms 304 and 2095, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C., or the Secretary of the United States Civil Service Board, postoffice, New Orleans, La.

HEALTH IN THE PHILIPPINES.—The Bureau of Health for the Philippine Islands reports for the first quarter of the present year better health conditions in the archipelago than they have been at any time during the past ten years. The death rate of Manila for March was 20.39 per 1,000, which is the lowest on record. The death rate for March, 1904, was 40.23 per 1,000.

CRITICISM OF NEW YORK CITY CHARITIES.—According to an investigation of the institutions under the control of John A. Kingsbury, the present Commissioner of Charities of New York City, the

grand jury has sent in a report severely criticizing present conditions. It has been found that many of the homes and hospitals are greatly overcrowded and that the food in some cases is unsatisfactory in quantity, quality and preparation. The suggestion has been made that the management be taken out of the hands of a commissioner and placed in the hands of a board of charities.

DRUG INTOXICATION IN AMERICA.—A report from the United States Bureau of Public Health, sent out recently, deals with “drug intoxication,” as it calls the indiscriminate use of drugs by the American people. It declares that the amount of money expended annually for drugs and medicines in the United States is out of all proportion to the real need or requirements of the people, and is a menace to public health. Five hundred million dollars is the price American people pay annually for drugs and medicines, says the report.

PHILADELPHIA POST-GRADUATE SCHOOL OF NEUROLOGY.—The Philadelphia General Hospital has organized a Post-Graduate School of Neurology. The school will open December 7, 1914, and instruction will be given by the members of the neurological staff of the Philadelphia General Hospital. The instruction will be arranged in periods of four to six weeks each during the winter, with special short courses of two or three weeks during the summer. It will be several years before American students can avail themselves of the neurological clinics and laboratories of London, Paris, Vienna, Berlin, Rome and other centers of medical instruction abroad, so it is thought the time is very opportune for this step.

TO INVESTIGATE MALARIA.—Sanitary Engineer J. A. A. Le-Prince and Technical Assistants M. B. Mitzmain, H. A. Taylor and D. M. Molloy have been relieved at Mobile and ordered to proceed to New Orleans, in order to conduct investigations with respect to the prevalence of malaria in that city.

DANNEEL SCHOOL CLOSED.—Owing to the prevalence of diphtheria among the residents of the neighborhood of the school, the Danneel school (New Orleans) was closed by the City Board of Health the first part of November. The Danneel school was not opened on the first day of the new term, but later, acting upon the urgent request of the parents, the School Board ordered it opened. Thirteen cases of diphtheria were found among the pupils, and the City Board of Health ordered it closed again.

THE TWENTY-EIGHTH ANNUAL SESSION OF THE NEW ORLEANS POLYCLINIC, POST-GRADUATE MEDICAL SCHOOL OF TULANE UNIVERSITY, began September 28. The attendance thus far bids fair to equal that of the last few years.

LOUISIANA STATE BOARD OF MEDICAL EXAMINERS' EXAMINATION.—At the recent examination of this Board, October 29, 30, 31, 1914, thirty-two applicants were examined in medicine, of which number seventeen received certificates to practice in this State, namely: Thomas B. Bird, Andrew G. Cowles, Walter E. Duhon, Walter E. Estabrook, T. W. Evans, Julius R. Fernandez, Wm. H. Hamley, D. Ross Hinton, Roscoe F. Johnson, Wm. M. Johnson, Daniel C. McCuller, J. Henry O'Neill, Sydney S. Schochet, Bert Tillery, James E. Walsworth, Lee Benj. Watkins, John Wm. Winn. At the same meeting, four physicians were granted certificates by reciprocity, namely: Wm. E. Balsinger, Arthur Elmer Simonis, Lewis C. Spencer, Charles D. Wilkins. At the midwifery examination, held October 30, the following midwives received certificates after a successful examination: Mrs. Louise Arieux, Mrs. H. J. Keenan, Mrs. Cecelia Long, Mrs. Ellen C. Norton, Mrs. Mary Nugon, Mrs. Claudia Salles, Mrs. Evabelle P. Taylor. The following resolution was adopted by the Board:

“Students matriculating on and after June 1, 1915, must present, in addition to the above requirements (an education equal to that possessed by a student finishing and graduating from a four-year high school, with fourteen educational units), evidence of the successful completion at an approved college or university of one full year of work in biology, physics, chemistry and a modern language.”

The resignation of Dr. Espy M. Williams, of Patterson, was tendered, and Dr. Leon J. Menville, of Houma, was appointed to fill the vacancy on the Board. Dr. Williams' resignation was caused by his removal from the Fourth District. The next meeting of the Board will take place in New Orleans, June 3, 4 and 5, 1915.

DR. DOWLING HONORED.—Dr. Oscar Dowling, president of the Louisiana State Board of Health, was elected president of the Southern Medical Association at its recent meeting held in Richmond, Va. Dr. Dowling's work in public health in the South, and particularly in the recent campaign in New Orleans against the bubonic plague, was thought sufficient reason to entitle him to the highest honor of the Association. The JOURNAL joins his many friends in felicitating him on this preferment.

DIET CAUSES PELLAGRA.—According to Dr. Joseph Goldberger, of the United States Public Health Service, the Government's investigations have led to the definite conclusion that pellagra comes from living on a onesided diet, and is in no way contagious or infectious. Only those whose diet contains too little of certain classes of proteid foods, such as milk, lean meat or legumes (beans and peas) develop the disease. "The treatment and prevention are very simple," says Dr. Goldberger. "Those who are sick with pellagra should be fed an abundance of milk, eggs, lean meat and beans and peas. To cure pellagra, eat beans; to prevent pellagra, eat more beans."

PERSONAL.—Dr. Homer F. Swift has been appointed associate professor of the practice of medicine in the College of Physicians and Surgeons of Columbia University, succeeding Dr. Theodore C. Janeway, now of Johns Hopkins Medical School.

Prof. James Wm. Toumey has been elected director of the Yale School of Forestry for five years, succeeding Henry S. Graves.

Dr. Isadore Dyer, of New Orleans, has been appointed consulting dermatologist to the Leo N. Levi Memorial Hospital of Hot Springs, Ark.

Dr. Morton Paul Lane, class of 1914, Tulane University, has been appointed to the Servian unit of the American Red Cross and has sailed for Europe.

Dr. Charles H. Mayo, of Rochester, was elected president of the Clinical Congress of Surgeons of America at the meeting in October.

Dr. George Hoyt Whipple has resigned as associate professor of pathology at Johns Hopkins University and has been appointed director of the Hooper Foundation of Medical Research, University of California.

Dr. Hideyo Noguchi, of Japan, one of the leading bacteriologists of the world, has been made a member of the Rockefeller Institute for Medical Research, being one of the seven in the world to enjoy that distinction.

Major Thomas L. Rhoades, Medical Corps, U. S. A., has been appointed superintendent of the Colon Hospital, Canal Zone, Panama. Dr. Rhoades was formerly aide to President Taft and President Wilson.

Dr. William Alvin Love has been appointed medical officer of the Tulane University of Louisiana for the session of 1914-15.

Dr. J. W. Simmons, of Strawn, Texas, has been appointed house surgeon of the Eye, Ear, Nose and Throat Hospital, New Orleans.

Senior Surgeon H. R. Carter attended the meeting of the Southern Medical Association at Richmond, Va., November 9-12, 1914, and participated in the symposium on malaria.

Surgeon R. H. Von Ezdorf was relieved from duty at the Marine Hospital in Mobile, Ala., and detailed for duty in New Orleans, La.

Dr. W. C. Rucker, Assistant Surgeon General of the Public Health Service, sailed the latter part of November for Havana and Central American ports on a leave of absence for two weeks.

Surgeon G. M. Corput, officer of the United States Public Health Service, in charge of the outgoing quarantine in New Orleans, was made acting commander in charge of the health campaign during Dr. Rucker's absence.

Dr. Otto Joachim returned during the month from Germany, after a long stay in that country. Dr. Joachim served several weeks in a German military hospital, but was far from the line of battle.

REMOVALS.—Dr. D. C. Quigley, from North Platte, Nebraska, to 728 National Bank Building, Omaha, Nebraska.

Dr. Phillips J. Carter, to 407-408 Medical Building. Practice limited to obstetrics and gynecology.

Dr. P. Michinard, from 3420 St. Charles avenue, to 2104 Berlin street. Office, from 734 Audubon Building to 726 Audubon Building.

Dr. W. W. Leake, from Audubon Building to I. C. R. R. Hospital.

Dr. H. L. Staring, from Charity Hospital to 919 Esplanade avenue.

Dr. Hampton T. Lemoine, from Big Cane, La., to Plaucheville, La.

Dr. Ansel M. Caine, from 2719 Milan street to 1528 Louisiana avenue.

Dr. D. P. Albers, from 1701 Tulane avenue to 2302 Canal street.

Dr. D. S. Brosnan, from Prytania and Clio streets to City Park avenue and Bienville street.

Dr. L. A. Fortier, from Charity Hospital to 105 Medical Building.

Dr. E. C. Samuel, from 1126 Maison Blanche Building to 3529 Prytania street.

Dr. C. Wm. Groetsch, from 734 to 722 Audubon Building.

Dr. W. T. Richards, from 1121 Maison Blanche to 734 Audubon Building.

Dr. A. O. Hoefeld, from 509 Macheca Building to 734 Audubon Building.

Dr. J. T. Wolfe, from 509 Macheca Building to 734 Audubon Building.

Dr. H. P. Jones, from 1210 to 1205 Maison Blanche Building.

Dr. W. H. Block, from 609 Macheca Building to 1221 Maison Blanche Building.

Dr. H. E. Nelson, from 411 Macheca Building to 1221 Maison Blanche Building.

Dr. P. Graffagnino, from 1614 Amelia street to 1221 Maison Blanche Building.

Dr. J. E. Landry, from 1204 to 1232 Maison Blanche Building.

Dr. J. A. Estopinal, from 604 Macheca Building to 1235 Maison Blanche Building.

Dr. J. A. Henderson, from 1113 Maison Blanche Building to 1121 same building.

Dr. E. F. Salerno, from 1113 to 1131 Maison Blanche Building.

Dr. Louis Levy, from 1204 to 717 Maison Blanche Building.

Dr. J. B. Larose, from 729 Maison Blanche Building to 411 Macheca Building.

Dr. E. L. King, from 411 Macheca Building to 416 Medical Building.

Dr. W. D. Chamberlin, from Charity Hospital to Cusachs Building, fourth floor.

Dr. H. W. Kostmayer, from 802 Audubon Building to Cusachs Building, third floor.

MARRIED.—On November 9, 1914, Dr. Robert Bruce Wallace and Miss Emma Dorothy James, both of Lecompte, La.

On November 17, 1914, Dr. Roman D. Martinez and Miss Ruth Comeaux, both of White Castle, La.

DIED.—Dr. John J. Castellanos died in New Orleans on October 29, 1914. He was one of the oldest medical practitioners of this city, having been in service since 1856 and being nearly eighty years of age. In active practice up to a recent period, when failure in health incapacitated him, he had always kept up with progress. He was a great student, a fluent speaker, an able writer. Among his contributions to this JOURNAL, all of which were highly appreciated, was a notable historical review of the New Orleans Charity Hospital. Many honors came to him. He had been a professor in the

Charity Hospital Medical College, a member of the Louisiana Board of Health, as well as a fellow of the several medical societies, being still an honorary member of the Orleans Parish Medical Society at the time of his death. We shall miss our old friend, and we share with his family a common grief at his demise.

On October 30, 1914, Dr. A. B. Coffey, dean of the Teachers' College, Louisiana State University, Baton Rouge, La., aged 60 years.

On November 6, 1914, at Waggaman, La., Dr. C. Milo Brady, a graduate of Tulane Medical College and former medical inspector of the State Board of Health.

On November 8, 1914, Dr. J. Webster Belden, of New Orleans, one of the most prominent homeopathic physicians of this city, aged 55 years.

On November 15, 1914, at Port Barrios, Guatemala, Dr. Roger Post Ames, formerly of New Orleans, aged 44 years. Dr. Ames was a graduate of Tulane Medical Department and occupied the posts of ambulance student at the Charity Hospital, assistant house surgeon at Hotel Dieu, surgeon in the United States Army in the Spanish-American War, and was connected with the United States Public Health Service under Dr. White in New Orleans.

THE ORLEANS PARISH MEDICAL SOCIETY NOMINEES FOR OFFICE (Election to be Held December 12, 1914, Between the Hours of 3 and 5 and 7 and 8:30 P. M.)—For President: Dr. W. H. Knolle and Dr. W. W. Leake. For First Vice-President: Dr. L. R. DeBuys, Dr. Lucian H. Landry, and Dr. E. W. Mahler. For Second Vice-President: Dr. R. C. Lynch. For Third Vice-President: Dr. Henry Daspit. For Secretary: Dr. Paul T. Talbot. For Treasurer: Dr. Ernest C. Samuel and Dr. Geo. H. Upton. For Librarian: Dr. Howard D. King. For Additional Members Board of Directors: Dr. John Callan, Dr. Chas. N. Chavigny, Dr. Maurice J. Gelpi, and Dr. E. L. King. Delegates to State Medical Society were elected as follows: Drs. M. Thos. Lanaux, W. A. Love, E. L. Leckert, J. A. Henderson, Isidore Cohn, and Chaillé Jamison.

## Book Reviews and Notices.

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

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**Asthma and Its Radical Treatment**, by James Adan, M. A., M. D., F. R. F. P. S. Paul B. Hoeber, New York.

The author advances the proposition that asthma is primarily a toxemia. He admits that his view is not confirmed by experimental proof, but he offers to maintain it by clinical support; namely, therapeutical success. He indicates a plan of treatment which fifteen years of experience have proved to be increasingly successful, and which vindicates the view adopted as to the nature of the disease. He puts it forward with the hope that it will be useful not only in the treatment of asthma, but also in those other diseased states whose kinship with asthma is too much overlooked.

There is no doubt but that the book is a most useful contribution to the subject.

DUPAQUIER.

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**Transactions of the American Society of Tropical Medicine, 1913.**

The tenth annual meeting of the society held at Washington, D. C., on May 6, 7 and 8, 1913, showed that the position it had reached could allow but of one conclusion; advancement. No doubt the membership will increase as the importance of the field of knowledge the society embraces is understood by the general practitioners. The character of the papers read is of high order, and they all appear in these transactions, which are worth having.

The secretary gave a short, but very interesting history of the society, and Prof. Anders read the eulogy of Dr. Curtin, a former president of the society, a model for the edification of the younger generations of medical men, indeed.

The following are the contributors: Drs. Edward R. Stitt; Weston P. Chamberlain; Frederick Knab, entomologist, U. S. Department of Agriculture; Elmer S. Tenney; Victor G. Heiser; Creighton Wellmann and C. C. Bass; Bailey K. Ashford; Juan Guiteras; Eugene R. Whitmore; A. Parker Hitchens; J. A. Chatard and C. G. Guthrie.

In addition to the intrinsic value of these original papers, the references and bibliography attached to them make of this book of transactions a most useful record in tropical lore for future consideration.

DUPAQUIER.

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**Diseases of the Heart**, by John Cowan, D. Sc., M. D., F. R. F. P. S. Lea & Febiger, Philadelphia and New York, 1914.

The author reviews the subject in the light of the recent advances in the knowledge of the diseases of the heart and arteries, with the authority



of one who has acquired personal experience in his own wards, showing original illustrations and tracings.

For the understanding of the reader, a special chapter is written by W. T. Ritchie, M. D., F. R. C. P., a well-known authority on electrocardiography.

Another special chapter is written by Arthur J. Ballantyne, M. D., F. R. F. P. S., on the ocular manifestations in arterio-sclerosis. The main object of the book bears upon the practical work of diagnosis, prognosis, and treatment. It's an excellent work.

DUPAQUIER.

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**Modern Medicine: Its Theory and Practice.** In original contributions by American and foreign authors. Edited by Sir William Osler Bart, M. D., F. R. S., and Thomas McCrae, M. D. Volume III. Diseases of the Digestive System; Diseases of the Urinary System. Lea & Febiger, Philadelphia and New York, 1914.

The introduction to part first, which comprises the diseases of the digestive system, is a valuable contribution by Dr. Chas. G. Stockton. No one can proceed intelligently in the study of the subject-matter of this part first, unless he grasps the bearing of the introduction referred to, which is the discussion of the relations between disturbed physiology and structural changes.

The chapter on diseases of the mouth and salivary glands alone is worth the price of the volume. The condition of the mouth has gained such a prominence in the examination of a patient that whoever overlooks it is way back of the times. The six plates are excellent.

Chapter three discusses the diseases of the esophagus.

Chapter four presents in a very lucid manner the functional diseases of the stomach, a most difficult subject.

Chapter five treats of the organic diseases of the stomach; chapter six of the diseases of the intestines; chapter seven of the diseases of the liver, gall-bladder and biliary ducts; chapter eight of the diseases of the pancreas; chapter nine of the diseases of the peritoneum, and chapter ten of splanchnoptosis, visceroptosis, enteroptosis, Glenard's disease.

The introduction to part second, the first chapter on diseases of the kidney, or chapter second in the book by Dr. McCrae, is a clear exposition of the physiological and pathological principles underlying the kidney diseases. An attempt at presenting a satisfactory classification of nephritis is a notable feature among others.

Chapter twelve includes malformations and circulatory disturbances of the kidney; chapters thirteen and fourteen anomalies of urinary excretion and uremia.

Chapters fifteen and sixteen deal with acute and chronic nephritis, and amyloid disease of the kidney. It goes without saying that the subject of nephritis is of the greatest interest to the practitioner and, certainly, he will find in perusing these chapters most valuable information. Fischer's etiology of acute nephritis is given the importance it deserves. The latest knowledge on pyogenic infections of the kidney, ureter, perineal tissues, tuberculosis of the kidney, tumors of the kidney, urinary lithiasis, genito-urinary diagnoses and diseases of the prostate, is included in chapters 17, 18, 19, 20 and 21.

Volume three maintains the reputation of its predecessors; it adds to it in the usefulness of the whole series, as planned originally for the busy practitioner.

DUPAQUIER.

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**A Text-Book of Medical Diagnosis**, by James M. Anders, M. D. W. B. Saunders & Co., Philadelphia and London, 1914.

All practical advances in diagnosis, for the past two years, are included in the present volume. The following are the more important additions: Movements of the two halves of the chest; electrocardiograms; extra-systole; auricular fibrillation; sinus irregularity; succussion sounds audible over the abdomen; abdominal tension, with original methods of determination; albuminous sputum; cobra-venom reaction in syphilis; the tick in transmitting relapsing fever; Rumpell-Leed phenomena in scarlet fever; inclusion bodies of Dohle in scarlet fever; sweating and its significance; *Trichinella spiralis* in the blood; MacEwen's sign and Brudzinski's sign of epidemic meningitis; Prendergast's reaction for typhoid fever; fatty emboli; pupillary reaction; drug eruptions; nitrogen content of the blood; respiratory movements in hicough; colloidal nitrogen of the urine, and initial eruptions in measles. Stokes-Adams disease, blood pressure, ulceration of the duodenum, Addison's disease, and anterior poliomyelitis have been rewritten.

Clinical tables have been added on the following subjects: Bloody sputum, dyspnea, hemorrhage from the mouth, abdominal enlargement, vomiting, ascites, splenic enlargement, hematuria and bacteriuria.

The work maintains its reputation as an exponent of the best on diagnosis.

DUPAQUIER.

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**Practical Bandaging**, by Eldridge L. Eliason, A. B., M. D. J. B. Lippincott Co., Philadelphia and London, 1914.

This little volume should be welcomed because of the accuracy of description, the clearness of the illustrations and the simple terminology used by the author. This last named feature adopts the work admirably to the needs of medical student (first year) and the nurse. The chapters relative to the handkerchief bandage, many tailed bandages and the application of plaster of paris, are sufficient in themselves to recommend this volume as worthy of space in any surgeon's library.

ISIDORE COHN.

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**The Principles of Pathologic Histology**, by Frank B. Mallory, M. D. W. B. Saunders Company, Philadelphia and London, 1914.

No brief review of this book could do it full credit. It represents the life work of a master guided by the greatest desire to learn the truth and surrounded, encouraged and assisted by other great students in this and allied branches of medicine.

The book treats of pathology from the morphologic point of view. The subject is presented in a frank way. Originality is a feature all the way through. Of the several hundred illustrations, there is only one

copied from other works. The photomicrographs and drawings are excellent and illustrative.

In fact, the book is one that students of pathology cannot afford to be without, and that is to be highly recommended to students of other branches of medicine.

C. C. BASS.

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**Serology of Nervous and Mental Diseases**, by D. M. Kaplan, M. D. W. B. Saunders Co., Philadelphia and London.

Kaplan is qualified to write correctly and comprehensively on this subject, having had extensive experience and having been one of the workers who has assisted materially in the development of serology in this country. His work is rather comprehensive, the first chapters dealing with the technic of lumbar puncture, methods of cell counting together with chemical and Wassermann methods of testing for disease alterations. A whole chapter is devoted to the technic of the Wassermann test. Although the author writes from the point of view of a laboratory man, his opinions appear to be broad and sound; he, remarking in one of his chapters that the serologist must always regard his reaction results with a wholesome degree of skepticism, inferring that the attitude of the serologist in reading his findings is important with regard to their value. He likewise takes the position that the Wassermann reaction is only an aid to the clinical diagnosis and nothing more; though a serologist, he insists that if clinical findings are at variance with the Wassermann test the latter must be disregarded or, at least, greatly discounted. In the later chapters of the book various syphilo-genous diseases of the nervous system are discussed and serological findings in a large number of cases reported. The serological findings in other (non-syphilitic) diseases of the nervous system are likewise delineated and discussed. The whole technic of the Wassermann test, of cell counting, of chemical tests of the spinal fluid, etc., together with diagrams of special apparatus employed are included in the discussions. Kaplan's estimation of the value of the Wassermann test in syphilis of long standing and, therefore, in cases the lesions of which are parasyphilitic degenerations, is probably what it ultimately and correctly will be; to-wit, it is of slight value.

E. M. HUMMEL.

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**Diseases of the Ear, Nose and Throat**, by Lucien Ballinger, M. D. Fourth edition, revised and enlarged. Lea & Febiger, Philadelphia and New Cork.

The fourth edition of Dr. Ballinger's notable volume is ready again for the approval of the medical profession. That this edition is necessary in so short a time speaks for its past.

The new volume again must be considered a practical working atlas, because of the profuse illustrations accompanying each procedure, the text of which is in the same characteristic, plain, clear style of the previous editions.

Nystagmus and the internal ear is here presented to the minute, with thirteen new colored plates to assist the student in indelibly fixing this intricate question permanently in his mind.

Twelve drawings illustrate the steps of the Hinsberg and Neumann

operations. Otosclerosis; functional tests for hearing hyperesthetic rhinitis. His leucocyte extract therapy; Haynes operation for meningitis; brain abscess; salvarsan in cerebral syphilis, and this affection of the auditory nerve are among the notable additions to the volume

One wonders why the suspension laryngoscope of Killian, which marks the most notable advance in laryngology, is not included in this most up-to-date work.

One again feels a pride in this American production and interpretation of modern oto-rhino-laryngology, and the volume stands as a model text-book, atlas and reference work, meeting the requirements from embryo to the finished worker in this special field, and should occupy the prominent place in a library.

R. C. LYNCH.

**A Manual of Diseases of the Nose and Throat**, by Cornelius G. Coakley. Lea & Febiger, Philadelphia and New York.

As a handy volume to have ready reference to for student and practitioner, this work is admirable; written in a brief, yet full, clear style, and containing the very essential features of the subject, without the very often burdensome and contradictory discussions.

This book must appeal to both student and practitioner as one of special value, the more so, because it represents the concentration of a worker whose fitness is known, and whose judicial conservatism is appreciated; the volume representing the deductions from a large and long existing experience.

R. C. L.

**The Practice of Urology**, by Charles H. Chetwood, M. D., LL. D. William Wood & Co., New York.

This is a large and comprehensive text-book, consisting of forty chapters, covering about eight hundred pages, and is profusely illustrated.

The author has included the maladies in men and women when such are the same in both, but not so far as they affect the organs peculiar to women—a good example for those urologists who try to capture the field of gynecology and vice versa; certainly a gentle rebuke to the gynecologists who do prostatectomies.

The characteristic features of the volume, as stated by Chetwood himself, are the bringing up to the modern status the questions of the local treatment of gonorrhoea, of serum diagnosis and therapy, of cystoscopy and functional renal diagnosis, of some features in surgical technic, and of salvarsan therapy.

He has accomplished his object, a desire to propagate what he considers orthodox teaching on the subjects treated of. An experience of over twenty years in his special field entitles him to speak with authority, and his reputation as a skillful operator warrants the accuracy of his judgment.

The chapter on syphilis presents the subject exceptionally well. It includes all that is new on the subject, and the conclusions are sound and as definite as experience up to now will permit.

We warmly recommend this text-book to the profession. C. C.

**The Pathogenesis of Salvarsan Fatalities**, by Dr. Wilhelm Wechselmann.  
Authorized translation by Dr. Clarence Martin. The Fleming-Smith Co., St. Louis.

Beginning with the statement that the blackest cloud on salvarsan therapy is the "foudroyant fatalities," due to intravenous injections, the celebrated writer who perhaps best of all is prepared to speak on the clinical side of the Ehrlich remedy, carries us through a series of scientific experiments and dissertations, rather fatiguing in the reading. He presents a list of about 140 fatalities in adults, omitting altogether the cases in infants, as well as other cases, "which possess no value," as his purpose is not statistical, but to study the genesis only.

He emphasizes the fact that the cerebral type of fatalities has not been observed after intramuscular injections, and that the latter method never throws so severe a burden on the kidneys as to occasion renal failure.

He concludes that the fatalities form a variegated group; that only in a minority of cases can death be attributed directly to salvarsan; that in the majority of instances the chemical is but an indeterminate factor; that no uniform explanation fitting all cases can be given.

Stressing the necessity for greater precautions in the use of the drug he recommends the following: First, the most exact technic; second, a dose carefully adapted to the individual case; third, careful observation of the urinary secretion, resorting to the most exact chemical and microscopic examinations, particularly when the combined treatment is employed; fourth, if combined treatment is used, give mercury carefully many days after the last salvarsan injection, but never reverse the rule; fifth, make a full investigation of every reaction or rise of temperature following the use of salvarsan.

The translator has done his share of the work very well, and believes that all physicians using the treatment will find much food for thought in this book, an opinion which the reviewer undoubtedly shares.

C. C.

**Manual of Cystoscopy**, by J. Bentley Squier, M. D., and Henry G. Bughee, M. D. Paul B. Hoeber, New York.

This manual of a little over one hundred pages is admirably calculated to meet its purpose. While brief, it contains the essentials of a working knowledge of the cystoscope and its uses. The respective technics selected are those found most satisfactory by the experienced authors.

The diagrams and colored plates, which form so important a part of a work of this character, are well drawn, accurate, beautifully colored, and show the principal landmarks and lesions of the bladder.

For the beginner, especially, this little volume must be of great value, and its form is not only satisfying, but elegant as well.

C. C.

**International Clinics.** Volume II, twenty-fourth series, 1914. J. B. Lippincott Co., Philadelphia and London.

As with most volumes, the contents of this are varied, interesting, and valuable.

The subjects treated are both medical and surgical. They range from "Health Before Birth," through the "Teaching of Sex Hygiene" and

"The Obstetric Forceps," all the way to "Some Clinical Indications of Senility." It is worth getting and reading. C. C.

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**The Practitioner's Visiting List for 1915.** Lea & Febiger, Philadelphia and New York.

This pocket size list is the evolution of thirty years of experience in the publication of such records. It is offered in four styles and affords a complete system for recording conveniently the data regarding daily practice. In addition, various useful tables for reference are furnished.

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**Some American Medical Botanists.** Commemorated in our Botanical Nomenclature. By Howard A. Kelly, M. D., LL. D. The Southworth Co., Troy, N. Y., 1914.

Dr. Kelly confesses to having presented only the biographical sketches of the men about whom positive information could be had by him, and he invites suggestions and information of others, for a future contribution. Among the physician botanists who have been prominent he gives some space to John L. Riddell, who was perhaps better known in New Orleans as a teacher; W. M. Carpenter is mentioned in passing, though the biography of him by Prof. R. S. Cocks, of Tulane, published within the last few months, shows him to have been an important figure among the students of natural science in the South and in Louisiana especially.

What most impresses the reader is the amount of good work accomplished by most of these men in a field now so little appreciated by the average student and practitioner of medicine. Botany is indeed a requirement for entrance to most medical colleges of any standing, but the botany accepted is usually credited in a perfunctory course and lacks the inspiration which so characterized the life of the men of whom Dr. Kelly writes. When Mendel and deVries have spent a large part of a life time in the garden, just for a theory, it must be a privilege to know more than a glimpse of the treasures therein.

Such contributions as these make for ideals and we are glad to have had the chance to read the book and to tell others what a delightful commentary awaits them, among the memories of men who had time to step outside the march of routine and to seek after nature's mysteries and her beauty and glory in the field. DYER.

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**Ten Sex Talks to Boys—Ten Years and Older; Ten Sex Talks to Girls—Ten Years and Older,** by Irving David Steinhardt, M. D. J. B. Lippincott & Co., Philadelphia and London.

In the prefatory announcements of these two volumes, the author states that the Sex Talks for Boys were originally published in Pediatrics and the Sex Talks for Girls in the New York Medical Journal, and that the demand for copies of these was sufficient to occasion their reissue in book form. The present appearance of the books needs no justification, for they are timely and so well arranged for their purposes that they may be commended.

The author establishes a personal equation with the boy or girl at once and leads the youth or maid into the danger zones by a method of

gradual knowledge brought up to a point where they can understand the reasons for virtue and the signals of temptation and its punishment. The terms are simple and the whole subject is comprehensible. The skeletal outline followed affords an excellent guide to parents who need instruction in the matter and manner of talking to their children of such things and to older students, either of these books might serve as a text for school purposes. To the clean all things are clean and the text in these books is altogether wholesome.

Functions and disease, habit and neglect are all discussed frankly and the purposes of sex are presented in plain terms.

The books are both altogether worth while and should be known to the physician who may be asked for just such reading matter by the parents among his clientèle.

DYER.

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**Ambidexterity and Mental Culture**, by H. MacNaughton-Jones, M. D., M. Ch., F. R. C. S. I., etc. Rebman Company, New York.

In recent years a strong effort has developed in the education of parents and others inclined to antagonize the natural tendency in children to the use of the left hand. Here is another book fraught with the wisest arguments for the development of the left-handed habit. The author goes much further in his plea for ambidexterity. The basic idea conveyed is that as we are born with a brain with two equal halves endowed with like attributes, we are not making the best of possibilities if both sides are not trained. Examples are given by many artists, musicians, soldiers and others who have been advantaged by the ability to use both hands equally. The left-handed individual starts with the usually neglected side stronger than the right, which by heredity, custom and environment grows into usefulness without the effort required of right-handed persons in training their left hands.

The present educational trend in developing natural attributes leads the author to suggest pedagogic methods which may train the child to ambidexterity. Tests exemplified would indicate not only that this is feasible and practicable, but that not to train children to ambidextrous usage is really a neglect in their instruction.

This book is sufficiently scientific to satisfy any student of the question, but it is so written as to make it both instructive and interesting to the intelligent reader, lay or specialist.

DYER.

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**A Manual of Biological Therapeutics.** Parke, Davis & Co., Detroit.

This book should be of interest and value to physicians. It is handsomely printed in large, clear type, on heavy enameled paper, and bound in cloth, with 174 pages of text, upwards of thirty full-page plates in color, and a number of half-tone illustrations in black and white, with a comprehensive index. It is concise and practical, replete with useful information. No practitioner should miss the opportunity to secure a copy, as the publishers announce that it is to be distributed gratis to members of the medical profession, on individual application.

We suggest the propriety of writing at once for a copy of this "Manual," addressing the request to Parke, Davis & Co., at their home office in Detroit, Michigan.

**The Physician's Visiting List for 1915.** P. Blakiston's Son & Co., Philadelphia.

For the sixty-fourth year this popular visiting list is presented to the medical profession. It is offered in three editions: the regular, the perpetual, and the monthly. The usual calendar and tables are included, as well as ruled pages for keeping various memoranda and accounts.

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## Publications Received.

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**G. P. PUTNAM'S SONS,** New York and London, 1914.

**Life and Law,** by Maude Glasgow, M. D.

**A Medical Dictionary for Nurses,** by Amy E. Pope.

**LEA & FEBIGER,** Philadelphia and New York, 1914.

**The Practitioners' Visiting List (1915).**

**Pathogenic Micro-Organisms,** by William Hallock Park, M. D., and Anna W. Williams, M. D. Fifth edition, enlarged and thoroughly revised.

**WILLIAM WOOD & COMPANY,** New York, 1914.

**A Text-Book of Pathology,** by Francis Delafield, M. D., LL. D., and T. Mitchell Prudden, M. D., LL. D.

**Handbook of Pharmacology,** by Charles Wilson Greene, A. B., M. D.

**Kirke's Handbook of Physiology,** by Charles Wilson Greene, A. M., Ph. D. Eighth American revision, revised and rewritten.

**C. V. MOSBY COMPANY,** St. Louis, 1914.

**Medical Jurisprudence,** by Elmer D. Brothers, B. S., LL. D.

**The Tonsils,** by Harry A. Barnes, M. D.

### MISCELLANEOUS:

**The Institution Quarterly.** Springfield, Ill., September 30, 1914.

**Public Health Reports.** Volume 29, Nos. 41, 42, 43, 44, 45. (Washington Government Printing Office, 1914.)

**Tuberculosis,** by Thomas Frazer, M. D. (Washington Government Printing Office, 1914.)

**The Hygiene of Rural Schools,** by Taliaferro Clark. (Washington Government Printing Office, 1914.)

**Report of the Department of Health of the Panama Canal for the Months of July and August, 1914.**

**The Rural School and Hookworm Disease,** by John A. Ferrell, M. D. (Washington Government Printing Office, 1914.)

**Municipal Ordinances, Rules and Regulations Pertaining to Public Health.** (Washington Government Printing Office, 1914.)

**Leprosy,** by Victor G. Heiser. (Washington Government Printing Office, 1914.)

**The Cause and Prevention of Pellagra,** by Joseph Goldberger; **The Treatment of Pellagra; The Cerebro-Spinal Fluid in Pellagra,** by W. F. Lorenz. (Washington Government Printing Office, 1914.)



**Co-operative Public Health Administration**, by Earle B. Phelps. (Washington Government Printing Office, 1914.)

**Trachoma**, by Charles A. Bailey. (Washington Government Printing Office, 1914.)

**The Source and Supply of Medicines**, by Martin I. Wilbert. (Washington Government Printing Office, 1914.)

**Goldenseal Under Cultivation**, by Walter Van Fleet. (Washington Government Printing Office, 1914.)

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## Reprints.

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**Motherhood**, by E. S. Harris, M. D.

**Practical Statistics of Public Health Nursing and Community Sickness Experience**, by Frederick L. Hoffman, LL. D.

**A New Contribution to the Etiology and Pathogenesis of Cancer**, by E. M. Perdue, A. M., M. D., D. P. H.

**Blood Resistance in Cancer**, by E. M. Perdue, A. M., M. D.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for October, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever	2	5	7
Intermittent Fever (Malarial Cachexia)	2	5	7
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough	1	1	2
Diphtheria and Croup	9	6	15
Influenza	5		5
Cholera Nostras			
Plague			
Pyemia and Septicemia	2		2
Tuberculosis	41	52	93
Syphilis	3	6	9
Cancer	15	8	23
Rheumatism and Gout	1		1
Diabetes	3		3
Alcoholism	1		1
Encephalitis and Meningitis	6		6
Locomotor Ataxia	1	1	2
Congestion, Hemorrhage and Softening of Brain	13	9	22
Paralysis	4	3	7
Convulsions of Infancy			
Other Diseases of Infancy	9	8	17
Tetanus	1	3	4
Other Nervous Diseases	4		4
Heart Diseases	68	44	112
Bronchitis	2	1	3
Pneumonia and Broncho Pneumonia	14	17	31
Other Respiratory Diseases	1	1	2
Ulcer of Stomach	1		1
Other Diseases of the Stomach	5	5	10
Diarrhea, Dysentery and Enteritis	20	23	43
Hernia, Intestinal Obstruction	5	1	6
Cirrhosis of Liver	4	3	7
Other Diseases of the Liver	5	2	7
Simple Peritonitis	1	2	3
Appendicitis	4	3	7
Bright's Disease	30	23	53
Other Genito-Urinary Diseases	9	6	15
Puerperal Diseases	9	5	14
Senile Debility		4	4
Suicide	3		3
Injuries	17	16	33
All Other Causes	35	13	48
<b>TOTAL</b>	<b>356</b>	<b>276</b>	<b>632</b>

Still-born Children—White, 35; colored, 20. Total, 55.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 15.70; colored, 32.79. Total, 20.33.

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

Mean atmospheric pressure. . . . . 30.02  
 Mean temperature. . . . . 70.  
 Total precipitation. . . . . 2.63 inches  
 Prevailing direction of wind, northwest.

# *New Orleans Medical and Surgical Journal.*

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## Original Articles.

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

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### **SOME PROBLEMS IN OBSTETRICS: UTERINE FIBROIDS IN PREGNANCY AND LABOR.**

By PAUL MICHINARD, M. D.,

Professor of Obstetrics and Gynecology, Post-Graduate School of Medicine, Tulane University.

The aim of this paper is to consider this subject practically and briefly. No attempt will be made to estimate the frequency of co-existence of fibroids and pregnancy, because usually percentages are based on statistics formed from cases reported, and cases reported are about one-fifth of cases found, and those recognized are most probably half of such existing.

From personal interviews with observing members of the profession I have learned that many more are found associated than would be supposed. Scarcely any of these cases that I have heard of are even kept in individual case-books—merely because they were not considered “worth while.” And in considering the surgical treatment of this complication we must not go too far back for a guide as to the mortality following incisions of the womb for the removal

of a fetus (a procedure occasionally called for in this condition) because methods were different some years ago to what they are now. Boyd (*Am. Jnl. of Obstet. and Diseases of Women and Children*, September, 1914) tells us that Radford's collection of 131 cases of Cesarean section by different operators in Great Britain and Ireland showed a maternal mortality of 78 per cent; and that Harris, in 1878, found that in 80 such operations in the United States there was a mortality of 52 per cent. At that time, it should be remembered, the uterine incision was not sutured. Our results are very much better to-day.

A fibroid is not always an insurmountable obstacle to delivery. Pregnancy frequently goes to term and termination without any untoward occurrence, and even without the existence of the growth having been suspected. But this fact should not mislead us into the belief that all such tumors will behave so kindly.

Obstetric experience teaches us that 85 per cent. of pregnancies can go to a happy termination without any assistance, but we should always be on the lookout for the remaining 15 per cent. There is no telling when a fibroid will become a great menace to the woman or fetus. No good surgeon would treat with indifference a mild appendicitis, nor would he wait until the patient's life is in jeopardy before interfering. He would certainly adopt a careful watching attitude. A fibro-myoma may become suddenly infected, be the cause of renal trouble, or excessive cardiac hypertrophy or prove an insuperable impediment to delivery. A dystocia from a tumor is more dangerous than one from a deformed pelvis. Therefore, I believe that every pregnant uterus should be carefully examined for fibroid, and if one be found it should receive proper attention.

Fibroids, although large, do not always prevent conception. This is often demonstrated on the operating table when a two months' fetus is found encased in a large tumor. The only fibroid that, in my opinion, causes sterility, is a very large intra-mural or fairly large submucous. In the latter case sterility is due to existing endometrial thickening. Pregnancy has been found together with a sub-mucous fibroid, but, probably, when conception occurred the tumor was intra-mural, and gradually developed towards the uterine cavity, becoming sub-mucous.

Fibroids are said to diminish in size or disappear entirely after delivery. While this is true in some cases, in the majority it is not. The character and location of the tumor are factors in this occasional

change. A sub-peritoneal fibroid is never altered because it takes no part in the process of involution of the uterus, while an intramural tumor (especially a myoma), being part and parcel of the uterus, occasionally is influenced. A sub-mucous is more likely to undergo sloughing. Four and a half years ago I confined, with forceps, a primipara in the anterior wall of whose uterus there was an intra-mural fibroid apparently about five inches in its transverse diameter. Three months later the tumor was smaller; operation was suggested, but declined. About seven months after her confinement she again became enceinte, when I was engaged for the accouchement. Of course, I made a careful investigation for the growth, but it had disappeared. I again examined this lady two months ago, when she thought herself in the family-way. The uterus was again found free of tumor. On the other hand, several years ago I examined a lady who was in the early weeks of pregnancy, and whose uterine anterior wall contained a small fibroid. She was confined in another city after a normal labor. This 6th day of October, the fibroid is more than three inches in diameter and is pressing uncomfortably on the bladder. Many of the instances of apparent shrinkage are really cases where the growth returns to its original size. We must remember that during pregnancy its vascularity is greatly increased; there is (as shown by Mallory) a proliferation and hyperplasia of the muscular tissue elements and development of great edema of the tumor. Hence the increase in size during the pregnancy. So great is this edema at times that, as I have seen, the tumor becomes pseudo-fluctuant. The muscular development is such that in the tumor, as Budin in his work on obstetrics says, there is a transient contraction similar to that existing in the pregnant uterus itself; and Tarnier warns that one might imagine he is feeling two fetuses.

Where the tumor was of fair size and not sub-peritoneal I have detected this contraction by gently placing the open hand on the mass. This is a feature to be remembered in making a differential diagnosis between a large tumor near the fundus of a uterus in advanced pregnancy and a large liver or ovary mass. Now, after delivery, there is an absorption of the edema and a gradual participation of the muscular tissue of the tumor with those of the uterus in the process of involution, causing a return to its normal size—an *apparent* diminution. Remember, it is not denied that the tumor (especially of myoma variety) does occasionally decrease in

size or disappear entirely. A peculiar feature with fibroids in pregnancy is that they are most frequently found in old primiparæ. Another feature is that they often harbor a dead fetus a long time. The death of the fetus is caused by pressure which also stimulates absorption of the amniotic fluid, and the dead fetus remains in an heremetically sealed sac. Several of us have seen such cases. Another peculiarity with these tumors is that they frequently cause placenta previa; so it would be well in all cases of placenta previa to look for such a tumor. Post-partum hemorrhage results from their presence, especially when they are situated near the placental site.

I have treated such bleedings from such cause that were attributed to paralysis of the placental site. When single and large, or small and several they interfere with proper contraction and retraction of the uterus after delivery. They may cause uterine inertia during labor, under which circumstances the careless administration of pituitrin might result disastrously to the uterus or fetus. Therefore, every case of hemorrhage or inertia should be examined for such growth at the time of delivery or later. I have found such masses (though small) in the walls of the uterus six weeks after delivery. The examination at such time is facilitated by the relaxed condition of the abdominal wall and uterine ligaments.

Neither hemorrhage nor inertia is likely to be caused by a pedunculated sub-peritoneal fibroid.

*Abortions:* Spontaneous abortion in the presence of uterine fibroids is of very much less frequent occurrence than the older books report, because, as said by Lynch in his article on this subject, the reports of the older writers lack data. As an evidence of the discrepancy in the statistics on the question between the older and recent reports I will quote from Lynch's paper: "West, in 1870, 28 abortions in 36 cases; Winckel, in 1876, 16 in 46 cases, while Lobenstein, in 1911, reports 13 spontaneous abortions in 100 cases, and Le Maire, in 1902, only 2 in 121 cases." I have had in my own practice fifteen cases and no abortion, yet on two of these I did a myomectomy, one at the fifth month and the last one at seven and one-half months of gestation.

Abortion usually occurs during the last months of pregnancy, when danger from placental complication is greatest.

*Diagnosis:* Diagnosis is often difficult to make in the early months of gestation if the tumor be not large. It must not be forgotten that during pregnancy the growth loses a great deal of its

firmness. This is particularly true where a sub-mucous or cervical fibroid exists. Later in pregnancy the diagnosis is less difficult. One must not mistake a large fecal impaction for a fibroid. I have seen a few such. Rectal examination will establish the diagnosis. Where the size of the womb is out of proportion to the duration of pregnancy, or where during such there is monthly bleeding a fibroid should be suspected. This is especially true where a sub-mucous or cervical fibroid exists. Later in pregnancy the diagnosis is less difficult. Care must be observed to not mistake a large fecal impaction for a fibroid placed low in the posterior wall. In the beginning of my practice I made such an error. Since then I have seen several, but avoided a mistake by making a rectal examination. A perplexing condition is a double uterus, one of which, through the courtesy of Prof. H. S. Cocram, I saw about twelve years ago. Here one might mistake the second uterus for a fibroid.

An enlarged and projecting anterior cervical lip during the first weeks of pregnancy may be mistaken for a tumor of this structure. I remember one case that had been so diagnosed at the eighth week of pregnancy which, at the sixteenth week, had entirely disappeared. It was a case of bilateral laceration of a snout shaped cervix, the engorgement, enlargement and prolapse of which were due to the normal sinking of the uterus, the condition being remedied by the later ascent of the organ.

One of the most perplexing conditions is that of a firm dermoid ovarian cyst low down behind the lower segment. I had one such case in which I discovered the tumor at the time of labor; it was easily pushed out of the way, with the woman in knee-chest position, the labor progressing normally. Three months later I operated, and removed not a fibroid, as I expected, but a firm dermoid of the ovary somewhat smaller than a goose egg. I doubt that the displacement would have been so easily accomplished had it been a uterine fibroid.

At times, when the pregnancy is advanced, it becomes necessary to introduce the entire hand within the vagina. One should remember that if the fetus is vertex and not engaged the hand is likely to push it far aside and the low situated tumor mistaken for another head.

Owing to repeated contraction of the uterus during labor, a small sub-mucous fibroid may be partially detached from its bed and project from the cervix as a polypus. Its removal becomes necessary to facilitate delivery.

Some cases of sub-involution are either postpartum metritis or fibroids. Where an abnormality in the delivery exists in the face of a normal pelvis, and a normal presentation of a fair sized fetus, a fibroid should be sought for after delivery.

Where the abdominal wall is thick a diagnosis is most difficult unless the tumor is large; but it is not so where the wall is thin and the tumors several, the only error probable is made in mistaking the fetal extremities for tumors. At times the condition simulates twin pregnancies, especially where the head of one fetus is at the upper pole of the uterus and the other at the lower pole. Failure after repeated examination to find two heart beats and the persistent original position will be a reliable guide to the diagnosis.

*Treatment:* During labor the contractions of the vertical uterine muscular fibers will often draw an anteriorly placed fibroid away from the pelvis, but are not likely to do so with one posteriorly situated and low in the pelvis, because of the obstruction offered by the promontory of the sacrum. Even under such circumstances one can, in some instances, push the growth out of the way while the woman is in knee-chest position. Where such maneuver fails and the growth is low and *small*, it is not such a difficult matter to do a posterior colpotomy as would be done for vaginal Cesarean section, and then enucleate the tumor in that way, even with the woman in labor. Where such procedure is not feasible, abdominal section is called for. In three of my cases where there was a large anteriorly placed fibroid, the growth was pulled toward the fundus by an assistant while the patient was in extreme Trendelenburg position, the delivery being then easily accomplished—in one of these the forceps were used. All children were born in good condition; but every woman had a postpartum bleeding, for which I was prepared. Sometimes these women are delivered very quickly. One of my cases, with a fairly large anterior fibroid, and for whom I feared some disaster, was confined after only three hours of labor—and she was a primipara.

But it is not the fibroid alone that we must contend with. Attention should never be removed from the heart and kidneys. Some twenty-three years ago one of my patients died suddenly, immediately after I had extracted a living eight and a half pounds baby. The patient had a greatly hypertrophied heart. I made a post-mortem incision and found the abdominal cavity free of blood, and the womb untorn. Nearly every one of my cases had some albuminuria.



I have seen in consultation three fetal cases of ruptured lower uterine segment occurring during podalic version and high forceps delivery in the presence of fibroids.

But though the fetus may be born without great difficulty (many dead or dying), there is often trouble with the placenta, particularly before the ninth month. The irregular and inefficient contractions fail to promptly expel the placenta, with a consequent hemorrhage. Owing to the deformed shape of the uterine canal, manual extraction is often tedious and laborious, injuring the inner surface of the tumor which, if of the sub-mucous variety, is most likely to suffer superficial sloughing with resulting sepsis—an unfortunate condition with the only chance of relief in hysterectomy. And, owing to this tortuosity of the canal, an abortion should never be committed. My experience teaches me that the safest treatment of retained placenta in these cases is firm uterine packing, repeated, if necessary, with gauze saturated with a half strength tincture of iodine, the vagina being also firmly packed with iodoform gauze. Every case, no matter how simple, should have a postpartum intra-uterine douche of a gallon of hot water, to which have been added a half ounce of tincture of iodine, followed by an iodoform gauze pack.

Obviously, the use of the X-ray for the purpose of diminishing the size of the tumor is contra-indicated.

No matter how innocuous a fibroid may often be when associated with pregnancy, my experience is that occasionally it may suddenly become a most venomous parasite. Therefore, I cannot agree with some writers who treat of fibroids with pregnancy as a comparatively harmless association and not as a serious complication.

Cervical fibroids, though small as a hen-egg, are likely to cause trouble during delivery, but dystocia is most frequent when the tumor is supra-vaginal-cervical and posteriorly situated, because they are immobile and remain fixed in the pelvis. Under such circumstances strong uterine contractions or forcible traction with the forceps may result in rupture of the lower uterine segment. Sometimes an edematous small laterally placed fibroid is mistaken for a tubal pregnancy. As in either case the condition is an operative one, the error is of no consequence.

But when there is great abdominal distention, serious hemorrhage, signs of impaction, such as severe uterine pains, laparotomy is indicated. Where there is only suffering opiates often answer well. Where there is great distention and only slight bleeding, and

the fetus has not reached the stage of viability and the tumors are interstitial and not more than two, myomectomy alone may be done. Occasionally opiates will relieve the sufferings.

When the growths are several, hysterectomy is called for, because union of the sutured uterus will most probably not occur. Under similar conditions, the removal by section of a viable child should also be followed by hysterectomy.

The removal of an interstitial fibroid is not necessarily followed by abortion. My two cases showed that.

An intraligamentary fibroid demands, in my opinion, removal of the womb. The only case on which I saw myomectomy done resulted in abortion, fortunately without any bad results. When performing a myomectomy it should be remembered that the thickness of the uterine wall after the fifth month is about one-fifth of an inch, never more than two-fifth. Therefore, in enucleating a fibroid during late pregnancy, care should be taken not to penetrate the uterine cavity. Should such an accident occur, hysterectomy is called for. Fortunately, most of these tumors become more superficial as pregnancy advances.

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## MY EXPERIENCE WITH THE MATAS OPERATION OF ENDOANEURYSMORRHAPHY.\*

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

I shall reverse the usual order of things by giving my conclusions first, and saying that I am just as enthusiastic about this technic as I was when, in 1897, I first had the privilege of seeing it applied.

Its simplicity, its economy of vessel continuity, the resultant reduction to a minimum of the danger of gangrene through sacrifice of collateral vessels, appeal to me now more than ever, since I have had the opportunity of seeing the method tested in a number of cases.

Before tabulating my cases, numbering in all seven, let me briefly refresh **your memories with** an outline of the technic. The restorative side of the method is brought out in the treatment of the sacciform aneurysms, where one aperture alone exists between the vessel caliber and the abnormal cavity of the aneurysm. Here, after provisional hemostasis has been secured, the sac is laid open, and from within it the one opening which conducts blood out of the artery is closed with Lembert sutures and its caliber is thus restored.

\* Read before the Orleans Parish Medical Society, October 26, 1914. [Received for Publication November 20, 1914.—Eds.]

The operation is obliterative when applied to what, in surgery, is called fusiform aneurysm. This expression is often applied to a dilatation of an artery without rupture of any coat, more properly described as an aneurysmal or an aneurysmoid dilatation.

Surgery calls fusiform an aneurysm presenting a distinct diverticulum with two apertures, one of entrance and the other of exit, this diverticulum presenting usually, though not invariably, a fusiform outline. In this type endoaneurysmorrhaphy, after invasion of the sac, means suture of the two orifices and of any collateral openings found in the sac-wall or between the main orifices. The reconstructive application is seen where, in the fusiform variety, a new channel is established by suture over a rubber tube placed between the two orifices as a guide in determining the vessel caliber. This provides a new arterial tube for the transit of blood, but one made of tissue that has already shown its unfitness to carry blood under pressure. The exact position of this type of endoaneurysmorrhaphy is perhaps not finally determined, but the present tendency is to employ it in those cases which show deficient development of collateral circulation. How is this established? by the use of the test recommended by Dr. Matas, which, briefly, consists in the exsanguination of the limb up to above the aneurysm with an Esmarch elastic bandage and the control of the involved artery at this point with a modified Massachusetts General compressor. When the bandage is removed the limb is at first cadaveric, regaining normal color gradually, through collateral circulation. The length of time requisite for this restoration varies with the collateral development from one to twenty minutes, or longer. When the restoration of color is abnormally slow the obliterative operation might be followed by gangrene, because of deficient collaterals. In such cases the reconstructive operation might help the development of collaterals and tide the patient over until some later time, when an obliterative might safely be performed.

Of my seven cases, six have been previously reported. The last, now reported for the first time, I report at some length, because of the unusual interest attending it.

J. M., colored laborer, 36 years of age, was admitted to the Charity hospital April 4, 1914; discharged October 15, 1914. Complaint on admission: Swelling in right leg and large veins.

Family history negative, except for the prominence of tuberculosis as a cause of death.

Personal history of no importance, except the occurrence of a venereal sore four or five years ago.

Present illness was brought on by a pistol-shot wound—38-caliber—inflicted twenty years ago. The bullet traversed the thigh at the junction of the middle and lower thirds, ranging from the postero-external to the antero-external aspects. There was no immediate evidence of vascular injury. Two or three years after being shot he noticed a buzzing sensation in his leg; his attention was directed to the leg by the fact that when it was crossed over the opposite knee it was put in motion by pulsation in the popliteal region. Later an ulcer developed on the outer surface of the leg, which had by this time become swollen and presented marked dilatation of the veins. In March, 1914, pain in the popliteal region caused patient to give up work; the leg ulcer then began to improve and was practically well when he came to be treated by us.

**Physical Examination:** On admission he showed no organic trouble beyond a systolic cardiac murmur, not transmitted. Along the upper part of the popliteal, near the adductor, was a mass about one and one-half inches in diameter, presenting, on palpation, the continuous thrill of an arterio-venous lesion, together with a distinct aneurysmal pulsation periodically superimposed. On auscultation could be heard the characteristic buzz and the aneurysmal bruit corresponding to the palpatory thrill and pulsation. Below the varicose aneurysm—for such we considered the lesion—venous dilatation was marked; the posterior tibial and dorsalis pedis pulsations were palpable, though feeble. Above the lesion the femoral artery could be felt, dilated, tortuous and thick-walled. For some inches above and below, the buzzing and thrill could be perceived. At the groin, pulsation seemed abnormally strong.

Our first decision was to avoid interference, partly because arterio-venous lesions are often very benign in their behavior, lasting for years without increase of dimensions or aggravation of symptoms, and partly because the character of the femoral was such as to foreshadow early aneurysmal change in that vessel. This decision was soon strengthened by the observation of a persistent, irregular temperature and of a steady discharge of pus in the urine, together with chest pains and cough. While our suspicions of pulmonary tuberculosis and of mixed infection pyelitis were never thoroughly confirmed, he was treated on this basis with much benefit. He spent three months on a porch and took urinary antiseptics, plus a liberal quantity of water.

After a three-and-a-half-months' stay in the service we were compelled to reconsider our decision not to operate, by the unruly behavior of his vascular lesion. This had continued to grow, in spite of strictly enforced recumbency, until nearly four-fifths of the circumference of his limb at this level was pulsating. As he lay in bed, with the right leg flexed almost to a right angle, the mass was seen as a large convex swelling seven and one-half inches long by fourteen inches across. The right and left thighs at this level measured  $19\frac{1}{4}$  and  $13\frac{1}{2}$  inches, respectively. While the arterio-

venous characteristics were still present, considerable portions of the mass, especially postero-externally, gave marked evidence of arterial dilation in the form of pulsation and bruit. The posterior tibial and dorsalis pedis pulsations had, by this time, been effaced. The continued and rapid growth of the mass, its approach to the surface in some parts, made us fear for the life of the patient. A constrictor was hung on his bed and directions for close observation were given.

Application of the Matas test showed excellent collateral circulation, the return flush showing at one minute and being complete at two minutes.

Fear of hemorrhage, the hope inspired by the good showing made by the collateral circulation, and the improvement in general health, evidenced by the absence of fever and by gain in weight, caused us to decide on operation, which was done on July 17, 1914.

For valued assistance in this procedure I am indebted to Dr. Rudolph Matas, the originator of the method applied.

Anesthesia was procured by the injection of one-half grain of stovain between the last dorsal and first lumbar vertebræ, this level used to get at the lumbar plexus more directly. Under constrictor hemostasis the sac was laid open along the sartorius and its several diverticula emptied of clot and laminæ, some of the latter distinctly calcareous. At least three distinct openings were closed with Lembert sutures, one of them clearly recognizable as arterial. A large cavity extended under the posterior muscles, this, as well as smaller diverticula, being packed with iodoform gauze. Chromic gut and linen were used.

Removal of the constrictor permitted some escape of blood, which was checked by whipping over the suture lines.

Recovery was uninterrupted. The circulation of the limb at no time caused uneasiness. The only hindrance to rapid healing was the linen suture material. This kept the wound open for several weeks as a result of the slight infection which seemed inseparable from the after-course of a wound in which so much low-grade material in the form of laminæ and pathologic vessel-wall has to be dealt with.

Before discharge, a dose of neosalvarsan was given as insurance against further vascular disease, in spite of repeated negative Wassermann tests.

The following table presents a brief review of the seven cases that have come under my care:

NAME	AGE	OCCUPATION	RACE	DIAGNOSIS	TREATMENT	CAN. GRENE	HEMORRHAGE	RECURRENCE	REMARKS	REFERENCE
1 G.D.	32	Brickmason.	Mixed...	Fusiform aneurysm, right popliteal artery lower two-thirds.	Intrasaccular suture (obliterative endo-aneurysmorrhaphy—Matas).	....	....	....	.....	<i>Annals of Surgery</i> , Vol. LXI, pp. 115-117.
2 C.W.	22	Laborer....	Negro....	Arterial varix of right femoral artery and a vena comes; sequel of gunshot wound.	Incision of vein; suture of opening in artery. (Modified Matas-Bickham technic.) (Restorative.)	....	....	....	.....	<i>N. O. Med. and Surg. Journal</i> , Vol. LX, pp. 553-556.
3 F.L.	29	Painter.....	Negro....	Fusiform aneurysm, right popliteal artery, middle portion.	Intrasaccular suture (obliterative endo-aneurysmorrhaphy—Matas).	....	....	....	No recurrence after four years (1911).	<i>N. O. Med. and Surg. Journal</i> , Vol. LX, pp. 590-592.
4 R.W.	21	Laborer....	Negro....	Varicose aneurysm, right profunda artery and vein, sequel of gunshot wound.	Intrasaccular suture (obliterative endo-aneurysmorrhaphy—Matas).	....	....	....	Patient died of erysipelas 18 days after operation.	<i>N. O. Med. and Surg. Journal</i> , Vol. LXI, pp. 531-533.
5 P.S.	53	Swamper...	Mixed...	Fusiform aneurysm, right iliofemoral region.	Intrasaccular suture (obliterative endo-aneurysmorrhaphy—Matas).	....	....	....	Patient died of multilocular prostatic abscess 43 days after operation.	<i>N. O. Med. and Surg. Journal</i> , Vol. LXII, pp. 631-633.
6 T.W.	25	Not rec'ded.	Negro....	False aneurysm, left femoral artery, following gunshot wound.	Incision of false aneurysm (restorative endo-aneurysmorrhaphy—Matas).	....	....	....	Permeability of vessel not preserved.	<i>Southern Med. Journal</i> , Vol. V, p. 306.
7 J.M.	36	Laborer....	Negro....	Varicose aneurysm of right femoropopliteal vessels, following gunshot wounds.	Intrasaccular suture (obliterative endo-aneurysmorrhaphy—Matas).	....	....	....	Operated on three months ago.	.....

## SUMMARY.

In all there were seven patients, 22 to 53 years of age, all of negro descent, two mixed, five unmixed.

Of the aneurysms three were fusiform, one false, three arterio-venous; of the latter two were varicose aneurysms, one arterial varix.

Of the seven cases, four (the one false and three arterio-venous) were due to gunshot injury.

Four obliterative operations were done, three restorative, and no reconstructive.

No gangrene, no hemorrhage, no recurrence followed the operation.

There was no mortality attributable to the operation, though one died of erysipelas eighteen days after operation, the infection being derived from another case adjacent to the patient in the ward; while a second died of multilocular prostatic abscess forty-three days after operation. A feature of this case was the fact that the diagnosis was not made in life, nor even on post-mortem examination, the fatal condition being discovered only when the pelvis was bisected by Prof. E. Souchon for the purpose of preserving the specimen of obliterated aneurysm. In considering the matter of mortality it is of interest to know that in the Charity Hospital of New Orleans, from 1884 to 1903, inclusive, thirty-three cases of popliteal aneurysm were treated, of which seventeen were cured, eight improved, one unimproved, seven died—a gross mortality of 21.21% for the older methods of treatment.

## DISCUSSION.

DR. RUDOLPH MATAS: I regret that owing to unavoidable delays I have arrived too late to hear Dr. Gessner's paper; but from my knowledge of his experiences in the cure of aneurysm by endo-aneurysmorrhaphy, in several of which I have had the pleasure of assisting him, I am satisfied that his report of the considerable number of cases in which he has operated by this method must have proven instructive and interesting.

Dr. Gessner, as senior member of my staff and closely associated with me for many years in my surgical work, was one of the first surgeons in Louisiana to apply the intrasaccular method (June 23, 1904)—my first description of the operation having

appeared in the *Annals of Surgery* for February, 1903—and the success which he has achieved by the skillful and consistent application of the principles and technic of the method, is to me most gratifying. This occasion also affords a most pleasant opportunity of expressing my personal thanks to my assistants and other surgeons in Louisiana, who, by their brilliant record, have signally demonstrated the simplicity and effectiveness of the operation and have aided in giving it its present permanent position in surgery. It is interesting that many of the operations have been successfully performed by young men who had never before operated upon aneurysm, and who really initiated their major work in surgery by performing this operation. This alone proves the simplicity of the procedure.

It may be interesting in this connection to supplement the reading of Dr. Gessner's paper by submitting to the meeting a brief statistical summary of the 225 cases which I reported to the seventeenth International Medical Congress, in August, 1913. Since that time I have received the reports of thirty-three operations for aneurysm performed by the intrasaccular method by twenty-two operators, thus increasing the published list to 258 cases up to October of the present year. These additional thirty-three cases have yielded results which confirm even more emphatically the conclusions submitted to the London Congress, which were stated as follows:

#### General Summary.

Total cases, 225.

Total deaths, 19 (8.4%).

Total recoveries, 206 (91.6%).

Total operative failures, 20 (8.8%).

Total operative successes, 205 (91.2%).

Total gangrenes, 11 (4.9%).

Total relapses, 3 (1.33%); 1 cured by obliterative operation.

Total secondary hemorrhage, 3 (1.33%).

Total primary hemorrhage and shock, 4 (1.7%), in 4 fatal aortic aneurysms.

If four aortic aneurysms are excluded from the count, we have:

Total Cases, 221.

Deaths, 15 (6.7%).

Recoveries, 206 (93.2%).

Operative successes, 205 (92.8%).

Failures, 16 (7.2%).

Gangrenes, 11 (4.9%).

Relapses, 3 (1.35%).

Secondary hemorrhage, 3 (1.35%).



In comparing these 258 cases, treated by intrasaccular suture, with the other procedures that are still advocated, whether ligation, extirpation, or the so-called "ideal operation," the results obtained by the intrasaccular method plainly lead the others in the superiority of the immediate as well as the permanently curative results.

In connection with the treatment of the peripheral surgical aneurysms, there is one phase of the question to which I would especially call the attention of the Society, and this refers to the method of determining the choice of procedures which are indicated in each individual case. As shown by Dr. Gessner, under the general designation of endoaneurysmorrhaphy, I have described three different procedures: (1) the obliterative; (2) the restorative; (3) the reconstructive operation. The selection of these three procedures is largely dependent upon the conditions found in the interior of the aneurysmal sac when this is opened. Whenever the parent artery opens into the sac by a single and comparatively narrow orifice, the *restorative* operation, which simply restores the lumen of the vessel by suturing the orifice, is an easy procedure which almost imposes itself as an obligate duty on the part of the surgeon. In cases where there are two orifices separated by a variable interval, one the inlet and the other the outlet of the sac, the question of reconstructing the parent vessel by an arterioplasty will depend upon two factors—first, the efficiency or inefficiency of the collateral circulation in the peripheral parts beyond the aneurysm; and, second, the conditions existing in the sac, which will or will not permit the reconstruction of the vessel out of the material formed by the sac. In deciding upon which course to pursue in the alternative between an obliterative operation and a reconstructive, the efficiency of the collateral circulation is a matter of supreme importance. If the collateral circulation has been demonstrated to be efficient before the operation has been undertaken, it is quite evident that a simple obliteration of the orifices in the sac by suture is all that is required, and that an arterioplasty is unnecessary. Hence, the great importance of determining beforehand what the resources of the collateral circulation may be in any given case.

To devise a simple and reliable method of determining the status of the collateral circulation has been my endeavor ever since I began to work on the intrasaccular method of curing aneurysms. These efforts have been rewarded by the development of two simple pro-

cedures which find their separate application according to the topography of the aneurysm. The first, "the hyperemia or vascular color test," is applicable to all the aneurysms situated in the extremities. The prophylactic and occlusive band test, with the aluminum bands which I devised with Dr. Allen, is applicable to the aneurysms of the neck and root of limbs in which temporary ischemia cannot be obtained by a mechanical compressor which will temporarily occlude the main trunk. These tests or methods of exploration I have already described in several published communications, and especially in a recent contribution to the proceedings of the Surgical Section of the A. M. A. at the June meeting of this year at Atlantic City (see *Journal of the American Medical Association*, Vol. 63, p. 1441, October 24, 1914).

The point that I would particularly insist upon is that we have now arrived at that stage of surgical progress in which the surgeon is no longer excusable for attempting to operate on any accessible aneurysm, by no matter what method, without making it his duty to acquaint himself with the resources of the collateral circulation. The empiric practice, which has prevailed up to the present, to attack these aneurysms and trust to luck for the consequences, as far as the life of the limb is concerned, is no longer excusable nor justifiable. The methods of investigation which I have so insistently advocated and urged are too simple and too certain to be disregarded or ignored. The time has come when the investigation of the resources of the collateral circulation is as necessary a part of a medical student's education as the study of physical signs by which the condition of the heart or lungs is determined for the purpose of clinical diagnosis and prognosis. In addition to the preliminary study of the resources of the collateral circulation, I would submit the following additional suggestions, which I will quote from my London report, and which I believe are worthy of consideration:

In every case the blood-pressure and the condition of the heart should be carefully investigated, because if the blood-pressure is low the collateral circulation, especially in the lower extremity, will establish itself with difficulty; and if it is high, a temporary occlusion of the aorta in the high intrapelvic aneurysms may lead to a dangerous strain of the myocardium. However, the high tension indicating a responsive heart will be safer than in low pressure, which may have to be raised by cardiac stimulants (digitalis, adren-

alin, pituitrin, and other means) before attempting an operation.

In addition, the coagulation time of the blood should be tested before an operation is undertaken in any case, but especially in aneurysms of spontaneous origin in arteriosclerotic subjects of advanced age, who are especially prone to thrombosis and embolism. While there is no absolute means of reducing this coagulability and diminishing the thrombogenic tendency, the suggestions recently offered by Kuhn, who confidently recommends the preliminary intravenous or hypodermal injection of glucose solution, aided perhaps by Wright's citric acid lemonade, are worthy of remembrance.

In conclusion, I would insist upon the exercise of judgment in the treatment of aneurysms, and in selecting the method best suited to the individual case.

It is obvious that in all pathologic aneurysms, and especially those nearer the trunk or which encroach upon the splanchnic cavities, there is almost invariably a complicating cardio-vascular disease involving the heart and eliminating organs (kidneys especially), which makes the majority of these patients dangerous surgical subjects—all prone to secondary hemorrhage, to secondary and multiple aneurysms, to embolism and thrombosis, and finally to cardiac failure or inefficiency. The nearer the aneurysm is to the heart, provided it is not directly traumatic, and the older the subject, the greater should be the caution of the operator and the greater his vigilance in preparing and anticipating complications and untoward results. It should be remembered that any trauma of an artery, no matter how trivial or insignificant it may appear to be, may lead to disastrous thrombosis and embolism. In attestation of this fact I need only remind you of the teachings of the past, and need go no further than the literature of the seemingly simple method of digital compression to find abundant examples of the disasters which may follow even the simplest of procedures. We should bear in mind that it is not always the method but the patient, upon whom the method is applied, who decides the final issue, and determines the merits or demerits by its application to his particular case.

DR. WILLIAM M. PERKINS: I cannot add much to Dr. Gessner's very interesting paper. I had experience with one case, which convinced me that the method is the only one. It was a case of aneurysm of the posterior tibial, which was sutured, with the assistance of Dr. Matas.

## AN ANATOMIC EXPLANATION OF MANY OF THE CASES OF LOW BACK-ACHE AND SCIATIC PAIN.\*

By JOHN TOLSON O'FERRALL, M. D., New Orleans,

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For a great many years the conditions known as sciatica and lumbago have demanded and received a great deal of attention from the entire profession, both as general practitioners and as specialists. For almost an equal length of time, in nearly all instances, a condition of scoliosis or listing has been recognized as accompanying sciatica and lumbago, the symptom-complex being designated "sciatic-scoliosis." Various other names, which are unimportant and mean nothing more, have been given it. Since Gussenbach published his paper in 1878, numerous theories have been advanced as to the cause of this condition, but not until 1905, when Goldthwaite and Osgood published their article on sacro-iliac diseases, followed in 1911 by Goldthwaite's paper on the lumbo-sacral joint, was the condition fully understood. Much other valuable and interesting work, relative to lowback conditions, has been accomplished by Z. B. Adams and H. Bucholz, mention of which will be made in another paper. For the present, I shall confine my remarks to the causation, symptoms and treatment of lowback-ache with sciatic pain. If time permits, to the accompaniment of lantern slides, I shall recite the history of a few cases selected from the interesting series which have come under my observation since my return from Europe.

In the past, sciatic pain has been generally regarded as a disease, the causation of which was very obscure; its treatment productive of very little relief to the patient. In the text-books, nothing of importance is given us. A simple mention of the condition usually suffices for the author. In a few instances, the possibility of the lumbo-sacral joint as a causative factor is noted. However, since the use of the radiograph has been perfected, and more knowledge has been gained relative to the lumbo-sacral joint, the causative factor in a large number of these cases is found to be a *malformation of the transverse and articular processes of the last lumbar vertebra*, which is usually the fifth, although a sixth is sometimes

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found. In my experience, the majority of cases of sciatica, with or without scoliosis, is due to these malformations.

In studying the lumbo-sacral joint, it is at once perceived that the important factors in stability of this joint are the articular and transverse processes. The lumbo-sacral articulation inclines forward and downward, about  $30^{\circ}$  when the person is standing erect, and but for the articular processes at the back, the spine would slip forward on the sacrum. The articular processes are of the flat or crescentic type. There may be one of each type on one vertebra. The lumbo-sacral and ilio-lumbar ligaments provide a great deal of support, but would soon become stretched—dislocation taking place—except for the articular processes. Should this happen, as at times it does, we would have not only a sciatica but also paralysis, due to true cord trauma. With the incline of the articulation, and the fact that fully one-half of the motion of the trunk below the dorsal region is at this joint, it is more evident that, if there is a flat articular process on one side of the last lumbar and a crescentic articular process on the other, any undue relaxation or strain at this point allows a slipping forward on the flat side, producing a dislocation of one leg of the tripod formed by the two articular processes and the body of the vertebra. The resultant condition is a complete paralysis, from pressure on the spinal cord. In such condition, the pressure may be due to the liberated intervertebral disc and not bony contact with the cord. Dr. Z. B. Adams advances the above dislocation or wide articular process as his theory for the causation of many cases of scoliosis. With him, I have had the pleasure of seeing quite a number of such cases, and by stereoscopic X-ray he has very adequately proven this fact. I had the opportunity of assisting him to remove a wedge of bone from a wide articular process causing scoliosis, and in obtaining satisfactory relief from the curvature by a subsequent Forbes jacket. I have not been advised of the ultimate outcome of the case.

If a flat articular process is present on both sides, a complete dislocation may occur with the usual symptoms. Much more might be said of the articular process, but must be postponed.

The transverse processes which absorb our attention this evening are very varied in shape and length, and, as I have already stated, when malformed, are the cause of the symptom-complex which I will describe. The variation in the height of the superior aspects of the lateral portions of the sacrum are very closely related to any

pain referred to a malformed transverse process, since in many cases these two impinge and produce great pain. Of the transverse processes the variations range from the short and small process, which could cause no interference with the lateral motions of the body, to the broad and long process which interferes greatly with lateral and forward bending of the trunk, causing the sciatic scoliosis, local and referred pain, and which, in the extreme, may be articulated with the sacrum or ilium by fusion or a true joint. Impingement repeated causes a sensitiveness at the point of contact, and if a bursa is formed at this point, great suffering is experienced. If this bursa is traumatized, a true inflammatory condition is present. With the variation in the length and width of the process, the two sides are seldom the same, which fact explains free bending to one side with marked limitation on the other.

When the sacral formation is the cause of trouble in this region, we find the superior surfaces of the lateral portions may be flat, so as to be lower than the spinal articular surface, or they may be raised considerably so that they are higher than this articulation—a condition which in the extreme is part of the fusion with the transverse process of the last lumbar, which represents the sacralization just described. The effect on lateral bending is easily seen. With the flat surface, the freedom is full, whereas with the raised surface the interference will depend on the shape and size of the transverse process and the height of the lateral aspects. The shape and height of the wings of the ilium must also be considered. The stability of the lumbo-sacral joint is not lowered with short transverse processes and the flat superior sacral surfaces, but the long processes and high sacral surfaces not only limit side bending of the body, but in such bending, with force applied, the point of contact acts on the fulcrum, the effect of which would be to pry apart the articulation of the articular process on the opposite side, thus producing partial dislocation and separation of the sacro-iliac joint. The width of the upper part of the sacrum and the width of the posterior part of the wings of the ilia also contribute to the instability of the joint and, as before hinted, articulate with the transverse process. It is also important to remember that the lumbo-sacral ligaments are attached to the transverse process and the posterior and superior portion of the wing of the ilia. These increase the stability of the joint until the abnormality or displacement changes their function and allow them to relax, thus increasing

the cause for the pain. If the transverse process is large and long on both sides, or the superior surfaces of the sacrum high on both sides, the interference takes place not only with lateral bending but with a drooping of the body which increases the lordosis. In this connection, a case will be reported by Dr. Brown, of Boston, in which there was a fracture of the tips of the transverse process of the fifth lumbar on each side, caused by the impingement against the iliac crests. The patient had a previously acquired locomotor-ataxia, but by proper support for the fractured transverse processes both conditions greatly improved. I will show you a photograph and lantern slide of the radiograph of this case.

The onset of symptoms in such conditions is usually sudden and in giving his history the patient often attributes his pain to a strain from lifting, a sudden twist of his trunk, or a fall. He describes his pain as a catch in his back, insisting upon his inability to straighten up and subsequently to bend forward. In such cases, the suffering is severe and the patient presents the picture of a very ill man. In other cases, where the transverse process acts as a fulcrum in separating the sacro-iliac joint, the onset is gradual and the symptoms similar to an ordinary sacro-iliac relaxation.

The condition, in my experience, and this fact is confirmed by others, is most frequent in men. I have seen a few women, however, with this anomaly, but the proportion is small and the symptoms as a rule less acute.

It may occur at any age from eighteen to sixty years; but the greatest number of cases occur between thirty-five and forty-five years; oftenest in the laboring and athletic classes.

The patient usually consults the surgeon because of the severe pain in the low back and along the distribution of the lumbosacral cord, *i. e.*, generally the sciatica and the small branches supplying the external aspect of the thigh and hip. He has much difficulty in arising from any posture and often requires assistance in walking. The typical story which he has to relate is usually as follows: Always perfectly well and accustomed to hard labor. While lifting a barrel of ashes, roll of paper, or what not, he felt a catch in his back and was unable to straighten up. Since that time he has had a crooked back, and several days after began to have pain over the crest of the ilium, the buttocks or thigh, even to the external aspect of the ankle on one side. His sleep is very much interfered with; his pain increased upon lying flat of the

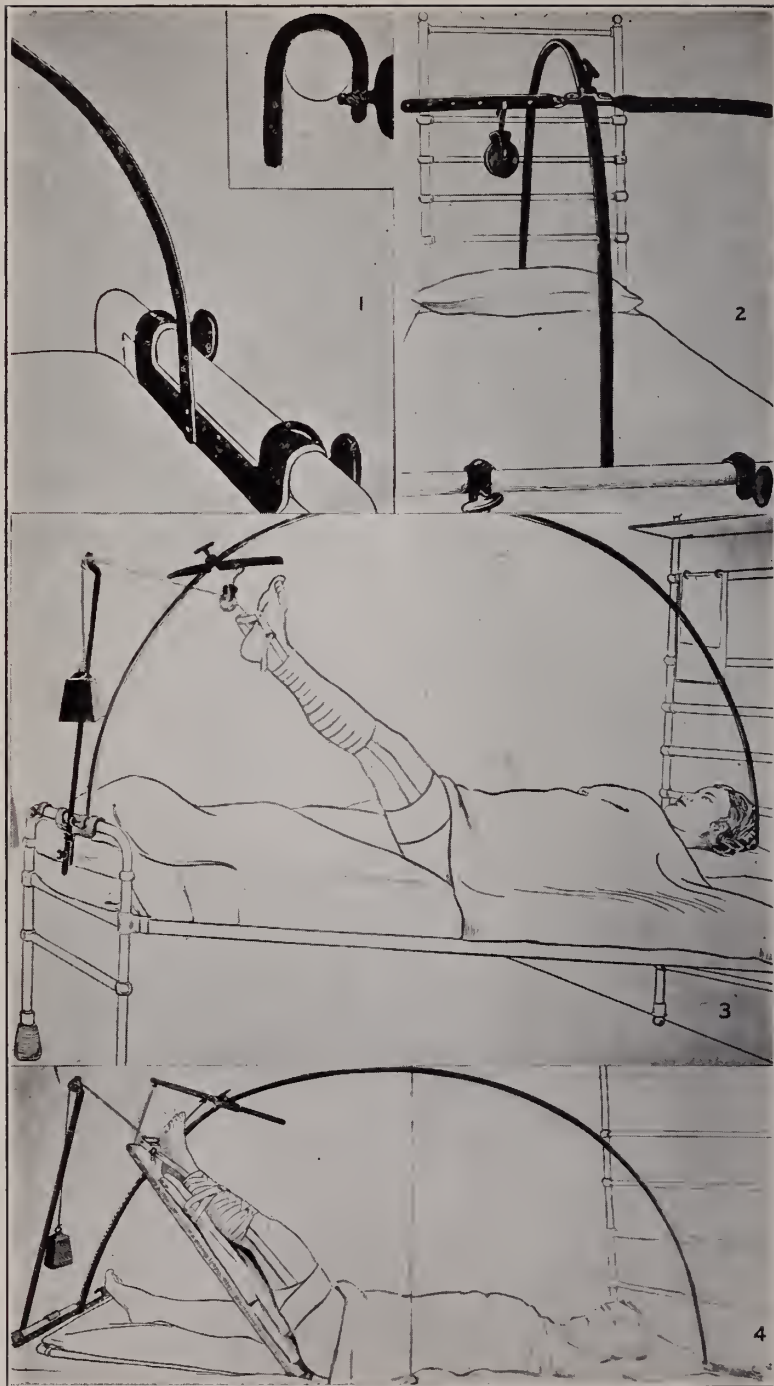
back; lying on his face is impossible. No position seems to give entire relief; his pain is very acute, very definite and very persistent. He looks the part of a sick man, and if the condition is of long standing he presents apparent anemia and loss of weight.

Upon examination we find that the patient stands with a marked total list, usually away from the side on which the large process exists; however, many cases show a list toward the affected side. As a rule, if this condition is of long standing, there will be a true scoliosis of the upper spine to compensate for the deviation at the lumbo-sacral joint. He generally keeps the thigh and leg of the affected side slightly flexed and any attempt to straighten same increases the pain. Forward bending is very markedly limited and is practically nil in lumbar region. When attempting this position a rotation of the spine will be seen to take place and the lateral spinal muscles will be in marked spasm. At this time the patient will tell you of the increased sciatic pain. Backward bending also is almost impossible and painful. Lateral bending is fairly free away from affected side, but shows some restriction in the low lumbar region. Side bending towards the affected side is impossible or very restricted in the lumbar region and greatly increases the pain. The back may be of two types—very flat, or almost convex, or it may present an increased lordosis. The flat type is most common. With the patient flat on his back, straight leg raising on the affected side is much limited to varying degrees, less than a right angle, and produces pain referred to the low back and down the leg. The hip motion on this side are also somewhat restricted. On the opposite side these motions are free. Hyperextension of the affected thigh is very limited, if it is possible, for the patient to come that near hyperextension by lying on his face. This position is most uncomfortable and increases the pain. The list does not disappear upon lying down. There is atrophy of the thigh on the affected side and an apparent lengthening of the leg on that side.

Bucholz, in an article in the *American Journal of Orthopedic Surgery*, May, 1913,, reviews the literature very thoroughly on the subject of "Sciatic Scoliosis," giving the views of the more prominent authors. While many of these refer to the low spine as a possible cause for the condition, none refer to the variation in the last lumbar vertebra. In my opinion, the majority of cases of sciatica are due to this abnormality, certainly in the series of sixteen cases which I have collected in the past few months, it has







1. Brackett Arch—Showing method of fixing on head or foot of bed.
2. Do., in position on bed, showing cross-bar with pulley.
3. Do., showing hip traction.
4. Do., showing hip traction with use of posterior board rest.

been the sole cause. In a limited number of cases it is due to sacro-iliac dislocation and fracture and dislocation of the last lumbar vertebra.

The reason for the abnormal transverse process being the cause of this symptom-complex, has numerous theories, but the most rational is that given by Dr. Goldthwaite, of Boston. He explains it as follows:

“With the increased width of the transverse process, or with the crowding of the articular processes together, the space in which the nerve root leaves the spine, or the space in which the lumbo-sacral cord lies as it passes under the transverse process and over the sacrum to join the sacral plexus, must be narrowed. This is enough at times to simply irritate the nerves, causing pain or numbness referred to the leg at the distribution of the nerve, while at other times the constriction is enough to cause paralysis through the same distribution. Naturally, the muscles supplied by other nerves are not involved in such cases.”

It is also readily observed what can and does happen with lateral bending, *i. e.*, a greater narrowing of the space in which the lumbo-sacral cord lies. When a bursa is present the impingement with force brings out true symptoms of a traumatic inflammation of the bursa, which is also at times extended to the perineural structures of the cord itself, thus producing symptoms of varied severity. The narrowing of the spinal canal may also be the cause of such symptoms and is produced, as before stated, by a complete or partial dislocation of the last lumbar vertebra as a result of the flat articular process; a slipping forward of the intervertebral disc, and other pathological conditions familiar to all.

These cases are so typical that it is seldom necessary to arrive at a diagnosis by exclusion. It is wise, however, to consider tumors of the prostate, tuberculosis, cancer or specific disease of the sacrum, and tumors of the cord.

The treatment of the condition is most satisfactory, even in obstinate cases. To obtain complete relaxation, it is best to have the patient recumbent. Bucholz has found that if the leg on the affected side is put in traction with a moderate amount of weight and with the leg straight at an angle of forty-five degrees, more speedy relief is gotten. This is best accomplished by use of a Brackett arch, which allows traction at any desired angle. I will show you a photograph of this apparatus, as it is in use. This position relieves the pain in the back as well as in the leg, as the pain subsides the leg is lowered until full, painless, extension is obtained. When

this point in the treatment is reached, the patient is put in a long plaster jacket in the erect position and with as much extension as possible. After the pain has quieted down for several weeks, this jacket can be changed for a lighter one and the patient may be permitted to do a moderate amount of work. At a later time, if, upon removal of the jacket, the back is found painless and free in its motions, a perfect fitting reinforced belt may be substituted for the jacket and the patient gradually allowed to resume his usual occupation. The patient is put in this position in order to change the poise of the body, decreasing the lordosis, thus relieving pressure and crowding of the articular processes and preventing impingement of the transverse process, or the straining of an articulation, if one is present. Upon resumption of his occupation, the patient must be cautioned to avoid heavy lifting, awkward moves and twisting of the body until complete flexibility of the spine returns.

The prognosis is very favorable, as the cases yield promptly to treatment and completely recover. As stated, they must be careful until they become accustomed to the new body poise and until the spine remains flexible.

If I may have a few minutes more, I shall show a few slides of cases which have come under my observation in the past few months, and will give a brief history of each case.

**Case I.**—This man was a shoe manufacturer, whose occupation required constant standing in one position. While attempting to lift a barrel of ashes, at his home, he felt a catch in his low back and was unable to straighten up. The pain in his back was so severe he was unable to return to work, and within a few hours he began to have pain down his right leg to the ankle. He had various medicinal treatments at home, with no relief. He was admitted to the hospital with a marked list to the left, with acute pain as described, appearing to be a very sick man. An X-ray was taken, which is shown here. A long plaster jacket was applied after a few days of recumbency, and almost immediately relief was given. The pain at the external aspect of the ankle persisted, however, for several weeks. The jacket was removed after six weeks and the back was found flexible. A wide reinforced belt was then given the patient, who returned to his work free of pain. A few weeks later he very foolishly attempted to spade his garden and again twisted his back, returning to the hospital with even more acute symptoms than before. He was put to bed in Bucholz' position and relief was immediate. After a couple of weeks, a long jacket and subsequently a belt were applied and the patient resumed his usual occupation. With care he will probably have no return of symptoms.

**Case II.**—Male, aged 25; mechanic. Nine months previous had been injured by large wheel falling on his abdomen. Unable to work for six

months, because of pain in back and left leg. This pain was increased by stooping or lying down. Finally returned to his work, but for past week has had pain similar to that at time of injury. This pain is increasing in severity and patient feels that he can stand it no longer. Slight list to the right, rigid lumbar spine, flexed thigh. X-ray taken, and patient strapped until next visit. Radiograph showed long, wide transverse process on fifth lumbar on left side, as you see on the screen. Patient returned with report of no relief from pain; sent to hospital and put in Bucholz position, which gave complete relief in ten days. Long jacket was then applied with a great deal of traction. The patient continued to suffer for ten days, after which he was entirely relieved. He has since worn his jacket for six weeks, doing light work, and now, with a belt, has returned to his usual occupation and says he feels better than he has since his injury.

**Case III.**—Male, aged 20. Shoemaker. Nine months ago began to have pain in left buttock and hip, with marked sciatic pain. Has been treated for rheumatism with no relief. Pain is becoming so severe that patient cannot obtain sleep or rest in any position. Upon examination he presented a marked list to the right side; lumbar spine very rigid; flexion of thigh and knee. Case very typical of malformed fifth lumbar. Radiograph showed large left transverse process on fifth lumbar, as per this slide. Long jacket applied with traction. Patient was very markedly relieved, except for pain over left ankle. This persisted, so he was taken into hospital, put in Bucholz position and relieved. Has now returned to his work, free of pain and erect, though still wearing jacket. Belt will be applied later.

**Case IV.**—Female, aged 27. One year ago was delivered of a still-born child. At this time was considerably lacerated. Since the birth of the child has had pain in low back and sciatica on both sides, extending to the knee. Her back has been so stiff and painful she has been unable to do her housework, and is in constant pain. She has been operated upon by a gynecologist for her laceration, but continues to have back and leg pain. Examination shows a very rigid spine; no motion possible except slight forward bending. The back is very flat. Straight leg raising and hyperextension are limited and painful. Patient very despondent, because of pain and disability. The slide shows the large transverse process on both sides of the last lumbar articulating, probably by a true joint, with the sacrum. Upon her admission to the hospital this patient will be put in recumbency and subsequently a long plaster jacket, still later a corset belt. I prophesy a satisfactory result.

**Case V.**—This case will be later reported in detail by Dr. Brown, of Boston, under whose care the patient has come. It is sufficient to say that while riding horseback his mount gave a sudden lunge forward and he immediately had pain in the low back and sciatica. Subsequent X-ray showed fracture of the fifth lumbar transverse process, on both sides. The second slide, taken sometime after the injury, shows the callous formation. The patient has been greatly relieved of both his locomotor-ataxia and his traumatic symptoms, by use of proper apparatus.

**Case VI.**—This slide shows a case of left dorsal right lumbar scoliosis, which is probably caused by the wide articular process on the left side. This radiograph is stereoscopic and shows the condition very plainly. The patient has greatly improved in a Forbes jacket.

## DISCUSSION.

DR. RUDOLPH MATAS: From the general surgeon's point of view the subject so interestingly presented by Dr. O'Ferrall is deserving of more than passing notice. The value of papers of this character is that they broaden the general practitioner's conception of causal factors. It is certainly a new experience to find that such a large proportion of cases of sciatica is associated with an abnormal transverse lumbar process, as Dr. O'Ferrall has been able to detect by his X-ray examinations. The association of sciatica with scoliosis, or "scoliotic sciatica"—a secondary neuropathic scoliosis—on the other hand, is not so rare that one should not be on the lookout for it. I have had occasion to observe three cases of this scoliotic deformity associated with sciatica and in which the lumbosacral nerve roots were involved at their origin. The deformity in the first case was extremely puzzling because the patient was a stout man and lateral curvature was so exaggerated that it caused a marked bulging, rigidity and hardness on the affected side, so that it simulated a neoplastic infiltration over the iliac crest and gluteal region. It was only after a careful exploration that the diagnosis was cleared up. The patient was relieved in a few weeks by over-correction of the curvature with a plaster cast. After this case the differential diagnosis in the other two cases was made much easier by the first experience.

DR. E. S. HATCH: I hesitate to say much at this time, because you have all heard me talk on this and allied conditions many times and know how much I am interested in the subject. The improvement under the proper treatment is very satisfactory, and these cases can all be relieved and in most cases cured.

The thing to remember is that most of the so-called cases of sciatica and lumbago are symptoms of a definite condition, and unless that condition is relieved the patients are not cured. Have some doctor see these patients who has given their condition the study they deserve.

DR. J. FRANK POINTS: I was called to see a case of marked sciatica with scoliosis. There was much pain upon attempting any movement of the affected limb, particularly on changing from the recumbent to the erect posture. Under ether I dry-stretched the sciatica nerve, but with no avail. I then tried the injection of normal saline solution into the sheath of the sciatic nerve. All symptoms then completely disappeared.

DR. J. T. NIX: Dr. O'Ferrall's interesting and instructive paper should sound the keynote of warning against the hasty diagnosis and treatment of all varieties of backache, especially the low lumbo-sacral type which the doctor so carefully describes.

Upon the mere mention of backache there looms up clearly, distinctly, and indelibly stamped on the pages of memory's most scientific records, many an unsolved, perplexing, dilemma—that cryptogenic backache, the real significance of which is overshadowed, shrouded, and veiled, by the co-existence of the most diverse and irrelevant conditions, on one of which the anxious physician most exhaustingly works in his ardent hope for a cure. The patient undergoes a thorough course of medical or surgical treatment, but the backache remains the same, the true cause being unidentified.

Dr. Robert Lovett, of Boston, emphasizes this fact in a most concrete article on "The Causes and Treatment of Chronic Backache." After observing eighty-two heterogenous cases of backache, as they appeared in rotation at a general clinic, fifty per cent were relieved only by the treatment of some attitudinal strain or static disturbance, the remaining fifty per cent being due to pelvic, traumatic, arthritic, or nephritic irregularities.

The paper of Dr. O'Ferrall should sharpen to the keenest perception our most refined diagnostic sensibility, that we might have a better understanding and more thoroughly interpret the various forms of back pains.

DR. O'FERRALL (in closing): In the cases of which Dr. Matas speaks, with gluteal pain, by resorting to the Bucholz position, the pain and symptoms will invariably be relieved. By the use of the jacket, the symptoms disappear; however, we sometimes have a recurrence, but pain is soon relieved by Bucholz position. X-ray should always be taken to rule out enlarged or wide transverse processes in the low lumbar region. In many injuries of the spine the intervertebral discs become displaced and these produce similar symptoms.

## TWILIGHT SLEEP.

By PHILLIPS J. CARTER, M. D., New Orleans,

Assistant in Obstetrics, Tulane University, of Louisiana; Former House Surgeon of the Lying-In Hospital of New York.

Some time ago there came out in *McClure's Magazine* an extensive article on painless childbirth, which brought to dawn upon the medical profession a subject that had long been in quiescence. Painless childbirth is by no means new, since it was first proposed and introduced in 1902 by Steinbuchel. Later its value was appreciated by such men as Krönig, Gauss, and Leopold, of Europe, and Reis, of America. This little article, published direct from the Freiburg clinic, where most of this work has been done, created such intense interest in the minds of the American people that it has caused obstetricians all over the country to execute their utmost skill in determining its value.

The drugs used for this sleep are morphin and scopolamin, the scopolamin being the all important drug. The morphin is given with the initial dose of scopolamin only, so as to lessen pain long enough for the scopolamin to get in its action.

Gauss, in 1907, reported a thousand cases, and in 1914, reports five thousand cases in Krönig's clinic in Freiburg, with very gratifying results. He says by a proper regulation of the drug, scopolamin, and the dosage of the drug, that the patient passes into a semi-conscious state, which he designates as "Dammerschlaf." The pain is appreciated by the patient at the time, but has no recollection of it later. His method pursued was the injection of 0.003 grams of scopolamin and 0.01 gram of morphin into the deltoid muscle hyperdermatically as the initial dose, the scopolamin being repeated once or twice later if necessary, but not the morphin. The indication for a second and third dose is afforded by the mental condition of the patient, who should be kept in a state of relative amnesia, and, therefore, not for any definite stated time. This relative amnesia is determined by showing the patient some unfamiliar object which she readily forgets if under the influence of the drug, but this should be repeated at half-hour intervals if consciousness results.

In May, 1914, "Twilight Sleep" was tried out in the lying-in hospital of New York City, and several large hospitals there have followed. The Jewish Maternity Hospital of New York reported



160 cases in July, 1914, with very gratifying results, with not a single death from the administration of the drug. The writer has personally supervised twenty-five of these cases, besides witnessing many others. Out of this number there were three unsuccessful cases, the fault being due to an unstable solution of scopolamin; this was further substantiated by the same solution being used in another division of the hospital with the same unsuccessful results. These cases were all primiparæ, with not a single maternal or fetal death. None of the cases presented any alarming symptoms during the sleep, with the exception of two, to which I shall call your attention later.

For a case of twilight sleep to be successful everything about the patient is to be absolutely normal, normal pelvis, normal presentation of fetus, and a full-term baby. The patient is to be well in the first stage of labor, which can only be ascertained by careful watching and examination of the patient. She is to be put into a darkened room, and away from all familiar objects. Absolute quiet is necessary, and continual watching of the patient from the time of the first injection of the drug. The maternal pulse and the fetal heart are to be taken before the injection and each half hour subsequently. Also frequency, duration, and intensity of pain, thirst, fatigue, flushing, delirium and location of the pain must all be taken at half-hour intervals during the treatment. The patient is told that she is to have a painless labor, since the psychic influence in these patients plays a most important part. An unfamiliar object is given to the patient to recognize, after which morphin, gr. 1/6; atropin, gr. 1/150, and scopolamin, gr. 1/100, are injected into the deltoid muscle, and the time of injection recorded. There must be absolute quiet on the part of the patient, and this can only be assured by the quietness of the attendants in the case. After the lapse of one-half hour, the patient is questioned as to the memory of the unfamiliar object. If she recognizes it and is still in an absolutely conscious condition, a second dose of the scopolamin is not repeated until the lapse of another half hour, when, if her mental condition remains the same, a second dose of scopolamin is injected, using gr. 1/100. The moment the mental condition becomes upset and a confusion of ideas is assumed by the patient, the scopolamin is discontinued until consciousness returns. The injections of the scopolamin are given at one hour intervals, provided the patient is conscious. Usually three injections suffice for the whole course

of labor. From the time the patient assumes the condition known as "Dammerschlaf," scopolamin is discontinued, but given again as soon as consciousness returns and each successive hour following, provided the patient does not pass into the sleep. In the narcotized condition the patient seems to be in a stupor, from which she can be easily aroused, but when answering questions she presents a confusion of mental ideas; the face is flushed, thirst moderate, and during pains the patient appreciates them, but remembers nothing after each cessation.

A person sitting in one corner of the delivery room would never know that labor was going on if he was not aware of the fact beforehand. To see these patients having regular uterine contractions, and bearing down with each pain, with probably only a slight movement of the body, knowing that pressure is there, to fall asleep after the cessation of each pain and remain so pending another uterine contraction, all appreciated at the time but not remembered afterwards, should convince any obstetrician of the value of scopolamin and its wonderful importance in obstetrics.

Quite a few of the leading obstetricians of our country are condemning the practice of twilight sleep, stating their reasons. I can only answer these objections with experience of a few of these cases, and after reading over the literature I have only been able to find about six objections, namely: Asphyxia and narcosis of child; post-partum hemorrhage; inhibitory action on all secretions, urine, saliva, etc.; violence and delirium; prolongation of labor, and more frequent necessity for forceps; cases are only suitable for hospital practice.

*Asphyxia and Narcosis of Child:* When the appearance of a patient in a doctor's office, with symptoms referable to no specific condition, and where no cause can be found for the condition, one is almost too ready to allay the cause to syphilis. How many times has this occurred to the practising physician, and yet later on, after all exhaustive means of treating the condition for syphilis has expired, how often has the condition dawned upon him to be one of easy simplification, when he realizes that he has made some gross error in his diagnosis. How many obstetricians have witnessed the maternity room, to see baby after baby born, asphyxiated, black and blue, requiring hours to resuscitate, and yet showing practically no assignable cause? Had scopolamin been administered to these patients by the practitioner, would not he and his

witnesses have laid the blame to scopolamin? Would it not have been the most natural presumption?

Of the cases treated with scopolamin under my supervision, not one of the babies was born asphyxiated, and all were primiparæ. But I have had probably over 200 to be asphyxiated before I started using this drug, and yet many of the cases were accounted for, while quite a good many were not. How readily would the opponent of this treatment condemn it if the sleep had been practised in these cases.

A hard labor, retching and nagging in character in a primipara with rigid soft parts, tight abdominal muscles, and probably a poor flexed head, if allowed to remain in labor any length of time, will in the great majority of cases, give you an asphyxiated baby at the time of birth. The reason men claim they get asphyxiated babies with this treatment, lies simply in the fault of the treatment. I believe the error is that they repeat the morphin more than once in the treatment, and surely the repetition of the morphin will have a very deleterious effect on the baby, and will give you either an asphyxiated or a dead baby every time. The administration of 1/6 gr. morphin at the beginning of any labor, certainly will not give you these bad results. There are so many cases that would naturally give you asphyxiation anyway, from such causes as cord around neck, prolonged labor, pressure, improper flexion and extension. One would surmise that asphyxia seen in deliveries from twilight sleep might be due to the direct action of scopolamin circulating from the maternal organism into that of the fetal. Scopolamin, as we know, is a drug that is readily eliminated from the system, and three-fourths of it is excreted by the kidneys alone; therefore, it would naturally arise that very little of the scopolamin enters into the fetal circulation. In two of my cases I have given 1/100 gr. of scopolamin every half hour for eight doses in order to estimate the effect of large doses of the drug on the maternal and fetal organism. I was muchly criticized at the time for giving such an enormous dose, but I simply wanted to prove to the condemners of the treatment that scopolamin has no deleterious action on the fetus in utero, and also none, when given in the right dosage, upon the mother. The mother, after having had five doses, went into a wild delirium, taking the entire time of three persons to hold her in bed and preventing serious trouble. On the delivery table the patient had to be chloroformed with no little difficulty. The baby

gave out a loud cry the moment the head was over the perineum. In less than a half hour after the delivery the mother came out from under the influence of the anesthetic, her wild delirium had ceased, and she went into a twilight sleep for two hours. She remembered absolutely nothing after the first injection of the drug, and made an absolutely normal recovery. To repeat here, I would say that three doses, one hour apart, sufficed for the majority of my cases to assume the condition of twilight sleep, and not in any patient did I require more than four doses.

*Post-Partum Hemorrhages:* How well it would be for the physician to have something to blame the malady on. I well remember six cases of postpartum hemorrhage occurring within twelve hours, and not one of the causes could be ascertained. Just think of the inclination to jump at scopolamin as the cause if I had used it in these cases. I had no case to show even a tendency to hemorrhage after this method of childbirth. Taking fifty odd cases that were carried out in the Lying-In Hospital under this treatment, not one showed a tendency to hemorrhage beyond the normal postpartum amount. Do not textbooks and the literature tell you that the majority of postpartum hemorrhage cases are due to the mismanagement of the third stage of labor; then why should the obstetrician hide his ignorance of the management of labor and blame this malady to scopolamin?

*Inhibitory Action on All Secretions, Saliva, Urine Etc.:* This is in all probability correct to a certain extent, the only conditions worth noting being the intense thirst and the dryness of the mouth, but the patient is none the worse for it. How many cases does the practitioner have that are not continually calling for water? Is not the natural phenomenon of labor enough to give thirst and dryness of the mouth? Would you rather have your patient screaming at the top of her voice, pulling at her hair, retching and exhausting every possible means of natural utility, than to present a smooth, knowingless, satisfied course of labor, and feeling just as fine after the delivery as she did before she started into labor? These are the questions that present themselves every day to the practitioner of midwifery.

*Violence and Delirium:* We may say that twilight sleep is a delirium. It is the very condition we strive to arrive at, but not the delirium that we generally see in alcoholics; rather one of quiet and ease. Violence and wild delirium are due to giving too much

of the drug, or giving it in too large a dose. If the patient is watched closely, and the proper amount of the drug administered, with the right intervals, it should not cause any alarming symptoms. This does not hold good where there is an idiosyncrasy for the drug. Should the patient have had an overdosage, producing the state of wild delirium and violence, I do not think there would be any serious consequences to the mother or to the baby, but it would certainly require the most careful watching. You should be able to tell that your patient was narcotized long before the delirium sets in. I admit that this effect upon the family would probably mean the last case of twilight sleep in that family, and probably the loss of practice in that family.

*Prolongation of Labor and More Frequent Use of Forceps:* The length of labor is most assuredly shortened. This is one of the reasons why men who have used the twilight sleep, and who have not gotten the results, condemn it. The reason is that their labors were so materially shortened that the scopolamin fell short of its time to act, before delivery took place. I have had a number of cases just like that, where the treatment failed, simply because it hastened the progress of labor to the extent that the drug did not have time to act.

A third of my cases came to forceps, and all being primaparæ. Naturally a great majority of the primiparous patients would come to forceps anyway. I think it unwise to let a head remain on the perineal floor for more than an hour before delivery is attempted. Probably if I had let some of my cases go longer they would have delivered normally. The objection to the use of forceps is, therefore, an unjustified criticism. Are we practising medicine to produce or relieve pain? Then why not relieve these patients of pain by the use of forceps? What would your patient say should you mention instrumental delivery to her after she has gone under a most strenuous effort at delivery with no result? She would consent to be delivered at once, every time.

*Only Suitable to Hospital Practice:* These patients are better off in hospitals, and in hospitals especially equipped for this purpose. I believe the practice in the homes is just as suitable, and even more so, than in some of the hospitals of our city. In New York City several of these cases were tested out in the tenement houses of the poor, where the very poorest of conditions prevail, and where the noise is something terrific. Still, up to the time I

left New York, several cases had been given the twilight sleep in these houses with absolute success.

To sum up, for a case to be successful there must be the following requisites: A normal case; absolute quiet; a darkened room; absence from the room of all persons except the nurse and doctor.

Patient must be well in the first stage of labor, with a dilation of the os not over three fingers in the primipara, and not over two fingers in the multipara.

The drug must be fresh. Careful administration and the necessary amount of the drug.

Finally, to know when the "Dammerschlaf" condition is assumed by the patient.

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## **ATAXIC TYPES OF POLYNEURITIS RESEMBLING TABES.**

By E. M. HUMMEL, M. D., New Orleans.

Not infrequently cases of polyneuritis are found in which ataxia is most apparent, or in which this symptom is so predominant as to make it extremely difficult to discriminate regarding tabes. This is a rather common occurrence in toxic neuritis attacking the legs specially. We use the terms toxic neuritis and polyneuritis synonymously, and it is also implied that the causative agent circulates in the blood, in which case a quadrupedal involvement is expected. However, very frequently the legs are so predominantly involved that the symptoms in the arms will escape notice unless closely looked for. This feature makes these cases resemble tabes all the more closely. It should also be remembered that although tabes attacks the lower levels of the cord as a rule, the upper segments are often invaded, and such being the case the arms do not always escape by any means. Likewise while the pupillary phenomena are very important for diagnostic purposes, the long abuse of alcohol—the most important agent in the case of polyneuritis—sometimes brings about a partial or complete Argyll-Robertson condition of the pupils. Thus we see that neuritis of this kind can give almost the exact criteria of tabes and often requires the greatest care and skill for its detection. In those cases of polyneuritis where ataxic symptoms are very predominant it is rather a rule that motor and sensory disturbances are slight, in view of which fact we cannot always rely on these more common expressions of polyneuritis for guidance. I have seen cases in which ataxia and

tenderness of the nerve trunks were the only pronounced symptoms. Just why inflammation of the nerve trunks composed alike of several fibers should impair a certain class of these so selectively is not clear, but we are familiar with the fact that neuritis not infrequently is sensory and motor in kind respectively, according to whether one or the other of these groups of fibers have been most predominantly impaired. It must be assumed that some extraneous factor or the character of the noxious agent determines these types of neuritis. I have made the observation that the legs are more apt to become predominantly affected in polyneuritis in persons who, because of their occupation or habits, are very active upon their feet. It must be admitted that the fiber paths specially employed in maintaining station and performing locomotion in the upright posture are thereby rendered less resistive to deleterious influences. These fiber paths subserving muscle and joint sense in the legs are supposed to be in some sense late acquisitions, and the more susceptible to disorder. In the case of tabes the same fiber tracts degenerate by selection in the cord, although the disease influence is general and such a theory has been applied by neurologists in explanation of the pathology of tabes.

It is obvious that it is very important to discriminate between tabes, a progressive, incurable malady, and the ataxic form of neuritis, which is a more innocent disease and in which complete recovery is usually to be expected—the management likewise being totally different. To make this distinction with certainty an intimate knowledge of both conditions is quite necessary. In regard to tabes, it is, of course, important to get a correct history, and unless the case is entirely anomalous we are helped over the difficulty of diagnosis or greatly assisted by such data. The comparatively long time required for tabes, under ordinary conditions, to progress to that point where ataxia is a prominent symptom, is the first thing to be remembered. The symptoms of tabes that have best served me as the ones of greatest importance in the early history are: the stabbing pains, which the patient nearly always calls rheumatism, and which, by the way, may be felt anywhere about the body, but most frequently in the legs; slight weakness of the bladder, appreciated by the subject either as vesical irritation or lack of complete expulsive power or inability to retain properly; diminution or loss of the sexual function; psychic depression; the constitutional signs of old syphilitic infection. We are now so well

confirmed in our knowledge of the luetic causation of tabes that the presence of syphilitic infection of long standing strengthens the probability of tabes under doubtful circumstances. The girdle sensation so much spoken of is not so constant as one would believe from the reading, of the text books, and it also may be present in the radicular type of neuritis. While the inception of tabes is, as a rule, gradual and of long duration, the first apparent signs may begin abruptly, greatly resembling the onset of neuritis. With rapidly developing types of tabes, ataxia is a very prominent symptom and appears with the same suddenness. Furthermore, we are acquainted with the fact that a tabetic patient who has never heretofore been troubled very much with ataxia, or not appreciably, and who has perhaps not been recognized to be tabetic, will, through the effect of shock or some sudden reduction of the health tone, etc., abruptly lose control of the legs in ataxic disability. If, however, the history is carefully inquired into and if other symptoms are closely analyzed, this latter class of case will easily be understood. A cardinal fact always to be kept in mind with regard to tabes is that its lesions attack the sensory half of the nervous system—practically always and we scarcely ever have to do with motor phenomena except as pertains to control—not diminution or loss of power. However, in a condition covering such a wide field of morbid phenomena as tabes, all sorts of anomalous departures from the customary clinical expression are found, and more recently it has been recognized that tabetic lesions may invade the anterior horn cells and lead to actual paralysis and trophic wasting. This never occurs, however, except in old, easily recognized cases of tabes. In regard to the disturbances of common sensation found in tabes, when these are present they are always found in irregular areas, more often as a band of anesthesia or hyperesthesia about the trunk.

On the other hand, when we turn to the symptomatology of neuritis, we find a group of symptoms practically always to be assigned to the involvement of the peripheral nerve trunks outside the brain and spinal cord. In certain rare instances involvement of the nuclei of the lower neurones might be found, but this can be left out of consideration. Sphincter control is, therefore, never disturbed in neuritis proper, nor in any other symptoms found pointing to lesions in the central organ. While it is a fact that the cranial nerves may be attacked in their periphery in neuritis, we never see signs pointing to nuclear disease such as are found in tabes.



Very prominent in neuritis are disturbances of common sensation, but these are always to be distinguished by the fact that the sensory disturbance is diffuse and most pronounced towards the periphery. Inasmuch as the motor fibers are less restive in a uniform inflammation of a given mixed nerve trunk, motor weakness is most pronounced, especially in the extensors, and associated with it is some degree of flabbiness and trophic wasting in the muscles. Some causative agents, *e. g.*, alcohol, seem at times, however, to have a selective action on the sensory fibers, exciting pronounced pain and paresthesia with edema. Later on the abolition of sensation is very pronounced. The pains of neuritis are more constant than those in tabes and are apt to be excited or aggravated by contact and pressure. They are not at all to be confused with the lightning-like intermittent root pains of tabes. We get no help from such symptoms as Westphal's sign and the Romberg symptom, for these are common to both tabes and neuritis. It is rare that we are unable to immediately recognize the toxic agent in neuritis. Likewise, the sudden onset of neuritis is characteristic, but in cases where the causative agent is constantly and gradually active, the neuritis is slow in onset. This is especially so in diabetes and certain other constitutional conditions, causing gradual intoxication of the nervous system. The partial type of neuritis which is most apt to find expression in ataxia very frequently develops after diphtheria—commonly spoken of as post-diphtheritic paralysis. I have seen cases of post-diphtheric neuritis in which ataxia alone was apparent to the patient. A very important procedure in the diagnosis of neuritis is palpation of the accessible nerve trunks for the purpose of detecting tenderness. In some degree this is always to be found. It is a mistake, however, to depend upon the ulnar nerve, which is so exposed as it passes the condyle of the humerus that it has become naturally protected with a fibrous sheath and stroma and pressure here will not elicit tenderness in this nerve. After all, neuritis, however partial it may be to the fibers subserving muscle and joint sense, and however predominant may be the resulting ataxia, scarcely ever fails to effect some reduction in the gross muscular strength of the limb and in the neuritic type of ataxia and sluggish, somewhat feeble floundering of the patient can easily be distinguished from the quick and violent slamming about of the legs seen in tabes.

## UTERINE HEMORRHAGE AT PUBERTY.

By RALPH DUFFY, A. B., M. D., Tampa, Fla.

Uterine hemorrhage, either menorrhagia or metrorrhagia, or both, is a not uncommon phenomenon of the first years of menstrual history. It is possible for such hemorrhage to have its origin and explanation in some gross pathological change, as abortion, infection, or polyp. Bleeding at this age, however, in the vast majority of cases, furnishes us with no evidence of any especial uterine disease. It is the purpose of this paper to discuss hemorrhage of this class—the so-called essential or functional hemorrhages.

Theoretically, the hemorrhage may be attributed to various underlying causes. If we conceive of the menstrual cycle as due to the heaping up in the blood of secretion from the ovary until an overflow takes place, *i. e.*, menstruation, then it is evident that any alteration in the ovarian secretion, either in quality or quantity, must affect the length of the periodic wave. Hence we may trace the cause to hypersecretion of the ovary (Mossbacher<sup>1</sup>), or to hyposecretion (Adler<sup>2</sup>). Dalché<sup>3</sup> considers the cause an upset of the "ovarian equilibrium," due to too rapid development of the sexual organs at puberty. Sturmdorf<sup>4</sup> claims to have demonstrated that the uterine mucosa elaborates a secretion which lessens the coagulability of the blood. Variations in this function, he asserts, are a frequent cause of bleeding from the uterus in girls.

Other local causes are congestion of the pelvic viscera from constipation or valvular heart disease. Flaccidity of the uterine muscle is another cause.

*The Thyroid in Uterine Hemorrhage:* The part the thyroid gland plays in these functional hemorrhages is of interest. We are just beginning to appreciate the close relationship between the thyroid and the hypophysis to the ovaries. Absolute cretins never come to puberty. In mild forms of thyroid insufficiency the uterus remains infantile and small. In myxedema uterine hemorrhage is frequent. Hertogue<sup>5</sup> of Antwerp, in a recent interesting article, lays great stress on thyroid insufficiency as a cause of hemorrhage in girls. He says: "When the thyroid is normally active the menses are normal; when weak, menorrhagia sets in. The weaker the thyroid the greater the loss of blood." And, again, "We very often come across these cases of menorrhagia even in very young girls. If we can put aside such causes as cancer and fibroids, we will

always think of thyroid insufficiency." Hertogue advances the interesting, if not altogether convincing, theory that absence of menstruation in pregnancy is due to hyperfunction of the thyroid, for the purpose of protecting the fertilized ovum.

Sehrt<sup>6</sup> tabulated fifty-five cases of uterine hemorrhage without discovering local cause. He found that thirty-eight had all signs of pronounced hypofunction of the thyroid. Other writers have recorded similar findings.

*Constitutional Diseases:* Any disease of the blood may cause hemorrhage from the uterus. Such are hemophilia, leukemia, chlorosis, and essential anemia. Lessened calcium content of the blood is a cause. Acute fevers, heart disease, and syphilis are also causes. Nervous tension, the stress of mental application, change in climate and altitude also play a part.

*Treatment:* The treatment of these cases fails in medical gynecology. The curette should not be resorted to unless all medical treatment fails, or unless the hemorrhage assumes such alarming proportions that a uterine pack is required. Curettage does not often cure these cases, for the cause is not often in the uterine mucosa. Even in those cases where the mucosa is hyperplastic, still after curettage the new mucous membrane partakes of the qualities of the old. Schickele<sup>7</sup>, in the examination of the scrapings in twenty-seven cases curetted, found no pathological change.

Nor should the treatment be local unless the indication be positive. It is unwise to submit girls to vaginal examination or treatment unless absolutely necessary. To do so gives the patient, at her most receptive age, a morbid view of her sexual life. To repeat, the indication for the curette is hemorrhage so profuse as to threaten life. Local applications to the uterine mucosa should be made only when all other treatment fails. When used, the value of the curettage is mainly in the stimulation of the uterine muscle to contraction.

Of drugs, ergot, cotarnin, and hydrastin, are widely used, especially ergot. They act by causing contraction of the uterine muscle. Hydrastin and cotarnin are very expensive. These drugs are not very efficacious. Ergot is the one most used, and is very popular. Sturmford<sup>4</sup> thinks it positively harmful.

There are three remedies more or less in vogue whose purpose is to increase the coagulability of the blood. They are calcium, gelatin, and blood-serum. Calcium chlorid, given in large doses (80

grains per day) acts in some cases like a specific. Gelatin hastens coagulation, but cannot be given subcutaneously or intravenously, on account of the liability to tetanus. By mouth it is of doubtful value, but is recommended by some.

Blood-serum is a remedy of great value. Weil<sup>8</sup> reports its very successful use in hemophiliacs to control menstrual hemorrhage. Either horse-serum or human-serum is used, the dose being from 15 c.c. to 30 c.c. every other day, by hypodermic. The serum should be fresh. Busse<sup>9</sup> uses the serum of pregnant women. Diphtheria antitoxin may be used if other serum be not obtainable (Weil).

There are two remedies which should always receive our close attention in uterine hemorrhage. They are thyroid extract and pituitary extract. Thyroid extract is lauded most highly, both for cases of thyroid deficiency and for cases where the thyroid function seems normal. I would refer the reader to the recent articles by Sehrt and Hertogue on this subject.

The use of pituitary extract in these cases is a natural corollary from its use in pregnancy. It is certainly a powerful stimulant to the muscle of the parturient uterus. Whether its effect is as great in the hemorrhages under consideration I am not prepared to say. I have used it in one case with good results. I have seen no reports in the literature on its use in this condition. Pituitary extract should always be given subcutaneously.

Focke<sup>10</sup> warmly recommends digitalis. He cites twenty-seven cases of metrorrhagia without local lesion cured by this drug. Only four had valvular heart disease. He commences with digitalis seven days before the menstrual date.

Any constitutional disease should receive appropriate treatment. Rest in bed is a sovereign adjuvant to all forms of therapy. In patients who can afford such luxuries, change of climate and surroundings, relief from school tasks, etc., may affect a cure where drugs fail.

*Local Treatment:* We now come to local treatment. My own experience along this line consists in curettage, and the results have not been gratifying. Sturmdorf<sup>4</sup> advises the injection of one-half ounce of pure acetone or of 16% formaldehyde into the uterine cavity every other day. The cannula of the syringe is wrapped with gauze and this is left in the uterus for 24 hours; this treatment is kept up for two weeks. Theilhaber<sup>11</sup> advises 30% formaldehyde, applied with a cotton-wound applicator. While recognizing the

necessity for drastic treatment in some cases, I should hesitate to make prolonged application of such strong caustics to the uterus of a girl. To make repeated applications to the virgin uterus would, I should imagine, require repeated dilatation. I believe a thorough curettage to be the best and certainly the safest local treatment.

Other forms of local treatment are atmocausis, fulguration, the d'Arsonval current, and the Röntgen ray. I would be loath to advise any of these, but do not speak from personal experience. The effect of the Röntgen ray, especially on the ovaries of young girls, would be disastrous.

#### CONCLUSION.

1. The treatment of essential hemorrhage in girls is primarily medical.
2. The best remedies are calcium chlorid, thyroid extract, pituitary extract, and serum.
3. Curettage is the best local treatment, but should be avoided if possible.

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## HEMATURIA AND ITS POSSIBLE SIGNIFICANCE.\*

By FERDINAND C. WALSH, M. D., San Antonio, Texas.

I had originally prefaced my remarks by disclaiming all responsibility for the selection of the foregoing title, referring to the impracticability of treating such a vast subject within the time allotted to individual papers, and casting the blame therefor at the door of your section chairman.

After a glance over the names of the gentlemen taking part in this symposium, I feel that it ill becomes me to do otherwise than express my appreciation of your chairman's kindness in placing me in such company, feeling assured that I am among friends who recognize the fact that a genito-urinary surgeon, given

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\* Read at the Thirty-sixth Annual Meeting of the South Texas District Medical Association, Galveston, October 8, 9, 1914.

a subject on which he wishes to say all that he thinks he knows, and hasn't the time in which to do it, is more to be pitied than condemned.

Fortunately for the medical profession at large, and, through this medium, humanity as a whole, to say nothing of a genito-urinary specialty whose valid reason for existence lies therein, was the introduction of that marvelous diagnostic instrument of precision, the cystoscope, and I feel that in discussing hematuria in particular it is only right that due credit be given this instrument, the correct use of which has made accurate diagnosis possible, and to the interpretation of whose findings is due the brilliant results now obtained by genito-urinary surgeons throughout the world.

Before the cystoscope came to the aid of the medical profession, the genito-urinary tract was, in many respects, as a closed book, the opening of whose covers, in order to legibly read and reflect on the contents therein, was often fraught with great damage to its reading matter. By recent structural perfections and constantly increasing technical refinements we may now, and daily do, easily steal glimpses into the innermost urinary strongholds, which but a very short time ago most successfully defied speculation and attack.

It may be well, in considering this subject, to differentiate those hematurias, in which no concomitant symptoms occur, from those in which one or more cardinal signs accompanying the bleeding tend to point toward its origin.

In the latter class of cases, the symptoms most frequently associated with blood in the urine is that of pain, and here we must always remember the fact that nowhere else are we so apt to be misled in diagnosing the seat of lesion from localized pain as in the urinary tract. Not only does urinary headquarters send out the S. O. S. signal of distress, indicating impending disaster at some particular point where, in reality, normal conditions obtain, but occasionally the "sympathetic" switchboard manipulator, becoming for the time hysterical, relays the message over an entirely different line, sending the alarm down the opposite side from that really affected, thus producing a most perplexing and therefore dangerous situation.

It is a fact, however, that, given a hematuria associated with pain, with or without a history of previous similar attacks, and

fortified with other diagnostic aids, such as a knowledge of pre-existing illness, a careful microscopical examination of the urine, and a well-taken radiograph, we may often arrive at a correct diagnosis as to the source and cause of the bleeding, yet the additional information derived from a cystoscopic examination will lend to the operator, if operation is deemed necessary, a feeling of security well worth its employment.

In the class of hematurias with concomitant symptoms, and they are by far the most frequently met with, any portion of the urinary tract may be the seat of origin, and any one of a most varied group of conditions cause its appearance. Starting with the kidney, we may expect to find neoplasm of the cortex or within the pelvis, tuberculosis, calculus, acute inflammatory conditions of the cortex or pelvis, or varicosities of the papillæ where angulation or stricture of the ureter, accompanied by rapid bleeding, does not admit of free drainage, and consequent clotting within the pelvis takes place. I omit the possibility of injuries to the kidney substance either from violence or from the ingestion of drugs, either poisonous or in poisonous quantities, as being self-evident causes, merely mentioning as points of unusual interest that several reported cases of hematuria have followed the use of salvarsan and the administration of urotropin.

Bleeding from the ureter may arise from neoplasm, calculus, or the extension thereto of an inflammatory process from a neighboring organ, as the appendix.

Hematuria originating in the bladder is found due to calculus, neoplasm, varicosities of the bladder wall, particularly in the prostatic region, tuberculosis, and other acute infections of the mucosa, due most frequently to the gonococcus or the colon bacillus. Infections of the seminal vesicles may cause an admixture of blood with the urine, and lastly, the origin may be from some point within the urethra, caused by an acute urethritis, or from a polyp or condyloma.

I have intentionally omitted from the foregoing exceedingly rare conditions, such as purpura hemorrhagica—a case of which I was fortunate enough to see, where the bladder mucous membrane exhibited many punctate hemorrhagic areas, as so extremely unlikely to be met with that they may be looked upon as curiosities.

Turning to the other divisions of hematuria, that in which no other symptom is present to direct attention to the bleeding point,

we arrive at a most interesting group of cases. It is to this group that the unfortunate term idiopathic or essential hematuria was given. Some definite lesion must always be responsible for the appearance of blood in the urine. Symptomless hematuria, perhaps, but never idiopathic. Here, in this particular field, the trained cystoscopist establishes himself in the front rank of specialism. To him is given the opportunity of quickly and surely making an accurate diagnosis.

The origin of a hematuria unassociated with pain, frequency of micturition, or other symptom, may likewise lie in any portion of the genito-urinary tract. The two most frequent sources, however, are found to be the kidney and the bladder. In the kidney this symptomless hemorrhage is most often found due to neoplasm, early tuberculosis, varicosities or calculus. In the majority of kidney neoplasms, bleeding is the first noticeable symptom. In from 15 to 20 per cent of renal tuberculosis, bloody urine is the initial manifestation of the presence of this disease. Hematuria originating in the bladder is generally found resulting from neoplasm, erosion or ulcer of the bladder wall, or varices of the mucosa, generally in the prostatic region. Urethral bleeding may result from stricture, polypi or condylomata.

Aside from the import which hematuria has to the worker in the special field of genito-urinary pathology, those of us to whom it is not already manifest must become imbued with the fact that hematuria is a most potentially dangerous symptom, and that by at once heeding the warning sounded at the first appearance of blood in the urine we may grasp the opportunity for making an early diagnosis of a condition which later on might readily be beyond all chance of medical or surgical relief.

Our only hope in successfully coping with tuberculosis and malignancy lies in early diagnosis, and we should ever bear in mind that the onset of a hematuria without other apparent symptoms is sufficient cause for at least a strong presumption of the presence of one or the other.



## Miscellany.

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### BY THE WAY.

#### GREAT HOSPITALS—ENDOWMENTS—THE WORK OF JAPANESE MEDICAL MEN RECENTLY.

Ever since Dr. W. Gilman Thompson wrote his article in the *Century* upon the "Modern Hospital," a revived interest has stimulated us to enlarge and improve, not only in great centers, but in smaller towns. It may be that his citation of the "Policlinico" at Rome was less the responsible or "first" cause than some straw indicating the general current of the winds, yet the observer can see the general awakening which even war's casualties could not have wholly originated.

We can only think of the verses of the poet, Lord Byron, when, in 1823, he wrote the twelfth canto of "Don Juan":

"Who hold the balance of the world? Who reign  
O'er congress, whether royalist or liberal?  
Who rouse the shirtless patriot of Spain?  
(That make old Europe's journals squeak and gibber all)  
Who keep the world, both old and new, in pain or pleasure?"

And after asking this, the miser is exhibited as the true passion-free, intellectual force of the world:

"Why call the miser miserable? As  
I said before: the frugal life is his,  
Which, in saint or sinner, ever was  
The theme of praise \* \* \*"

"He is your only poet \* \* \*  
The lands on either side are his \* \* \*  
Perhaps he hath great projects on his mind—  
To build a college, or to found a race,  
An hospital \* \* \*"

"What is his own? Go—look at each transaction:  
Wars, revels, loves—do these bring men more ease  
Than plodding through the 'vulgar fraction?'"

And Byron goes on, with the doctrine of Malthus fresh in sight,

to show that "ready money is Aladdin's lamp" (as we find when founding hospitals), and, referring to love and the world, Byron gives "Cash" the title of ruler. Probably Dr. Thompson would agree, as any one other builder must. The task of elevating medical institutions is highly laborious, and so we are glad to find the New York Orthopedic Hospital is to build anew. A fund of six hundred thousand dollars is to erect a new structure between Fifty-eighth and Fifty-ninth streets, the building being in the form of a cross, with the central portion embellished by loggias, arranged floor by floor above the main story.

The situation enables a north to south wing, and an east to west one. The general placing of light is thought important. The possession of open-air wards, and roof gardens, has become a metropolitan necessity.

The University Hospital, in Philadelphia, was built along the south side of the street. Then wings, at right angles, extended southward, permit light to enter, from the East, South and West, to each floor. This arrangement is ideal. The Philadelphia General Hospital is to be remodelled at a vast expense, some say five million dollars. The old structure of "Blockley," historic, according to some, as an Evangeline site (although others believe she went to the Pennsylvania Hospital on Fifth street), is arranged upon a diagonal of the compass. The long, white wood-and-plaster edifices, dignified with years watching over the banks of the Schuylkill, and Dr. Pepper's great museum, are to come down. St. Joseph's Hospital, on Girard avenue, has the same lighting as the University Hospital. The arrangement of the Long Island College Hospital, on Henry street, in Brooklyn, is that of a letter H. The central arm runs north and south, but the wards in the lateral wings run east and west. The same sunlight distribution prevents a need to rearrange beds, and probably has advantages over the north and south daily reversal of light and shade. The immense structures of the renewed Bellevue are also east and west in placing of their wards. These, standing beside the Pathological Division, opposite Cornell, on First avenue, are lighted chiefly from the sun rising on the East River. The afternoon sun is partly cut off. But the wards of many of the wings of the Metropolitan Hospital, on the island, are north and south structures, allowing sun through and through. The old brick building of the Presby-

terian Hospital in Philadelphia, at Thirty-ninth street, runs irregularly north and south. In building upon such spacious foundations as six hundred thousand to five million dollars will allow, the possibilities and advantages of light-placing has aroused discussion, and the advisability of each way is as yet unsettled.

In the New York Academy of Medicine the French drawings of the Temple of *Æsclepios* and the *Thermæ*, and other buildings at Kos, used for the care of patients, suggest possibilities even to-day enviable.

That our hospitals must be situated between tenements and factories is an evidence of bad judgment. Accidents require some provision of this kind, nearby. But our largest institutions ought to become rural or suburban. (Some one suggests that West Philadelphia and Brooklyn are in this category!) But, seriously, the question of site ought to provide plenty of open space near any hospital. The German Hospital in Philadelphia is fortunate in its proximity to Girard College and to the city water reservoir.

The Metropolitan Life Insurance Company, in this summer, has at last founded its hospital for employees. But, wisely, they put it out in the country, near Saratoga (on the Hudson).

The City of Cincinnati has chosen a suburb for its new four-million-dollar hospital. It is arranged on the pavilion plan, and so avoids the difficulties in lighting discussed above. The pavilion plan is that of the *Policlinico* at Rome, admired and described by Dr. W. Gilman Thompson. The low, open buildings are separated by the plentiful area of courtyard, which means safety of all sorts.

The importance of ground for all hospitals is such as to remind one of the principle of space in Japanese design. It is basic, and always salient in appeal—so important, indeed, as to suggest a ruling of building commissions when projects of such institutions are considered.

Some interest attaches to the part in our science which men from the east of Asia are assuming. At this time the relations of every country become crucial for peace or for war.

So your correspondent took the time to review a year's medical literature, and found that many important contributions are coming from Germany by the pens of Japanese.

It was in 1913 that Yuan Shi K'ai, President of China, presided

over the Medical Association in its yearly convention there, and he said plainly that China wanted to develop its own physicians, and obviate dependence on "foreign" medical men. They are needed now, he explained. The term "foreign" in China, however, crops out with the vehemence and severity that a Hellen felt in his word "*barbaroi*."

Disregarding the articles of the *Sei-I-Kwai*, of Tokyo, Japan, we find that most of the year's contributions from Japanese physicians appeared in German and Austrian periodicals, and a few in our own *Journal of Experimental Medicine*, some in New York and one in Philadelphia.

From Vienna, Ishiwara writes of the lepra bacillus.

From Leipsic, Kawasoye writes of the action of X-rays on fetal membranes. Koga considers the viscosity of the blood in gangrenous conditions. Ogata gives an account of the symptomatology of osteomalacia and rachitis in Japan, and Kasashima writes of the treatment of septic abortion and of the "Twilight Sleep." Nobe records the twelfth case of pure dislocation of astragalus on the scaphoid. Eguchi takes up traumatic epilepsy in the Russo-Japanese war.

From Jena, Isobe takes up the surgical relation of one kidney to the other. He shows that pathologic secretions exercise a selective action on the other, normal kidney, harming its epithelium.

From Berlin come many articles. Yakoyama writes on nodular hyperplasia of brain and of liver; Idzumi, cancer of the liver; Toida, hour-glass gall-bladder; Miyaauchi, varices in Japan; Goto, teratoma of upper jaw; Ishioka, rupture of spleen; Kato, congenital cranial variations in relation to spina bifida; Sato, atheromatous sclerosis of the arterio-ventricular valves; Fukushi, syphilitic aortitis; Jianu, the levator ani muscle; Kuru, fibrin in gall-stones; Sugi, the appendix in infantile peritonitis; Miyake, cholelithiasis in Japan; Saisawa, the bacilli present in erythema multiforme; Shibayama, rectal use of serums; Sasaki, putrid sputa.

From München, Noguchi gives us a paper on the recovery of spirochetes from syphilitic brain tissue. And Noguchi gave us, in this twelve-month also, *Treponema calligyrum*, the virus of poliomyelitis (with Flexner); resistance of spirochete to chemical and physical activities.

From Philadelphia, Kaneko writes on congenital lateral curvature of the spine.

These references are additional to all the matter found in the columns of the *Sei-I-Kwai* and fellow Oriental journals. They are mentioned as arising from Japanese working in our own laboratories, and instructive to know of at this time.

Hata, with Ehrlich, does not issue anything during this period. There are, also, many other silent workers.

What this body of medical scientists will accomplish in achieving race evolution is a question of the close future.

But the feeling in California and in many other sections is less amicable than justice might ask. Japan, only just out of her hermitic seclusion, ought to feel compassionate, rather than offended, in perceiving our tendency to imitate her historic conduct. Her Admiral Perry may take the form of this body of scientific workers.

In New York City one sees, passing laboratory doors, the patient student and fellow of Japanese race. They are freely scattered among us. Indeed, in trains and villages one encounters them, and at times with European wives.

The solution of many nationalities, in America, is one of astounding rapidity.

Besides the general movement toward massive endowments of hospitals—endowments suggesting the priories of the Middle Ages, and the general movement of racial assimilation, the change of front in the sciences dealing with the X-ray calls attention to a group of occurrences.

Charles Lester Leonard is dead. They have organized a Memorial Society for him in Philadelphia. Pancoast still does the work in the university. Wilbert has gone to Washington. Pfahler illustrates the difference of use of radiograms.

In the beginning, the X-ray was seized upon to aid in the surgery of fractures and dislocations. Our minds faltered. We used to diagnose them. The olden bone-setters of Yorkshire and Wales did not need a skiagraph.

But soon the nervousness passed. Then gastric conditions and the *primæ viæ* absorbed us. So the radiologist became the surgeon. This is well seen in changes at Cornell. A. P. Geysler, after his

accident and recovery, left, to become professor of physiologic therapeutics in the Post-graduate, broadening his field on the side of general physiochemic lines, as would be necessary, unless he had chosen to do as his successor, who turns to a study of the normal position of abdominal viscera. (See *Radiologist*, 1913.)

Robert Abbe, last May called to speak before the Ohio Medical Society on the use of the X-ray and radium in oncologic surgery, has written in the *Ohio Medical Journal* to show that he stands in agreement with Kelly, Wickham, Bulkley and many French authorities, Doyen among them, who find a class of cases (and patients) with whom, and with which it is advisable to use newer treatments than the "aseptic scalpel."

Among surgeons, the Mayos, Rodman, Deaver and many others generally advise early excision, although Deaver, in the *Pennsylvania Medical Journal*, says that certain epithelial (surface) neoplasms yield to the use of radium.

It will be remembered that when Professor Ashhurst's great successor (J. William White) was taken ill with a neoplasm of the caput coli, he used the application of X-rays to render it operable, taking a trip to Minnesota for the operative procedure.

Nevertheless, men are moving to other fields who formerly reserved the practice of skiagraphy for disputed fractures.

The project of the American College of Surgeons is widening. Washington is being considered for its home. There are over 3,000 fellows in its organization at this time.

From surgery to anatomy is a ready step. The surgical anatomy of Gray, of Agnew, of Cunningham and those representing the era of general practice, now changes. We are approaching the day when the departments are to be officered with strictly biologic units. The standpoint of Piersol, Huntingdon, Mall, McMurrich and Minot in all the more experimental tendencies, takes possession of us. The feeling against the BNA terminology is not crystallized. We hear that it is too early to use it at this time. Huxley's amused exclamation at the zeal of the younger men of Burlington House is paralleled by the caution of those who say we must "go slowly."

And Tasso will sing a new *Orlando Furioso* as our cerebral pioneer finds his fissure re-named the "central fissure." Perhaps Piersol's warning has less to do with the feelings of the illustrious scientist, forgotten, than with the possibility that our studies of the neopallium may displace the centrality of the fissure in question;

so vigorously does it grow to keep up its pace with our intelligences, it may move, as the North Star, and require a better appellation.

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## Society Proceedings.

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SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, ASHEVILLE, N. C., DECEMBER 15, 16, 17, 18, 1914.—What is declared to have been the most successful convention in the history of the Southern Surgical and Gynecological Association came to a close when the final paper of the twenty-seventh annual session was presented. Officers elected by the Council, the governing body of the Association, for the coming year, follow: President, Dr. Bacon Saunders, of Fort Worth; first vice-president, Dr. Thomas S. Cullen, of Baltimore; second vice-president, Dr. S. M. D. Clark, of New Orleans; secretary, Dr. W. D. Haggard, of Nashville; treasurer, Dr. Le Grand Guerry, of Columbia. Dr. Haggard and Dr. Guerry were re-elected to the positions which they have filled during the past year. Cincinnati was chosen as the place of holding the next annual meeting, and Dr. C. A. L. Reed, of that city, was named as chairman of the committee on arrangements for the 1915 convention.

Announcement was made of the following surgeons who have been named as members of the organization: Drs. W. L. Cousins, of Portland, Me.; L. H. Landry, of New Orleans; G. B. Rhodes, of Cincinnati; Dean Lewis, of Chicago; W. A. Downes, of New York, and J. Bailey, of St. Louis. These six were chosen from a list of eighty-five applicants for membership in the organization, whose membership is limited to 200.

Dr. Joseph Taber Johnson, of Washington City, and Dr. N. Shilling, of Cedar Bayou, Texas, were named as honorary fellows, their elevation to this class being a tribute to their service in the operating room. Dr. Johnson was one of the speakers at the meeting, dealing with an operation for solid fibroid tumor of the ovary.

Dr. John Wesley Long, of Greensboro, N. C., becomes a member of the Council, which is composed only of former presidents of the Association. Associated with Dr. Long on the governing board are the following surgeons, all of whom have served as presidents, and

who are the only living former presidents: Dr. Stuart McGuire, of Richmond; Dr. Rudolph Matas, of New Orleans; Dr. Bacoun Saunders, of Fort Worth; Dr. J. M. T. Finney, of Baltimore, and Dr. John Young Brown, of St. Louis.

Upon recommendation of the retiring president, the Constitution of the Association will be changed to read that "the object of the Association is to promote the study and practice of surgery and gynecology." Heretofore the object has been "to further the practice and study of surgery and gynecology among the profession of the Southern States." The change cannot be made until the next annual meeting, although it was announced on the floor of the convention at the final session that the change has been authorized, and there is no doubt but that it will be made. While the name of the organization probably never will be changed, it is sectional in name only, one-fifth of the members residing in States of the North and West. Formed twenty-seven years ago to promote the study of surgery and gynecology among the members of the profession in the States South of Mason and Dixon's line, the organization has expanded rapidly, and there is no territorial limit to membership in it now. No heed is paid to the residence of prospective members when the Council is selecting new fellows.

The membership of the Association was unanimous in expressing the belief that this year's meeting was one of the best ever held, both from a scientific and a social standpoint. Many of the visitors were accompanied by their wives and daughters, and, while the surgeons were exchanging views on the floor of the convention, the women were the guests of the management of Grove Park Inn, the headquarters of the assembly, at dances, musicales and teas. Of the fifty essayists on the program for papers, forty responded when their names were called, this being the greatest percentage of speakers to appear at any of the twenty-seven meetings of the Association. The record is considered a remarkable one, and the members will be satisfied if the future sees the organization live up to the standard set at the Asheville meeting. The attendance, too, was large, there being over one hundred in attendance at each of the sessions. The papers were listened to with close attention, and at the close of each the subject treated by the speaker was discussed by those in attendance. Many interesting points were brought out in the discussions, and, while there were various views expressed on



many subjects, at no time during the meeting was the argument allowed to become controversial.

Dr. Hubert A. Royster, of Raleigh, N. C., was one of the busiest men connected with the meeting, serving as chairman of the committee on arrangements. He spent sometime here prior to the time of the annual meeting making plans for the entertainment of the visiting surgeons, and was warmly congratulated upon the success of his efforts, a vote of thanks being extended to him for his services. Similar recognition was taken of the courtesies extended by the management of the hotel at which the surgeons maintained headquarters during their stay at Asheville.

The first meeting was called to order promptly at 9:30 o'clock Tuesday morning, December 15, without formality. There were no exchanges of greetings, no addresses of welcome or responses. The Association is unique in this particular, being one of the few organizations of the country which begins its work without any preliminaries. The first paper read before the assembly was that of Dr. James E. Thompson, of Galveston, whose subject was "A Case of Ligature of the Innominate Artery." He was followed by Dr. J. M. Mason, of Birmingham, the title of whose essay was "The Simplicity and Efficacy of Blood Transfusion with Kimpton-Brown Tube." This lecture was illustrated with lantern slides. Dr. S. Shelton Horsley, of Richmond, spoke on (a) "New Method of Lateral Anastomosis of Blood Vessels and an Operation for the Cure of Arterio-Venous Aneurysm"; (b) "Transplantation of the Anterior Temporal Artery." Lantern slides were used in illustrating these addresses. "Surgical Treatment of the Fracture" was the subject of the address of Dr. W. R. Jackson, of Mobile, while Dr. H. Stuart MacLean followed with a discussion of "A Modification of Lane's Bone Plates." Dr. MacLean is a resident of Richmond. Dr. W. B. Coley, of New York, spoke on "Sarcoma of the Undescended Testis, with Reports of Twelve Cases."

The afternoon session of the first day of the convention began with the address of Dr. Henry O. Marcy, of Boston, on "The Surgical Service of the Civil War." Dr. Marcy served as a surgeon in the war between the States, and his address dealt with the methods employed in the treatment of wounds during the days of that bitter conflict. He was followed by Dr. J. C. Bloodgood, of Baltimore, whose subject was "What the Civil Surgeon Can Do for Military Surgery in Time of Peace." His paper was a plea for a uniform

manner of surgery practiced by the civil surgeons and those who are connected with the United States Army. Speaking, upon the invitation of the Association, Col. Charles Richards, of Washington, of the United States Army, spoke on "Military Surgery, With Special Consideration of Gunshot Injuries." During the course of his remarks the speaker took occasion to explain the origin, construction and effect of the much-talked-of dum-dum bullets. Such missiles, he explained, are those made of soft lead, which expands when it is exploded, and which causes a much more ghastly wound than the Mauser bullets. The dum-dum bullets, Col. Richards said, derive their name from a place of the same name in India, where they were used for the first time. The English armies have used them in their possessions occupied by unusually savage tribes, it being necessary that unusually effective ammunition be brought into service. Col. Richards declared that there has been a radical change in bullets since the Spanish-American War, stating that the bullets now used in Europe, while just as effective, do not cause the extensive wounds suffered by the soldiers who participated in the war with Spain. Dr. C. H. Mayo, of Rochester, Minn., spoke on "Uterine Prolapse," while Dr. S. J. Mixer, of Boston, had as his subject "Some Points in the Treatment of Intestinal Obstruction." Dr. E. S. Judd, of Rochester, Minn., read a paper on "Cancer of the Prostate," and Dr. Carroll W. Allen, of New Orleans, gave a discourse on "Prostatectomy Under Local Anesthesia." Dr. Joseph Taber Johnson, of Washington City, read a paper on "Solid Fibroid Tumor of the Ovary." He delt with an operation which he recently performed and which resulted with success. "Further Experience in the Treatment of Fibroid Tumors with Radium" was the subject of the paper of Dr. Howard A. Kelly, of Baltimore. Replying to the discussion which his paper precipitated, Dr. Kelly took occasion to score the Government for allowing Eastern speculators to gain control of the radium lands of the Western States after plans had been worked out for placing them under the control of the United States Government. He said that he had offered the officials the use of his machinery and had made preparations for placing a supply of radium at a score of distributing points. The suggestion had the hearty approval of Secretary Lane, although later the officials allowed the radium lands to be taken over by people who are hoarding the mineral. The visiting surgeon made the assertion that two grams of radium were shipped to Germany last week, and he stated that he knew that it was received by that country.

The annual banquet of the Association was held on the night of the first day and was featured by the address of Dr. Long, who spoke at length. The presidential address was a eulogy of the men who are devoting their lives to the practice of surgery and gynecology, and it was declared that the operating room has its heroes who are just as true and just as loyal as the heroes of any blood-stained battlefield. The president dealt with the hardships endured by the physicians of the Southern States following the war, and declared that they deserve great praise for the manner in which they labored when Northern organizations were closed to them and they were forced to perform their tasks without the aid of outside influence or environments. He spoke of the rapid growth of the Association and the part its members are playing in the relief of suffering mankind, and was heard with a great deal of interest. He thanked his fellows for the high honor they conferred upon him in electing him as their president and in choosing his State as a place for holding their twenty-seventh annual session.

The first paper submitted at the morning session of the second day was that of Dr. Guy L. Hunner, of Baltimore, whose paper dealt with "A Rare Type of Bladder Ulcer in Women; Reports of Cases." Dr. Bransford Lewis, of St. Louis, spoke on "Ureter Stones; The Technic of Their Removal by Cystoscopic Methods, with Reports of Cases." The paper was illustrated with drawings. Dr. Louis Frank, of Louisville, had as his subject, "Further Study of Renal Calculus, with Especial Reference to Anuria Due to Unilateral Obstruction." The subject of the paper of Dr. E. P. Richardson, of Boston, was "Review of Cases of Perinephritic Abscess Operated on at Massachusetts General Hospital, with End Results." He was followed by Dr. Rudolph Matas, of New Orleans; whose subject was "Hair Balls in the Gastro-Intestinal Tract." Dr. J. Garland Sherrill, of Louisville, spoke on "Gastric Ulcer, with Unusual Complication," while the subject of the paper of Dr. John Young Brown, of St. Louis, who followed him, was "Surgical Treatment of Perforating Duodenal Ulcer."

No afternoon session was held on the second day, the members of the party being given an opportunity to drive through the famous Biltmore estate, the country home of the late George W. Vanderbilt, which is the most pretentious private home in the world.

At the night session papers were read as follows: "Thoractomy in Unresolved Pneumonia," Dr. Randolph Winslow, of Baltimore;

(a) "The Kinetic Theory of Peritonitis," (b) "Acidity, Alkalescence and Anesthesia," Dr. George Crile, of Cleveland; "Gall Stones During the Course of One Thousand Abdominal Sections for Pelvic Diseases," Dr. Reuben Peterson, of Ann Harbor; (a) "A Large Tubercular Cyst Occupying the Mesentery of the Jejunum," (b) "Cure of Umbilical Hernia in a Patient Weighing More Than Four Hundred and Fifty Pounds," Dr. Thomas S. Cullen, of Baltimore; "Diaphragmatic Hernia; Report of Four Cases," Dr. J. D. S. Davis, of Birmingham; "Massive Umbilical and Ventral Hernias," Dr. Alexius McGlannan, of Baltimore; "New Facts About Cancer and Their Clinical Significance," Dr. William Carpenter McCarty, of Rochester, Minn.; "A Contribution to the Cure of Cancer of the Uterus by Curetting for Diagnosis," Dr. H. J. Boldt, of New York; "Preliminary Report on the Use of the Percy Cautery in Uterine Carcinoma, with Special Reference as a Preliminary Measure to Wertheim's Operation," Dr. S. M. D. Clark, of New Orleans.

The absence of seven essayists on the program for addresses at the final day's sessions enabled the convention to hear all of the discussions at one meeting. They were submitted as follows: "Case of Mega-colon," Dr. Irvin Abell, of Louisville; "Spina Bifida; Tibial Transplant Father to Child," Dr. Hugh H. Trout, of Roanoke; "Trauma in and About Joints," Dr. C. E. Caldwell, Cincinnati; "Some Results of Orthopedic Surgery," illustrated by moving pictures and lantern slides, Dr. Fred G. Hodgson, of Atlanta; "The Treatment of Angiomata by the Injection of Boiling Water (Weyth Method)," Dr. Francis Reder, of St. Louis; "A Report of Three Cases of Cysts of the Mesentery," Dr. Edward E. Jones, of Atlanta; "Bulgaria Bacilli in the Treatment of Alkaline Cystitis," Dr. Francis H. Hagner, of Washington; "The Use of Skin Grafts in the Ambulatory Treatment of Ulcers," Dr. John Staige Davis, of Baltimore; "Spontaneous Rupture of the Tubercular Spleen; Report of a Case," Dr. J. E. Cannaday, of Charleston, West Virginia.

# N. O. Medical and Surgical Journal

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- ESPY M. WILLIAMS, M. D., Patterson, La.

### TULANE OPENS MEDICAL CLASSES TO WOMEN.

The Board of Administrators of Tulane University of Louisiana has approved the recommendation of the faculty of the School of Medicine admitting women as candidates for the medical degree. Women have been admitted to all the laboratory courses of this school for several years past, but in the policy of the school it was considered inadvisable to admit women to the clinical classes until the reorganization, begun in 1908, was completed and in force.

It is not apprehended that any large numbers of women will enter Tulane as the result of this new step, for the faculty announced several years ago that if any reasonable number of women applied for the medical courses the faculty would arrange to meet

the demand. As a matter of fact, very few women enter coeducational medical schools.

This action on the part of Tulane is in accordance with the practise of a number of medical colleges of the same standing throughout the country, and it means that women in the South may now have the opportunity of attendance at a medical school of the first rank, with exceptional clinical opportunities.

The University of Texas Medical Department, at Galveston, has been coeducational many years, but the number of women registered has always been small, notwithstanding the exceptional advantages offered to women at that school.

There has been no real objection to women in the Tulane Medical School; as we understand, it has been rather a matter of expediency, which now no longer opposes women in the clinics, in which already several women physicians in New Orleans are at work.

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### UNCINARIASIS AND THE WAR IN EUROPE.

A reprint from the Public Health Reports for October 2, 1914, by Dr. Murray Galt Motter, calls attention to the oil of chenopodium for the treatment of hookworm and its probable adoption, now that the supply of thymol will be so much reduced thru the war conditions in Europe affecting shipments.

American wormseed oil, as the *Oleum Chenopodii* is commonly known, has been demonstrated a valuable anthelmintic. Motter quotes the report of Shüffner and Vervoort, in 1912, before the Fifteenth International Congress on Hygiene and Demography, where this oil had been given by the authors in 1,457 cases, with an efficiency higher than thymol.

Wormseed oil seems to be less toxic than thymol, and has the advantage of being administered with castor oil—in fact, it is best so administered, as the castor oil removes both the drug and the parasite at the same time.

Wormseed oil acts as a paralyzant rather than a parasiticide, narcotizing the parasite, which must be removed by purgation. The toxic effects of the drug show in the nervous system. Untoward symptoms are pointed out as inordinate sleepiness or depression, which are indications for the withdrawal of the drug, for stimulation with coffee, active purgation, etc.

The dosage employed by Shüffner and Vervoort was sixteen drops of oil of chenopodium with sugar every two hours for three doses. Two hours after the last dose a tablespoonful of castor oil with a teaspoonful of chloroform was given. Gockel gives the dose at eight to sixteen drops, according to age: six to eight years, eight drops; nine to ten years, ten drops; eleven to sixteen years, twelve drops; over sixteen years, twelve to sixteen drops.

Dr. Motter calls attention to the wide distribution of the chenopodium, which grows as a weed in the South, and of the possible efficacy of a decoction of the plant made by boiling an ounce of the plant in a pint of milk or water and administered in wineglassful doses. The experimental use should be carefully practised and notes kept of results.

It is especially interesting to note the observation that this drug now recommended is "a truly American remedy, said to have been used by the Indians as a vermifuge before the landing of Columbus."

Once more we are reminded of the effect of the war abroad in bringing us to a realization of our own resources, hitherto undeveloped because of the American trend in the lines of least resistance and of luxurious neglect.

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## Department of Obstetrics and Gynecology.

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In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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SCOPOLAMIN—NARCOPHEN SEMINARCOSIS IN LABOR.—At the meeting of the American Association of Obstetricians and Gynecologists, Buffalo, N. Y., September 17, 1914, a paper was read on this subject by Drs. James A. Harrar and Ross McPherson, of New York. They said that the use of scopolamin in obstetrics was first suggested by Von Steinbuchel, in 1902. The method was then taken up by Gauss, in Krönig's Clinic at Freiburg, where the technic was elaborated, whence, in 1906, he published his first 600 cases.

In 1908 the subject was agitated among obstetricians; the method at this time was tried and found dangerous. Steppens, Leopold, Hocheisen and Veit (foreign observers) opposed it.

Many men in this country used it, to be condemned by some,

faintly praised by all. In 1907, Newell, of Boston, made a favorable report on 112 cases; but he finally discontinued the method on account of the number of babies born asphyxiated. It was also tried by McPherson in 1908 at the New York Lying-In Hospital, but proved a failure to produce the desired results and exceedingly dangerous to the babies. Up to this time they all condemned it because of the dangers of asphyxiation of the babies, of atonic postpartum hemorrhage and of prolonged labor. It was further concluded that in domiciliary practice, and owing to the liable by-effects suddenly developing, medical aid could not be obtained at any moment. The subject was dropped until May, 1914, when Krönig reported successful results in over three thousand cases.

The readers of the paper decided, however, to give the method another trial, following closely the technic advised by Krönig and Gauss in 1908. They desired to see if they could secure the same results claimed by Krönig in Chicago, in November, 1913.

The great trouble has been that detailed descriptions of the technic have lain idle in the literature for six years, no one having taken advantage of them, and that those who did try the procedure erred both in method and in the object to be attained.

The mistake made in this country was in the use of morphin and scopolamin not only in the first dose, but also in succeeding doses; excessive doses were used and unstable and deteriorated preparations of scopolamin employed. Another error was to expect entire abolishment of pains of labor when it is only intended to cause oblivion of the event.

Their own technic has been that of Krönig and Gauss and is quoted in full. The treatment is not started until the pains are occurring regularly, every four or five minutes, and lasting at least thirty seconds, as determined by laying the hand on the fundus and noting its contractions. The outcry of the patient is no guide to the strength of her pains. Waiting for labor to be well established thus at once eliminates cases of so-called primary inertia from treatment. The first injection consists of gr.  $\frac{1}{150}$  scopolamin hydrobromid, combined with gr.  $\frac{1}{2}$  narcophen. Narcophen is a proprietary preparation (a synthetic opiate), narcotin-morphin meconate (by Straub), and, according to Krönig, gives better results than morphin and is less toxic. It is sold in this country in ampoules, ready for hypodermic use and, as found on the market, "Scopolamin, Haltbar" (in ampoules), prepared after the formula of Straub of the Freiburg Clinic.



This drug consists of scopolamin with the addition of mannite ( $C_6 H_8 O H_6$ ), which prevents deterioration of the solution. It is prepared by Hoffman La Roche.

Three-quarters of an hour after the first injection a second injection is given, consisting of  $\frac{1}{150}$  gr. of scopolamin alone. "Thus far the dosage is empirical and standard. The further dosage varies for each patient, and depends entirely upon repeated tests of memory." A combination of narcophen with scopolamin has a slight analgesic action, but the latter drug produces long interruptions of mental associations. "Based upon this action the psychological test of the patient's memory is the most accurate guide to the dosage required in a particular case. Some women require much less than others. It is quite simple to keep repeating very small doses of scopolamin and get results as to complete amnesia. But herein lie the dangers of the method, asphyxia of the child, prolonged labor and atonic relaxation of the uterus. It is most important to secure amnesia with the minimal dose for each case."

Gauss, of Friedburg, insists that on the observance of the memory test the success rests or falls.

"Half an hour after the second dose the woman is asked whether she had an injection, how many, and where; or if she remembers a watch or some simple object that was shown her at that time. Even if the memory is still retained, a third injection of scopolamin, 0.0003 or less, is given. The third dose thus usually comes an hour and a half after the second."

As abolition of memory is desired other doses will be given according as it is retained, doubtful or lost. "It requires the nicest judgment to suit the test to the standard of the intelligence of a given case, especially in patients of the lower grade of mentality."

The attendant must make frequent observations of the uterine contractions, the objective and subjective symptoms shown by the woman, the condition of her memory, her heart beats and also that of the fetus. The patient becomes drowsy and sleeps lightly between pains. Consciousness is not entirely lost. She manifests her suffering to a certain extent and again sleeps. To this condition Gauss gave the term "*Dammerschlaf*" (Twilight Sleep).

She will slowly reply to questions and obey instructions to change position or to increase her bearing-down efforts. "The progress of labor must be more closely watched than usual, for the presenting part frequently is bulging the perineum without any apparent effort of the patient."

The advantage here gained by the method is that there is a gradual escape of the head over the perineum and, therefore, less risk of laceration. This fortunate feature may or may not be due to diminished reflex spasm of the levator ani muscles.

Krönig insists that a state of semi-unconsciousness must be maintained, for then while the pains are apparently felt they are immediately forgotten. The patient perceives a pain, but does not realize it. There is absolute loss of recollection of anything that has happened when it is all over.

At times the patient may complain bitterly that the treatment is a failure and abuse the physician, yet after delivery there is no recollection of her pains or of the coming of the baby.

At times a few whiffs of ether or chloroform is necessary as the head passes the perineum. Occasionally this last pain is so acute that the woman remembers it distinctly and with this is a failure of the treatment.

It should not be forgotten that when the surroundings are not quiet scopolamin induces excitement, hence the patient should be isolated in a darkened room in which absolute quiet is observed. At the time of delivery the woman's face should be covered and her ears stoppered. The child should be removed from the room immediately after its birth.

In one patient  $\frac{7}{100}$  gr. of scopolamin was given during thirteen hours, yet there was complete failure. The pulse rate in the majority of cases ranged between 100 and 130. One patient developed a pulse of 140 to 160 and weak, with active delirium.

She recovered after delivery and was oblivious of everything after the first injection. In their one hundred primiparæ there were only two instances of profuse postpartum hemorrhage not requiring packing and eight cases of moderate hemorrhage. Whereas in one hundred primiparæ without scopolamin there were two cases that required packing and thirteen with moderate hemorrhage. The hemorrhage in the two scopolamin cases they attributed to the use of pituitrin made less than an hour before delivery. As to the occurrence of fetal asphyxia, in their one hundred non-scopolamin cases there were seven cases requiring artificial respiration. In the majority of scopolamin babies there was no evidence of effects of the drug, eight were moderately apneic and responded to spanking, and only two required artificial respiration. The asphyxia heretofore encountered was due to the repeated doses of morphin. With

the present technic the initial dose of narcophen is worn off before delivery. It is rare that a second minute dose of this is required, but it should not be given when labor is not likely to last two hours longer. It is better to use a general anesthetic. In their series there were only two still-births, and one death of a child whose mother had eclampsia. In both still-birth cases there was coiling of the cord around the neck. The average duration of labor in these one hundred scopolamin cases was sixteen hours, while with the untreated hundred it was eighteen hours. The third stage averaged thirteen minutes. They claimed dilatation of the cervix was more rapid than usual, but there was some delay in the advance of the presenting part at the perineum, which was almost constant and required low forceps; but now they use pituitrin. They used forceps in seventeen cases. In two cases, owing to feeble fetal heart, low medium forceps was used. The use of pituitrin in most of their forcep cases, they believe, was all that was required.

They claim that the few disadvantages of the method may be prevented by constant observation. They count the fetal heart every fifteen minutes. The memory test must be carried out, watch in hand, and every detail carefully observed. Closer attention must be given than in usual confinements to meet unexpected trouble.

They found that after the onset of bearing down pains it was impossible to get the patient under the control of the drug. Very early in their experience they found it necessary to select their cases, and that in less than one-quarter of the confinements in their hospital were they able to use it, that to a certain extent was due to the advanced stage of labor when the patients applied for treatment, and, therefore, now they are using the drug in cases early and when a normal labor is anticipated. Krönig claims 80 per cent. of complete amnesia during labor, but in their own experience of one hundred cases they secured in only sixty-six complete amnesia, partial amnesia and with distinct alleviation of suffering in ten, and twenty-four did not respond at all. Nearly all of the successes were obtained where the treatment was started three to seven hours before the termination of labor. But they assert that success is increasing as they become more familiar with the details of treatment. Some of their failures, they say, were due to too early application of the drugs, labor having begun, but uterine contractions not sufficiently frequent or regular. "Inertia developing, the treatment had to be abandoned. In some the second dose was given at

too long an interval after the first." The majority of failures, in patients apparently suitable, memory of the suffering was perfect throughout labor, though there was dozing between pains. Where amnesia was not obtained after three or four injections it was found better not to push the drugs any further.

The following important advice is quoted: "In a large hospital often the resident staff are too busy to give the case the prolonged personal attention that is necessary.

"On the other hand, it is not only to be admitted, but to be emphasized that the method is only a practical procedure for general practice in private houses when the finances of the patient permit the transfer of a complete working force to her room for the entire duration of labor. We tried eight cases in the tenement service with six successes, but the services of one or two attendants were constantly required throughout the course of labor and the remainder of the family locked out."

MICHINARD.

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## Department of Therapeutics and Pharmacology.

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In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

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ON THE USE OF SALVARSAN-COPPER.—G. Baermann (*Munch. med. Woch.*, 1914, lxi, 1) reports his results in treating forty-five patients suffering with amebic dysentery, frambesia and malaria, with Ehrlich's new compound, which, for brevity's sake, is called K. The number of cases treated is small, and permits of no definite conclusions, but the results seem to show that the compound is a very active one. The drug may be given in 0.1 gm. dose on each of three successive days, or 0.15 gm. on two days. The latter is the maximal dose. Baermann found that the drug was entirely useless in the treatment of amebic dysentery. In frambesia it is markedly spirocheticidal. Baermann's impression is that it is more active in this disease than salvarsan. In one case of quartan malaria with schizonts and free gametes the parasites disappeared from the blood. In four cases of tertian fever with schizonts and gametes no parasites had been found two months after treatment. In two cases of pernicious malaria, with rings, but no gametes, cure re-

sulted (no parasites after two months). In cases of pernicious malaria with crescents, the latter were unaffected, though the schizonts were destroyed. In one case of leprosy there was apparent improvements following the treatment. Baermann plans to continue his study and considers the results with frambesia and malaria very encouraging.

J. A. S.

IODIN VAPORIZATION IN THE TREATMENT OF TUBERCULOUS CYSTITIS.—Normand (*Jour. d'Urolog.*, 1914, v., 271) introduces into tuberculous bladders the vapor of nascent iodine by a special apparatus. It was employed in twenty-four cases, and is indicated, particularly, in tuberculous cystitis, or tuberculous bladders, after removal of a tuberculous kidney. It will give equally encouraging results in cases in which bilateral renal and pulmonary lesions or any other tuberculous focus contra-indicate nephrectomy. It should not be employed in acute attacks of reno-vesical tuberculosis or general tuberculosis, for a time at least. Normand has tried to demonstrate the value of iodine vaporization and to give its exact indications. On the other hand, he has tried to overcome the causes of error in the technic of its application and to avoid the painful reactions which constitute the most serious objections raised against the method. It is not claimed to be a panacea against tuberculous cystitis, but he believes it is the most valuable therapeutic agent we have for this affection. If the cures are not more frequent, if he finds it impossible to certify that the cures are permanent, he can, at least, say that there follows a general improvement and relief, and that the method is not accompanied by any danger if it is administered carefully. When one considers the agony which these poor patients experience, whose existence is rendered almost intolerable by the frequent and painful micturition which interrupts sleep and causes a serious drain on the nervous system, the relief afforded by iodine vaporization becomes very important.

J. A. S.

ANTIMONY IN SYPHILIS.—While the curative effects of antimony on syphilitic lesions are much like those of arsenic, McWalter says it is distinctly milder in character, and is seldom, or never, followed by optic neuritis or by the fatal effects attributed to arsenic compounds. He does not think that antimony will cure syphilis if given alone, but it certainly assists the cure if mercury be also given. It appears to be particularly useful in the dermatologic manifestations of the disease, and the cases which McWalter treated with it were notably free from nervous complications. The red sulphid,

or antimonium sulphuratum, is the most convenient salt to employ. The dose should not exceed from 1 to 2 grains, but must be continued daily for two or three months—with occasional intermission of a few days. McWalter thinks it is a useful drug in the fatal broncho-pneumonia which carries off so many infants the subjects of inherited syphilis.—*Brit. Med. Journal.* J. A. S.

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## Medical News Items.

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THE ORLEANS PARISH MEDICAL SOCIETY, at its annual meeting, December 12, 1914, elected the following members for the ensuing year: President, Dr. W. H. Knolle; vice-president, Dr. Lucian H. Landry; second vice-president, Dr. R. C. Lynch; third vice-president, Dr. Henry Daspit; secretary, Dr. Paul T. Talbot; treasurer, Dr. George H. Upton; librarian, Dr. Howard D. King; additional members, Board of Directors, Dr. Chas. N. Chavigny, Dr. Maurice J. Gelpi and Dr. E. L. King.

ANTI-TUBERCULOSIS LEAGUE ELECTS OFFICERS.—At a meeting of the Louisiana Anti-Tuberculosis League on December 11, 1914, the following officers were elected for the ensuing year: Dr. J. Geo. Dempsey, president; Miss Kate M. Gordon, first vice-president; Dr. Geo. S. Brown, second vice-president; Dr. G. Farrar Patton, secretary, and Dr. E. W. Mahler, treasurer. It was announced by the new president that the League would devote its efforts principally to the establishment of a hospital for the advanced cases of the disease. The report of the secretary showed that \$954.98 had been donated to the League during the year. According to the treasurer's report, the receipts of the year were \$8,021.89, with a balance of \$661.15 on hand, aside from a reserve in bank of about \$4,698.34. Sixty-seven patients were admitted to Camp Hygeia during the year.

CHARITY HOSPITAL NURSES GRADUATE.—Twenty-three girls graduated as professional nurses at the annual commencement exercises of the Charity Hospital Training School for Nurses on December 11, 1914. The occasion was marked by appropriate exercises, with addresses from Dr. Jos. A. Danna and Dr. F. W. Parham. Dr. Wm. McFadden Alexander officiated in Gov. Hall's

place, who was unable to award the diplomas on account of absence from the city. Miss Clara Carroll was awarded the prize for the highest honors among the graduates. The other members of the class are: Misses Katherine Frey, Omille D. Delaney, Iris Ursula Henderson, Alice Bagnetto, Camille Collins, Carrie Goodman Ellis, Mae Helwick, Sidonia J. Paine, Ophelia LeBourgeois, Jennie D. Guthrie, Katherine H. Kleeher, Regina Levy, Etta Harvey, Marie Enola Lewis, Mary Escher, Gertrude Weisenberger, Lois Poitevent, Grace Estelle Jones, Rose Robinson, Bessie Peretto, Mae Claridge.

THE SIMPSON COUNTY MEDICAL ASSOCIATION held its annual meeting in Mendenhall, Miss., on December 12, 1914. Dr. Tillis Gandy, of Weathersby, was elected president; Dr. W. F. Stroud, of Pinola, vice-president, and Dr. J. L. White, of Pinola, secretary-treasurer and delegate to the State Medical Association. Dr. J. H. Kennedy, of Pinola, and Dr. A. E. Kennedy, of Magee, were elected as the board of censors.

THE ST. JOHN-ST. CHARLES BI-PARISH MEDICAL SOCIETY held its regular quarterly and annual meeting at Reserve, La., on December 2, 1914. The election of officers for 1915 resulted as follows: Dr. J. P. Elmore, of Edgard, president; Dr. H. D. Cooper, of Edgard, vice-president; Dr. L. Cheves Tebo, of Reserve, secretary-treasurer, and Dr. S. Montegut, of Laplace, delegate to the Louisiana State Medical Society.

ASSOCIATION OF SOUTHERN MEDICAL WOMEN.—This association was organized last year, at the Lexington meeting of the Southern Medical Association, for the purpose of bringing Southern medical women in touch with one another. The second annual session of the association was held in Richmond, Va., on November 10. The officers elected for the ensuing year are: President, Dr. Mary E. Lapham, Highlands, N. C.; vice-president, Dr. Mary Parsons, Washington, D. C., and secretary, Dr. Rosa Gannt, Spartanburg, S. C.

MEDICAL ALUMNI ASSOCIATION, UNIVERSITY OF VIRGINIA.—During the meeting of the Southern Medical Association, held at Richmond, November 9-12, 1914, the Medical Alumni Association of the University of Virginia went into permanent organization. A very enthusiastic meeting was held, with about fifty physicians in attendance, who had received their education at this school. The purpose of the organization is to promote the general welfare

and progress of the university and to advance the medical department especially. There are nearly 1,000 of the alumni of the medical school scattered throughout the United States, and an effort will be made to have as many as possible join the association. The officers elected are: President, Dr. Hugh Young, Baltimore; vice-president, Dr. R. H. Whitehead, University of Virginia, and secretary-treasurer, Dr. Thomas V. Williamson, Norfolk, Va.

REPORT OF CLERGYMEN ON TUBERCULOSIS.—The National Association for the Study and Prevention of Tuberculosis recently sent out a list of questions to clergymen. In response thereto, 2,852 clergymen, representing a church-going population of 1,603,300, reported that during the year ending August 31, 1914, they officiated at 36,798 funerals, of which 3,794, or about 10 per cent., were of persons dying of tuberculosis.

UNUSUAL RECORD.—According to *Northwest Medicine*, Seattle, Wash., a city of about 250,000 population, had, on September 23, the experience of passing twenty-four hours without a single death except that of a week-old infant, who died a few minutes after midnight of the 22nd.

HOSPITAL BEQUESTS.—By the will of the late William Endicott, of Boston, \$50,000 was bequeathed to the Beverly (Mass.) Hospital, \$25,000 to the Massachusetts General Hospital, \$25,000 to Harvard College for the work of the Cancer Commission, and \$10,000 each to the Sharon (Mass.) Sanatorium and the Boston Instructive District Nursing Association.

LARGE MEDICAL FEE.—Thirty-five thousand dollars is said to have been the fee paid to a French surgeon recently for an operation performed on a German prince who was wounded. No German surgeon could be had at the time to operate on the prince, so a French surgeon was requested, and the offer was made to pay him any fee he might ask. The operation took place at Epernay, and the coincidence is recalled that \$35,000 was the amount of indemnity in bottles of champagne required of the French when the Germans occupied Epernay.

POWDER TO STOP FLOW OF BLOOD.—A preparation which will almost instantly stop the flow of blood from a wound has been invented by Prof. Theodor Kocher, winner of the Nobel prize for surgery in 1912, and his assistant. Coagulen is the name of the



powder and, before being applied to the wound, has to be dissolved in water. It does not require a trained hand for its administration, so it is likely to prove of considerable service to the nations now at war. The French and German surgical headquarters have received large quantities of the powder.

**CHOLERA IN THE PHILIPPINES.**—According to a report made to the United States Public Health Service, under date of September 3, for the two months beginning July 4, 1914, 113 cases, with 82 deaths, were given for Manila, and 369 cases, with 239 deaths, for the provinces.

**FOURTEEN DEATHS FROM WOOD ALCOHOL.**—Fourteen persons were killed and a number of others were blinded recently, in Vermont, by drinking whisky adulterated with wood alcohol. The improper labeling of this poisonous alcohol was the cause of this fatality, and shows the need of a law requiring wood alcohol to be labeled as a poison. The Sanitary Code of the New York City Department of Health has recently been amended, requiring all forms of wood alcohol to be labeled "wood naphtha" and to bear a poison label, together with the skull and crossbones. It would be wise if this step would be followed by authorities in all States.

**CANADIAN AND UNITED STATES NURSES IN THE WAR.**—During the Crimean War, only thirty-four nurses went to the front with Florence Nightingale. More than 1,000 Canadian nurses and several hundred from the United States are giving their services in the present European war.

**KINEMATOGRAPH WILL SHOW PREVENTION IN TUBERCULOSIS.**—A motion picture dealing with the problems of tuberculosis in children has been prepared by Thomas A. Edison, and is to be shown throughout the country. The film was produced in coöperation with the National Association for the Study and Prevention of Tuberculosis. The picture is entitled "Temple of Moloch," and a fine lesson is drawn, which will no doubt appeal to the ignorant as well as to those more informed on the subject of this dread disease.

**RELIEF FUNDS FOR THE EUROPEAN WAR.**—On November 20, 1914, the New York Belgian Relief Fund reached a total amount of \$517,075.07; the New York Rde Cross Fund, \$360,523.25; the American Ambulance Hospital Fund, \$175,839.00, and the American Branch of the Prince of Wales Fund, \$75,200.00. On Novem-

ber 21, 1914, the New England Belgian Relief Fund amounted to \$102,949.83; the Massachusetts Red Cross Fund, \$76,609.07; the Boston Branch of the American Ambulance Hospital Fund, \$33,780.51, and the Boston German Relief Fund, \$13,374.00. In Kansas City, Mo., a fund of about \$50,000 has been raised, representing the largest proportional per capital contributions of all cities in the United States.

**HYDROPHOBIA AND PASTEUR INSTITUTES.**—Dr. Charles W. Dulles, consulting surgeon, Rush Hospital, Philadelphia, says: "It is interesting to note that in France, which is full of Pasteur Institutes, there are supposed to be annually thousands of cases with the infection of hydrophobia; while in Great Britain, where there is no Pasteur Institute, the disease does not occur. Another curious thing is that in Constantinople, where dogs have for centuries run wild in the streets, there was so little hydrophobia that it was long denied that it existed there at all; but since a Pasteur Institute has been established, cases have been quite frequent, according to the Pasteur people. This has been the experience of every country in which Pasteur Institutes have been established."

**PELLAGRA IN MISSISSIPPI.**—During the month of October, 1914, there were 824 new cases of pellagra reported to the United States Public Health Service.

**THE SOUTHERN MEDICAL ASSOCIATION**, at its eighth annual meeting in Richmond, Va., November 12-14, elected the following officers: President, Dr. Oscar Dowling, Shreveport, La.; first vice-president, Dr. R. C. Dorr, Batesville, Ark.; second vice-president, Dr. McGuire Newton, Richmond, Va.; secretary, Dr. Seale Harris, Mobile, Ala. The next meeting will be held in Dallas, Texas.

**THOUSANDS ASKED FOR CONTINUANCE OF PLAGUE FIGHT.**—In order that the Public Health Service campaign for the extermination of the bubonic plague in New Orleans be continued, \$220,000 has been asked, in addition to the fund already given for that purpose. The Public Health Service has been spending \$45,000 a month in New Orleans, and finds that its funds are now running low, and provisions will have to be made to carry on the work for at least six months longer. No human cases have occurred for several months, but the rat-proofing, rat-extermination and inspection will go on until there is no more likelihood of the disease.

**BAN UPON OPIUM IN KOREA.**—Due to the influence of American missionaries in Korea, the government has suppressed the opium monopoly and put a ban on the smoking of that drug.

**HOOKWORM IN PERU.**—After three years spent in Iquitos, Peru, where he went at the request of the Peruvian Government to find out why the inhabitants of Iquitos were dying at the rate of 50 per 1,000 per annum, Dr. Geo. M. Converse, of the United States Public Health Service, has returned to San Francisco. He found that yellow fever and hookworm were the diseases causing the entire population to be either sick or ailing, and that at least 90 per cent. of the people were suffering from hookworm. Unsanitary conditions and no hospital facilities of any kind handicapped the work considerably, but Dr. Converse succeeded, in spite of this, in reducing the death rate to 21 per 1,000 and in establishing a well-equipped clinic.

**KISSING A MENACE.**—According to Dr. W. G. Ebersole, of the Mouth Hygienic Association, in order to give humanity what it is entitled to from a hygienic standpoint, you would have to place gauze muzzles on more than 90 per cent. of the people. Dr. Ebersole thinks kissing as great a menace to health as the spitting habit and the public drinking cup.

**TOURO INFIRMARY OF NEW ORLEANS** announces that two internships are vacant at the Infirmary, and applications for the appointments are requested. The periods of service are from date of appointment until June 30, 1915, as juniors, and from July 1, 1915, to June 30, 1916, as seniors.

**GIFT AN IMPOSTOR.**—Dr. R. E. Gift, claiming to be a representative of the Pennsylvania Board of Health, called at the office of the Louisiana State Board of Health in New Orleans during the month and requested to be directed to a sanatorium where he could get over the effects of a spree. He was directed to the Wallace Infirmary of Biloxi, Miss., where he managed to get away with a Tyco's sphygmomanometer and later managed to obtain a check of \$275 from the Salvation Army in Mobile. He failed to get this cashed, however, owing to complications arising on account of a watch he stole from his roommate in the Y. M. C. A. He is described as a glib talker, not well posted in medicine, about six feet, and weighing 180 pounds, neither thin nor stout, and having hair somewhat gray.

GEORGIA SANITARIUM FOR PELLAGRA WORK.—The United States Government has selected the Georgia State Sanitarium at Milledgeville as a station for experimental work in pellagra cases. The work is to be done under the charge of two experts of the United States Public Health Service, and the patients are to be segregated and kept under special treatment and diet.

THE RICE INSTITUTE, at Houston, Texas, announces its first series of university extension lectures to be given on the afternoons of Mondays, Wednesdays and Fridays.

IDA NOYES HALL.—The construction of the Ida Noyes Hall, the building which is to serve the women students of the University of Chicago, provides for the physical culture and social needs of the women. This building, a gift of Mr. La Verne Noyes as a memorial to his wife, will be completed in January, 1916, and will cost over \$450,000.

PUBLIC DRINKING CUP IN THEATERS.—In New York City an inspection of the theaters with reference to the use of the common drinking cup revealed the fact that, of the 429 theaters visited, only sixteen violations of the law were discovered, and fourteen of these were in Brooklyn.

LESS DRINKING IN CANADA.—The per capita consumption of spirits for the fiscal year of 1914 in Canada was 1.061 gallons, as against 1.112 in the previous year. The average consumption has, however, been going up since 1886, when it was only 7.11 per capita. Canadians are drinking more beer, the consumption per capita being now placed at 7.200, as compared with an average of 3.840 in the last four decades.

PARIS MEDICAL SCHOOL RESUMES COURSES.—The Faculté de Médecine de Paris resumed its courses during the month of December, but with a markedly abbreviated program. All the courses for the first- and second-year students are to be given under ordinary conditions, postponing all the other courses until the summer semester. The clinics remain open to the students.

PERSONALS.—Dr. Simon Flexner has resigned from the Carnegie Institute. Pressure of work at the Rockefeller Institute was given as the cause of his resignation.

Dr. and Mrs. J. A. Thompkins, of Baltimore, are spending the winter in New Orleans and are located at Warwick Manor.

Dr. J. Frank Points and Dr. Henry N. Blum returned during the month from a short vacation spent in the North.

Dr. Cornelius Copley has succeeded the late Dr. William K. Simpson as professor of laryngology in the College of Physicians and Surgeons, Columbia University.

Dr. Howard Thomas Karsner, of Pennsylvania, formerly assistant professor of pathology in Harvard Medical School, has been appointed professor of pathology in the School of Medicine, Western Reserve University.

Prof. W. H. Bragg, formerly of the Department of Physics of the University of Leeds, has been appointed Woodward lecturer at Yale University.

Dr. Rudolph H. Kocher has been appointed instructor in research medicine in the Hooper Foundation of Medical Research of the University of California, Berkeley.

Prof. Wilhelm Erb, the distinguished neurologist of Heidelberg, has celebrated the fiftieth anniversary of his doctorate.

Dr. Albert Calmette, according to report, is a prisoner of war at Munster. Dr. Calmette, who is the eminent pathologist and director of the Pasteur Institute at Lille, had been acting as one of the chiefs of the medical service in the French army.

Dr. Karl Thomas, of Prof. Rubner's laboratory in Berlin, who was in charge of a field hospital near Mons, has been awarded the Iron Cross for courageous action during the retreat.

Dr. Roger I. Lee, of Boston, has been elected to the chair of hygiene recently established at Harvard University.

Lieutenant Douglas W. McEnery, M. C., U. S. A., has been appointed special health officer of the city of Panama.

Dr. Walter G. F. Baetz, of the medical staff of the Ancon Hospital, Canal Zone, has resigned his position and will take up his practice in New York City.

Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association; Dr. H. D. Arnold, chairman of the Committee on Postgraduate Study of the A. M. A. and dean of the Graduate School of Medicine, Harvard University, and Dr. W. J. Means, chairman of the Executive Council of the Association of American Medical Colleges, were visitors in New Orleans during December on an inspection tour of the postgraduate medical schools of that city.

REMOVAL.—Dr. George Dock, to 600 South Kingshighway, St. Louis.

MARRIED.—On November 18, 1914, Dr. R. Martinez, of White Castle, La., and Miss Ruth Comeaux, of Bayou Goula.

On December 17, 1914, Dr. Sidney K. Simon and Miss Emma R. Dreyfous, both of New Orleans.

DIED.—On November 27, 1914, Dr. John Edward Waterhouse, of New Orleans, aged 26 years.

On November 24, 1914, at Osyka, Miss., Dr. J. J. Alford, of Washington Parish, La., one of the oldest and most prominent physicians of the State, aged 84 years.

## Book Reviews and Notices.

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

**Local and Regional Anesthesia**, by Carroll W. Allen, M. D., with Introduction by Rudolph Matas, M. D. Illustrated. W. B. Saunders Company, Philadelphia and London, 1914.

"If Dr. Allen's book will only encourage others to follow his example, and stimulate his contemporaries, and especially the young surgeons of the rising generation, to cultivate the 'qualities of head, heart and hand,' that are necessary for the successful practice of the art of peripheral anesthesia, it will have served a useful purpose and discharged a worthy mission." So ends the introduction by Dr. Matas, and so may well begin any notice of this pretentious work on a field of so much current interest.

As yet no such extensive task has been undertaken in the English language, and both in the compilation of material and in the original observations presented Dr. Allen deserves the encomium of his friends and the gratitude of his fellow surgeons.

The character of the matter contained will make of this book a work of reference for some time to come, and for the surgeons in the South, particularly, the task should be recognized by a proper appreciation of the contribution to contemporaneous surgery.

The scheme of the book is logical throughout, and the presentation of the material affords the student of the subject the benefit of either a casual reference or of a careful review of all the contents.

First giving a historical sketch of local anesthesia, the author presents the theories of anesthesia peripherally employed. Then follows an exhaustive list of substances which have been used. A considerable amount

of original material is drawn upon in these chapters, much of local interest, as the experimentation was conducted in New Orleans.

Full space is given to technic, under which caption the best of accepted procedures are reviewed, including those of Matas and the author. Anoci-association (Crile's) receives full consideration.

Regional application of local anesthesia is submitted in extensive detail, with a clearness which indicates the precision characteristic of a trained teacher. Anatomic relations, nerve routes, and the dangers on the way are all presented so that the text may be followed as a guide to procedure. Even the application of local anesthesia to dental practise is furnished—with the explicit technic to be employed.

The illustrations are numerous, well placed, and, where these are not original, they have been well chosen.

To those of us who have known of the years of experimental work and of study which have preceded this product of Dr. Allen, the book is not entirely a surprise. Its magnitude, scope and possibilities for usefulness, however, are developed in our mind the more we examine the contents and the detail covered.

We are glad to know that this book has come and, moreover, we are glad that it has come from one among us. DYER.

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**Manual of Obstetrics**, by Edward P. Davis, A. M., M. D. W. B. Saunders Company, Philadelphia and London, 1914.

The author states in the preface to this convenient little volume that it is intended to give a concise account of modern obstetrics. The growth of modern knowledge in this specialty has been so rapid that one who wishes to study the new gains in obstetric science must consult the best journals throughout the world, and the writer of this book hopes to assist the general practitioner and the medical student to study obstetric diagnosis from the clinical standpoint and to learn how to make wise decisions in treatment.

The book contains 463 pages and seventeen illustrations. Dr. Davis has been able in this well arranged volume to give a splendid outline of obstetrics, and it will no doubt find a convenient place in the library of the busy doctor for reference and an excellent source from which the medical student may obtain the elements of obstetric practice. MILLER.

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**Modern Surgery**, by John Chalmers da Costa, M. D. LL.D. W. B. Saunders Company, Philadelphia and London.

The seventh edition of this book, a veritable encyclopedia, is just from the press, and, like its predecessors, still leads in the class of single volume. The author's wonderful versatility is manifest in this work. It would be difficult to conceive of any surgical condition not treated of, and all in a most concrete manner. Since the appearance of the first edition, they have graded from good to best.

To analyze the book in detail would be too great a task, and totally unnecessary. Those who have it know its merits, those who have not, should get it. E. D. MARTIN.

**Development and Anatomy of the Nasal Accessory Sinuses in Man**, by Warren B. Davis, M. D. Drawings by Dorothy Peters. W. B. Saunders Company, Philadelphia and London, 1914.

This work derives its greatest value from being entirely original, and thus making a distinct addition to substantial knowledge on a subject where differences of opinion had made further research imperative. Dr. Davis made his studies from anatomical preparations obtained in Berlin and Philadelphia. His specimens cover all periods of development from the second month of intrauterine life to advanced maturity. The fifty-seven excellent figures lead us from the nasal area of a sixty-day embryo to the fully-developed sinuses of a mature man. The drawings devoted to the ethmoid cells are particularly instructive, though it must not be inferred that any one of the sinuses is in any way slighted.

A thorough knowledge of anatomy is essential to successful surgery. Works like the present one of Dr. Davis' should be in the hands of every specialist in nose and throat work. A. McSHANE.

**Epitome of Pediatrics**, by Henry Enos Tuley, A. B., M. D. Lea & Febiger, Philadelphia and New York.

In the second edition of his *Epitome of Pediatrics* Dr. Tuley has made many additions to some of the chapters, and has rewritten others, which became necessary owing to the advances in the branch of pediatrics.

L. R. DeBUYS.

**Nervous and Mental Diseases (The Medical Epitome Series)**, by Joseph Nagel, M. D. New (second) edition, revised and enlarged. Lea & Febiger, Philadelphia and New York, 1914.

Manuals on neurology are numerous—almost too numerous. Nagel's book, being one of many of a kind, is to be commended chiefly for a certain original turn which the author shows in the classification of nervous diseases. His chapters on neurology are clear, and the most important desiderata are nicely epitomized. The portion devoted to psychiatry, however, is scarcely to be approved, as the author therein departs from Kræpelin's analysis and classification of the psychoses—undoubtedly the best, and an advantage in the study of psychiatry not to be thus neglected by a modern writer. E. M. HUMMEL.

**Manual of Diseases of The Eye**, by Chas H. May, M. D. Eighth edition. Wm. Wood & Co., New York, 1914.

In a perusal of Dr. May's *Manual of the Diseases of the Eye*, one readily observes that this, the eighth edition, holds a place probably second to none as a convenient book for student and general practitioner. Comments are most favorable to this book, for it is up to date, yet the size has not increased to any extent. The book is well presented, and the illustrations carry with them information that quickly shows the external and internal diseases of the eye without hunting through long text.

One notes that the tonometer of Schiötz has not been forgotten, though not to be used generally. One sees the necessity of this instrument, that has been of such assistance to the ophthalmologist.

One of the most admirable parts of this little book is the immense amount of instruction given in the fitting of glasses, and presented in such a shape as to be readily grasped by the busy practitioner.

DIMITRY.



**The Ophthalmic Year Book.** Volume X. Edited by Edward Jackson, M. D. Herrick Book Company, Denver, Colo., 1914.

This year book is a digest of the literature of ophthalmology for the year 1913. It is published with the assistance of the Knapp Testimonial Fund of the section on ophthalmology of the American Medical Association. The publication of this digest is a very expensive undertaking. For financial need, and to assure its normal development, the price of the next edition will be increased to ten dollars.

Those sufficiently desirous of keeping in touch with meritorious ophthalmic literature of the world have in this year book an easy reach for information otherwise impossible to procure. The editor and his corps of assistants are men enthusiastic in their undertaking, and the result of their labor is praiseworthy. It is pleasing to note that a meritorious paper contributed from this section of the country is given cognizance, and H. Dickson Bruns is the writer of the article. DIMITRY.

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**Lecture on First Aid to the Injured,** by W. L. Brown, M. D. J. A. Majors & Co., New Orleans.

This little brochure has been especially prepared for distribution among the employees of the railroad to which the author is attached as a surgeon. Much practical information is afforded, and the detail is presented in a manner of easy understanding. There is a good deal of repetition, but even this serves the purpose of impressing the lay reader with the method of applying the information the book contains. There are several excellent illustrations covering the text. DYER.

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**Blood-Pressure in Medicine and Surgery,** by Edward H. Goodman. Illustrated. Lea & Febiger, Philadelphia and New York, 1914.

In a little over two hundred pages the author presents the history, mechanism, defects, results and complications of blood-pressure and its vagaries. Associate diseases are given briefly, and both apparatus for, and methods of, diagnosis are described. Illustrations are employed where they can serve, and no detail is overlooked in the make-up of the text. Considerable space is given to the treatment, which is also suggested throughout in all the discussions of particular diseases and conditions where the blood-pressure may be involved.

Altogether a convenient volume, with excellent and clear presentation of the subject undertaken. DYER.

## Publications Received.

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**W. B. SAUNDERS COMPANY**, Philadelphia and London, 1914.

**Local and Regional Anesthesia**, by Carroll W. Allen, M. D., with an introduction by Rudolph Matas, M. D.

**Abdominal Operations**, by Sir Berkeley Moynihan, M. S., F. R. C. S. Vols. 1 and 2. Third edition, revised.

**The Clinics of John B. Murphy**, M. D., Mercy Hospital, Chicago. October, 1914.

**Chemistry and Toxicology for Nurses**, by Philip Asher, Ph. G., M. D.

**Qualitative Chemical Analysis**, by A. R. Bliss, Jr., Ph. G., Ph. C., M. A., Phm. D.

**WM. WOOD & CO.**, New York, 1914.

**Manual of Surgery**, by Albert Carless, M. B., M. S., F. R. C. S. Ninth edition, revised.

**Tropical Diseases**, by Sir Patrick Manson, G. C. M. G., M. D., LL.D. Fifth edition, revised throughout and enlarged.

**Urgent Surgery**, by Felix Lejars. Translated from the Seventh French edition by Wm. S. Dickie, F. R. C. S.

**Medical Dictionary**, by Thomas Lathrop Stedman, A. M., M. D., Third edition, revised.

**Manual of Physiology**, by G. N. Stewart, M. A., D. Sc., M. D., D. P. H. Seventh edition.

**P. BLAKISTON'S SON & CO.**, Philadelphia, 1914.

**The Diagnostics and Treatment of Tropical Diseases**, by E. R. Stitt, A. B., Ph. G., M. D.

Physicians' Visiting List for 1915.

**REBMAN COMPANY**, New York, 1914.

**The Backward Baby**, by Herman B. Sheffield, M. D.

**The Salvarsan Treatment of Syphilis in Private Practice**, by George Stopford-Taylor, M. D., M. R. C. S., and Robert Wm. MacKenna, M. A., M. D., B. Ch.

**The Pocket Formulary for the Treatment of Diseases in Children**, by Ludwig Freyberger, J. P. Fourth revised and enlarged edition.

**W. M. LEONARD**, Boston, 1914.

**Case Histories in Obstetrics**, by Robert L. De Normandie, A. B., M. D.

**FUNK & WAGNALLS COMPANY**, New York and London, 1914.

**Child-Training as an Exact Science**, by George W. Jacoby, M. D.

**PAUL B. HOEBER**, New York, 1914.

**Mechano-Therapeutics in General Practice**, by G. de Swietochowski, M. D., M. R. C. S.

**Acute General Miliary Tuberculosis**, by Prof. Dr. G. Cornet, Translated by F. S. Tinker, B. A., M. B., B. C., M. R. C. S., L. R. C. P.

**LEA & FEBIGER**, Philadelphia and New York, 1914

**Progressive Medicine**, edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Volume XVI, No. 4, December 1, 1914.

#### MISCELLANEOUS.

**Public Health Reports.** Volume 29, Nos. 46, 47, 48 and 49.

**Yellow Fever**, by H. R. Carter, U. S. P. H. S. (Washington Government Printing Office, 1914.)

**Hookworm Disease**, by Murray Galt Motter. (Washington Government Printing Office, 1914.)

**Report of the Department of Health of the Panama Canal for the Month of September, 1914.**

**The Chemical Disinfection of Water**, by Earl B. Phelps. (Washington Government Printing Office, 1914.)

**Public Health Administration in Minnesota**, by Carroll Fox. (Washington Government Printing Office, 1914.)

**Drug Intoxication**, by Martin I. Wilbert. (Washington Government Printing Office, 1914.)

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#### Reprints.

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**The Histological and Clinical Changes Induced by Radium in Carcinoma and Sarcoma**, by Dr. W. H. B. Aikens and K. M. B. Simon, M. B., L. M. C. C.

**Personal Experiences with Radium**, by Dr. W. H. B. Aikens.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for November, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever	7	4	11
Intermittent Fever (Malarial Cachexia)	4	3	7
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough	1		1
Diphtheria and Croup	6	5	11
Influenza	2	6	8
Cholera Nostras			
Plague			
Pyemia and Septicemia	1		1
Tuberculosis	41	53	94
Syphilis	3	3	6
Cancer	19	8	27
Rheumatism and Gout			
Diabetes	7	2	9
Alcoholism			
Encephalitis and Meningitis	3		3
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	26	5	31
Paralysis	4	1	5
Convulsions of Infancy			
Other Diseases of Infancy	16	7	23
Tetanus	1	1	2
Other Nervous Diseases	3		3
Heart Diseases	70	23	93
Bronchitis	4	3	7
Pneumonia and Broncho Pneumonia	18	33	51
Other Respiratory Diseases	1	2	3
Ulcer of Stomach	2	1	3
Other Diseases of the Stomach	1	3	4
Diarrhea, Dysentery and Enteritis	22	15	37
Hernia, Intestinal Obstruction	2	1	3
Cirrhosis of Liver	9	8	17
Other Diseases of the Liver	3	3	6
Simple Peritonitis			
Appendicitis	5	3	8
Bright's Disease	29	22	51
Other Genito-Urinary Diseases	9	9	18
Puerperal Diseases	3	4	7
Senile Debility	2	2	4
Suicide	7	1	8
Injuries	13	15	28
All Other Causes	17	39	56
<b>TOTAL</b>	<b>361</b>	<b>277</b>	<b>638</b>

Still-born Children—White, 21; colored, 28. Total, 49.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 Per Annum for Month—White, 15.92; colored, 32.91. Total, 20.52.

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

Mean atmospheric pressure. . . . . 30.09  
 Mean temperature. . . . . 61.  
 Total precipitation. . . . . 4.65 inches  
 Prevailing direction of wind, northeast.

# New Orleans Medical and Surgical Journal.

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VOL. LXVII.

FEBRUARY, 1915.

No. 8

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## Original Articles.

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

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### FURTHER OBSERVATIONS ON PYORRHEA ALVEOLARIS.\*

By C. C. BASS, M. D., AND F. M. JOHNS, M. D.,  
Tulane College of Medicine, New Orleans.

Recently (September 14, 1914) we reported to this Society<sup>1</sup> some observations that we had made during the previous month on pyorrhea alveolaris, and also called attention to observations on the probable specific cause of the disease (*Entameba buccalis*) by Gros, Sternberg, Prowozek, Kartulis, Barrett and Smith, Chiavaro and many others. Though the ameba had previously been considered probably pathogenic by other observers, Barrett and Smith<sup>2</sup> seem to have been the first to consider it with certain other protozoa the specific cause of pyorrhea alveolaris.

Up to that time we had examined eighty-six cases of what was diagnosed pyorrhea alveolaris, in eighty-five of which we found amebæ, most or all of which were of the species, *Entameba buccalis*.

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\* Read before the Orleans Parish Medical Society, October 26, 1914. [Received for publication December 8, 1914.—Eds.]

Since that time we have been able to study and treat a much larger number of cases of this disease. The observations, both as to the constant presence of the amebæ and the specific curative action of emetine and ipecac, are so striking and seem to us of sufficient importance to warrant our directing attention to this subject again at this time.

We have now examined more than 200 cases of pyorrhea alveolaris in all stages of the disease, and have found amebæ present in all except one case. The diagnosis in this case was doubtful, in the opinion of the dentist who presented it, but we feel quite confident that the disease was surely mild or early pyorrhea. We believe that the cause of failure to find the amebæ was faulty technic, though quite thorough search was made.\* In one other case of undoubted Rigg's disease of moderate extent we failed to find amebæ in ideal material taken from typical early lesions. After failing to find them, the patient volunteered the information that he had been using fluid extract of ipecac as a local application with the tooth brush for two days, according to instructions we had given other patients under emetine treatment. We believe the conclusion is justified by our investigations that amebæ, chiefly if not wholly of the species *Entameba buccalis*, are demonstrable by proper technic, in the lesions of pyorrhea alveolaris in all stages of the disease in all who have the disease in this locality. Our patients have been from the different walks of life and from three States besides Louisiana. We have not been able to demonstrate them in material taken from healthy gums and free from pus or pyorrhea. We have, however, found them often in material scraped from lesions which did not seem to extend to the alveolar process, and therefore could not be correctly called pyorrhea alveolaris. It seems to us certain that these lesions are the early lesions or the beginning of the disease, which later reaches the alveolar process, and finally, by destruction of the peridental membrane, leads to the loss of the teeth, and is then called pyorrhea alveolaris. What is now generally recognized as pyorrhea alveolaris, or Rigg's disease, is, therefore, in fact, the late stage of a disease which would more correctly be called *periostitis dentalis*. The quantity of pus varies, no doubt, with the secondary infection that must always exist, and also with individual conditions or influences.

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\* We have subsequently found amebæ in material scraped from the very bottom of one of the lesions in this case.

We have experimented with different doses of emetine given with varying intervals between doses, making frequent examinations for amebæ to determine, if possible, just what treatment with emetine is necessary to destroy the demonstrable amebæ. In our experience now with more than 200 cases we have found that amebæ are not demonstrable, by the technic we use, in more than from about two to five per cent. of all cases after one-half grain emetine hydrochlorid, given hypodermatically each day for three successive days. Demonstrable amebæ disappear in only a small per cent. of cases from one dose of emetine. They do not disappear, in most cases, if the interval between doses is more than twenty-four hours. Observation of a number of patients for more than two months permits us now to have some opinion as to the probable certainty of the disinfection, and also the permanency of it. In about 12 or 15 per cent. of cases in which amebæ could not be demonstrated just after the course of emetine, they have been found again in one or more lesions from a few days to five weeks after the emetine treatment had been given. In a few instances this was observed also in the case of patients who had applied fluid extract of ipecac when brushing the teeth, which, theoretically at least, would tend to prevent reinfection. We take this observation to indicate that, though the three days of emetine treatment, as recommended in our former paper, destroys the amebæ demonstrable by our technic, in practically all cases there remain a few parasites in a considerable per cent. of cases. It would seem, therefore, that the emetine treatment should be continued daily for a period of from three to about six days, according to the extent of the disease in the particular case. It should be pointed out and emphasized that the extent of the disease varies around different teeth in the same patient. It often happens that, while one or more teeth are loose and in the last stage of the disease, others are much less affected, and still others are not affected at all. The amebæ may disappear from the early lesions after only a short period of emetine treatment, but they may persist much longer in the advanced-stage lesions. This is largely due, no doubt, to the amount of pus, dead and foreign material, which protects some of the amebæ from the action of emetine given hypodermatically, which can only reach amebæ in contact with or near the living tissue. There can be but little doubt but that washing out these large, deep pockets with emetine, one-half per cent solution, as recommended by Barrett and Smith<sup>2</sup>, or, probably better,

with a one to one-thousand solution of fluid extract of ipecac, would help to disinfect them of their amebæ.

Further observations have led us to consider one hypodermic of one-half grain of emetine given every few days after the first course of several doses, as recommended in our former paper, to be of comparatively little value. If it is necessary to repeat the emetine it should be given for at least three days, as at first. The only indication for repeating the emetine treatment is the presence of amebæ, which, of course, can best be determined by proper microscopic examination. The fact that it is sometimes necessary to make and examine several preparations from a lesion before amebæ are found shows that even this method may be misleading, especially when negative.

It should be understood that the emetine destroys the amebæ by some specific action, but that, after the amebæ have been destroyed, the lesions remain, and will require a variable length of time to heal, according to the extent and character of the lesion, and other influences. The pocket is usually very much more extensive than would be supposed, and those interested in the disease may be enlightened by passing some suitable small instrument to the bottom of pyorrhea pockets. Upon careful dissection we find the pocket contains necrotic and, often, tough tissue (especially periosteum in the bottom), and more or less carious bone. For nature to liquefy and remove this material will necessarily require a considerable length of time, during which there must continue to be more or less pus formation.

As long as the lesion is not healed up it naturally offers favorable soil for reinfection. The disease is almost universal, and, therefore, chances of getting infection from others must exist almost daily. We have experimented considerably with fluid extract of ipecac as a local application made by the patient for the purpose of preventing reinfection, and have learned that not only will it theoretically prevent reinfection, but it will actually destroy the amebæ present in many early lesions. The proper method of using it seems to us to be to brush the teeth in the usual way to clean, and then to apply one drop of fluid extract of ipecac to the wet brush and brush again. Force some of the solution between the teeth and spit out the excess, but don't wash it out. This ought to prevent the disease in those who haven't it, and, in the light of present information, all persons now free from the disease should use this



specific, either in this form or possibly in some other form, as a prophylactic, instead of the many commercial preparations now in use.

- REFERENCES.—1. *N. O. Medical and Surgical Journal*, Vol. LXVII, No. 5, p. 456.  
2. *Dental Cosmos*, Vol. LVI, No. 8, p. 948, etc.
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### DISCUSSION.

DR. CHAS. N. GIBBONS (D. D. S., guest): As president of the First and Second District Dental Society, I wish to thank the Orleans Parish Medical Society for their invitation and privilege of being present to hear Drs. Bass and Johns on this important and interesting subject.

I want to report one particular case, chronic or of long standing, in which I had injected emetine and gave careful instrumentations with the continued flow of much pus. Teeth quite loose, with one very much elongated. The elongated tooth was extracted, and scaled perfectly, nerve removed and root canal filled. The alveolar socket was deepened, necrotic tissue curetted. The tooth replaced with splints. The result is very gratifying up to the present time, though the splints are still in place. I will report the final result later.

I believe that emetine will materially aid in the prompt healing in this class of cases. I do not believe in the use of emetine in cases of long standing, without some instrumentation and the removal of the necrotic tissue.

DR. J. J. SARRAZIN (D. D. S., guest): True it is, as the essayist portrays, that toothpicks frequently produce abrasions which offer ingress to bacteria, and that the toothpick habit should be discouraged on account of its tendency to help the breaking down of healthy gum septa; yet the etiology of Rigg's disease requires no toothpick as a factor. Unless frequently and thoroughly broken up by proper mouth hygiene, crowned by germicidal action, inspissated mucus agglutinates at teeth necks, especially between them. Into films thus formed, dead epithelial surface cells and lime salts from the calco-globulin of the saliva deposit, while the concretion thus formed is charged with a mixed variety of septic micro-organisms, the pabulum for whose growth is enhanced by fermenting starchy meal remnants and decomposing animal particles therefrom. Thus we have, at the same time, mechanical irritation, as the salivary calculi increase, and venous congestion of soft mucous tissue being

infected thereby, receding as this tartar develops, and the calculi continue to develop and impinge on the gums. The mucous tissue tumefies, and its swollen edges form false pockets filled with pus, although, in this acute stage of the disease, no true deep pockets are yet present along roots and into their sockets. The periosteal membranes swell from inflammation; teeth are sore and appear loose, although this is not the looseness of infected cementum into carious alveolar sockets. It is in this phase that surprisingly rapid improvements manifest as the result of removing thick tartar deposits and applying some mouth hygiene to mouths previously neglected. Later, if the conditions just described have not been corrected by timely treatment, a chronic form is reached. Congested capillaries, by exuding against roots a serum charged with lime and soda salts, form serumal calculi thereon, the pores of which are infected mainly, but not entirely, by streptococci in pockets deepened at that time by periodontal tissues breaking away from root necks as a result of the continued process of infected congestion. Then starts the caries of alveolar walls, ultimately leading to the shedding of roots. This is the chronic picture. It is the one which resists casual treatment and claims all the resources of skill and judgment, since not even granular cicatricial tissue may be expected to imbed its fibres in cementum unless the infected lacunæ thereof have been reopened and freed of bacteria. It is cases of this class in which I have selected the emetine experimentation, because their several lesions could not mislead observation. Certainly, I have no intention to parallel those few cases with the couple of hundred observed by the essayist, but in no such chronic case have I obtained any result from carefully followed emetine technic unalloyed with other medication, while, in many cases of the acute type, the remarkably rapid improvements have shown as usual, which would have been ascribed to emetine treatment if it had been there employed.

DR. J. FRANK POINTS: From what I have learned through Drs. Bass and Johns' paper concerning the use of emetin in pyorrhœa alveolaris, I heartily approve of the use of the drug, and I desire to commend Drs. Bass and Johns most highly for their admirable work in discovering a cure for this disease. Gentlemen, I congratulate you.

DR. P. B. SALATICH: If emetine and ipecac will do what Dr. Bass claims, then we have a valuable means of relieving or curing several general manifestations, of local foci of infection, as in joint

or heart involvement due to absorption of pus or cocci from such foci.

DR. RANDOLPH LYONS: Several members of my own family have been under Dr. Bass' care, and in their case the emetine treatment has produced strikingly good effects. The possibility of a relapse due to the presence of encysted forms must be considered as in dysentery. By the subcutaneous use of the drug the amebæ in the tissues are destroyed. In certain instances where pockets exist the local use of the drug should be combined, as originally employed by Smith and Barrett. The use of fluid extract of ipecac on the tooth brush should prove of great benefit as a prophylactic and preventive of relapse.

DR. C. L. ESHLEMAN: Dr. Bass seems to have laid a good deal of stress on the effect of foods which lodge between the gums and teeth. Does he think that this is a mode of infection? If so, what foods contain the amebæ? Is it the green vegetables which have been infected by water? I have Riggs' disease, and I expect to make myself Dr. Bass' two hundred and first case. I know he will cure me, but I desire to know if certain foods will be apt to re-infect me.

DR. C. EDMUND KELLS (D. D. S., guest): I have been out of the city for some time and have had no experience with the treatment. I am glad to hear of the good results achieved, which will no doubt benefit to a great extent the 30,000 dentists in this country.

DR. C. C. BASS (closing): I would like to correct the impression that there is a chronic or acute differentiation of Riggs' disease. The reason that the chronic cases do not heal is due to the continued presence of the necrotic tissue. It takes rather a long time to heal them when the tissues are necrotic. If the peridental membrane is destroyed, only nature can remedy same. The plan would be to remove the tooth down to the place where the destruction has not occurred. Removing of the scales on the teeth and cleaning the gums would be very beneficial. However, I feel a doubt whether it would make any difference or not by the removal of such an accumulation.

I do not know at present any source of infection, but same might come from a damaged tooth-paste or other infective objects. The amebæ in the mouth become infected, and the infection is no doubt transmitted from one individual to another.

**ACUTE SUPPURATIVE OSTEOMYELITIS.\***

By JOHN F. OECHSNER, M. D., New Orleans, La.

Between the years 1906 and 1914, during which time the history records of our Charity Hospital have been more accurately filed, there appeared a total of 272 cases of osteomyelitis, of which number 48 are classified as acute and 224 as chronic. The acute cases are those of two months' or less duration, the chronic ones over two months.

The acute cases usually entered the hospital from four days to four weeks after the onset of the disease. The differentiation between the acute and chronic cases is more or less irregular and arbitrary, and dependent upon the diagnosis of the individual observer.

For all practical purposes, it were better that these cases be classified as subacute, and, in practically all, the golden opportunity for radical interference had been lost. Were this classification followed—and it is suggested only in the interest of the patient, and not for scientific accuracy—there would appear in our Charity Hospital records no cases of acute osteomyelitis. Considering the fact that most of our free hospital cases are not seen very early in their afflictions, this might not seem so bad; but I fear that our records of private hospitals do not make a much more favorable showing. All of which demonstrates one of two things: either we are not called sufficiently early to these cases, or we do not recognize them when we do see them. To those of us who are privileged to see the ravages to bone and joint, and not infrequently the danger to life itself, the importance of an earlier recognition of this not infrequent condition, and its only method of attack, become daily more impressive. While not universally recognizable as a diseased vermiform appendix, the determination of an osteomyelitic focus does not any more permit of conservative or temporizing treatment than does a ruptured appendix, or one threatening rupture. On account of the attention which it has attracted in the profession and among the laity, to-day nearly every practitioner of medicine can either diagnose or strongly suspect the existence of a diseased appendix, and let us hope that the same may soon be true of osteomyelitis.

Probably 90 per cent. or more of the dire consequences following

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an infection of the bone marrow are dependent upon the management of this infection during the first forty-eight hours of its existence. After this, we are confronted more with the results of the septic invasion, so far, at any rate, as the bone is concerned, than with the invasion itself. The circulation of the medullary canal is particularly free, and the journey of a septic focus is simply a matter of physics and mechanics; the same applies to the method of invasion. Lexer, in his interesting researches on the circulation of the bone of growing children, shows three sets of blood vessels: (a) those supplying the epiphyses; (b) those the diaphysis, the main nutrient arteries and their branches; and (c) a set between these two, the metaphyseal. The anastomosis between these sets is not free, and hence the greater danger of the location of a septic embolus at the terminal end. In view of the very free circulation of the diaphysis, and its comparatively large blood vessel, the nutrient artery, the current of a pyogenic infection, is easily explained, and, on account of the practically blind termination of this diaphyseal group near the epiphyseal line, the almost universal location of the septic focus at this point is understood. Again, on account of the lack of anastomosis between these three groups of blood vessels, can be explained the usual escape of the epiphysis, except late in the disease, from infection. Of course, we except those cases of acute primary epiphysitis, with which the present paper does not propose to deal. Lexer, from these same observations, determines the comparative immunity from osteomyelitic infection enjoyed by those who have attained full-bone growth, so that the disease is one of childhood and early adolescence.

The method of invasion is essentially through the blood current, truly hematogenous in character. Injury, either direct or through thermal or other influences, is only a predisposing factor, and not causative. Boils and carbuncles are a very common cause, and the microorganism most commonly present is the *staphylococcus aureus*. Frequently, as in the case of the infectious arthritides, the primary focus is not determinable.

It is with the symptomatology, diagnosis and treatment, however, that we are most concerned, and which is of greatest importance to the general practitioner and to the patient.

**Symptomatology:** While there are those authorities who would make the diagnosis of osteomyelitis comparatively easy, there are others who think it difficult.

There is a fairly constant group of symptoms, if we will but diligently search for it, and remember that such a disease as osteomyelitis exists. Excepting those cases of profound toxic infection, with delirium and unconsciousness, where the patient can be of no assistance to us in the determination of his malady, and those too young to direct attention to the seat of pain, the diagnosis should be comparatively simple. Certain things to remember are:

1. The disease occurs most frequently in the long bones, the femur and tibia being most often involved.

2. Pain is a constant symptom, and is definitely located near the epiphyseal end of the bone, in the diaphysis.

3. The disease occurs most often in those old enough to direct attention to their seat of pain.

4. The picture is one of sepsis, fever of greater or lesser intensity, with or without a chill preceding, and the leucocyte count is high, running anywhere from 18,000 to 40,000, or even 50,000.

Corroborative symptoms, though of secondary importance, are external swelling, sensitiveness to continued pressure over the site of the lesion, and sensitiveness to bone percussion. These may be absent.

For purposes of illustration, we have selected a few histories:

1. E. F., white girl, 13 years old, was admitted to hospital March 10, 1908. Present illness: About two months ago patient went to bed one night with fever. After lying down about one hour began to get pain in left lower thigh. Next morning pain had increased and fever had gone up some. On third day fever and pain were about the same. About a week later could notice swelling in leg, and about this time patient began flexing the leg, and since then has been unable to straighten it. Ten days after the illness began patient developed a profuse diarrhea. A physician was called, and he said patient had typhoid fever. Fever and pain disappeared about two weeks previous to admission to hospital. Physical examination shows an emaciated and poorly nourished child; a hard mass surrounds the lower one-third of femur.

Operation, March 14, shows the femur necrosed for one-half its lower extent. Blood examination during her stay in the hospital shows a negative Widal.

2. W. W., age 3, colored, admitted July 13, 1908. Present illness began about two weeks ago, when child began to suffer with pain in leg; shortly after that it began to swell, and was hot to touch. Child developed temperature. Operation showed dead bone and the scraping showed the staphylococcus.

Three cases at present under observation and treatment show some very interesting and instructive X-ray findings, slides of which will be exhibited to-night, and give the following histories:

3. Thos. Berdeau, 4 years, admitted August 5, 1914. Complaint, swollen

left leg. Present illness: One week ago child fell from bicycle to pavement; at time of fall, did not complain, but three days later went to sleep, and two hours after awoke with high fever and crying with pain in leg. Four days later child's leg began to swell and look inflamed. Ran a temperature from 101° to 104°. Physician was called, and advised poultice and that child be brought to clinic. August 5, full incision was made at outer aspect of tibia; abscess freely drained. Iodoform pack. Leucocyte count of 20,000. Operation for removal of dead bone since.

4. Gladys Mitchell, white, age 6 years, entered September 4, 1914. Swollen right knee. Eight days previous to admission, had a chill and fever, and immediately began complaining of pain in right knee; has been having fevers ever since, higher during day. Mother thinks she had a fall three months previously, and thinks present condition is due to same.

Temperature on admission, 101°, ranging between that and 103°, typically septic. Physical examination: Well developed and nourished. Heart and lungs negative. Swelling and redness of right knee to middle third of thigh. Knee very tender and skin red. September 4, date of admission, total white count 30,000. September 5, knee aspirated; no pus from knee-joint. Incision over external surface of thigh three inches above knee-joint, and pus obtained; microscopic examination showed staphylococcus aureus. Wound has been discharging pus since this date. October 15, 1914, incision over metacarpal bone for swelling, which developed a day or two previously. Cultures from finger show staphylococcus aureus.

5. Gladys Spears, white, age 6, admitted May 16, 1914. Three weeks previous to admission, a buggy wheel ran over the left foot near the toes, causing a lacerated wound. Five days later child began to complain of pain in the lower one-third of the left thigh. Three days later patient had a chill, followed by fever and pain, which have persisted until admission.

Child looks septic, is restless and irritable; pulse fast and not good volume. Left thigh swollen, red, and very painful on manipulation; child cries and objects very strongly. May 17, 1914: Operation, Dr. Brown. Ether; incision; drainage. Child almost pulseless all day. Incision made over outer aspect of thigh through fascia lata. On incision, soft parts, pus escaped in considerable quantities. Dr. Brown says he could palpate a hole in bone through to canal, so bone not trephined nor chiseled. Smears show staphylococci; staphylococcus aureus in cultures.

It will be observed that there is a uniformity in these history records—pain definitely localized and a picture of sepsis. Had a leucocyte count been made early, it would have shown high in every case. Yielding to no one a greater expression of obligation to the X-ray in its invaluable assistance to me in the matter of diagnosis, we must yet confess its limitations. In the matter of diagnosis of early osteomyelitic infections it is of negative value, or at least can be of corroborative service only upon the most scrutinizing examination, and only then in consultation with the clinician and his clinical picture. The lantern slides shown to-night are those of the three

last cases mentioned, and were all taken after a diagnosis of osteomyelitis had been clinically made.

No. 1. Front view of Thos. Berdeau. X-ray taken August 4, 1914. X-ray report: "Bone of leg negative."

No. 3. Same case. Picture taken October 5, 1914, two months after first picture. X-ray report: "Osteomyelitis head of tibia." The plate shows distinctly necrotic changes in the head of the bone.

No. 4. Gladys Mitchell, front view. Picture taken September 4, 1914. Radiograph shows no evidence of osteomyelitis. Diagnosis by radiologist: "Arthritis of knee-joint."

No. 6. Gladys Mitchell. Picture taken October 5, 1914, practically one month after preceding, shows well-marked sequestra and other evidences of osteomyelitis.

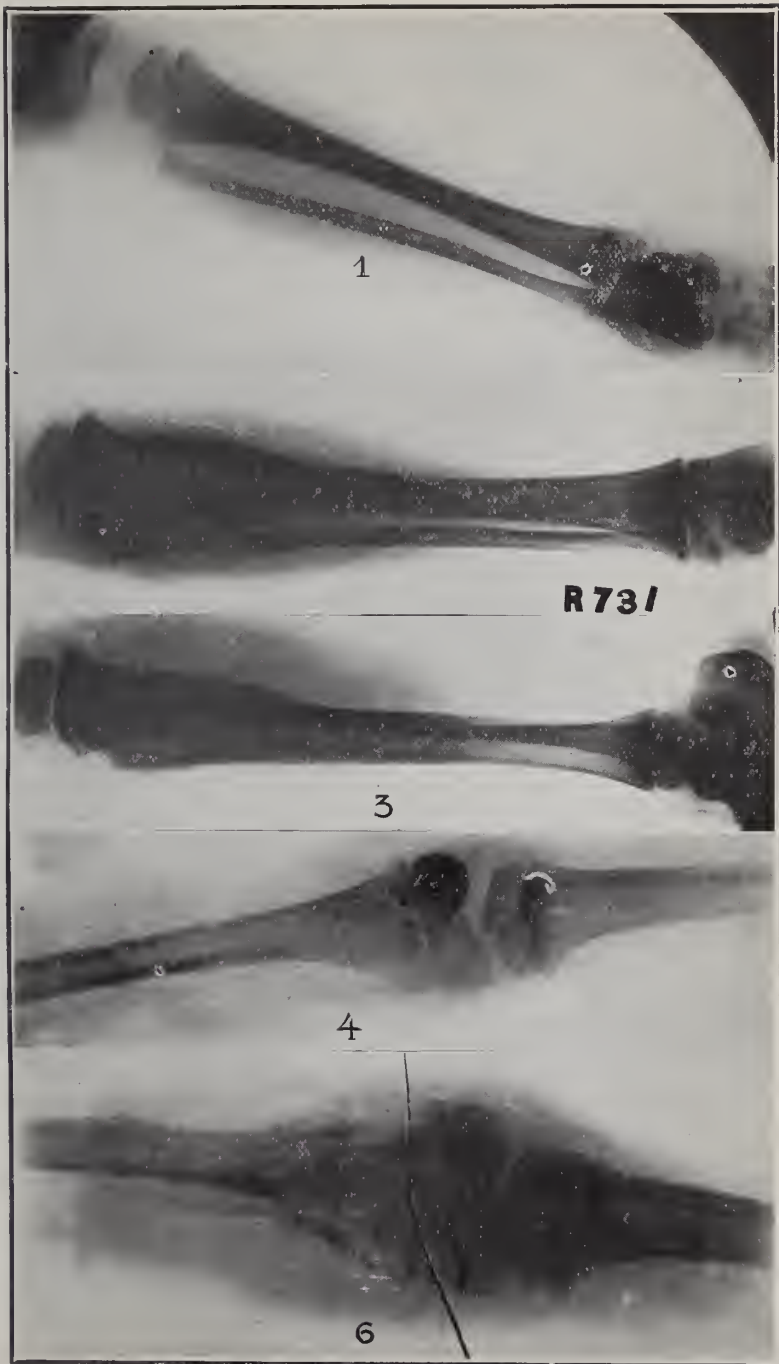
No. 9. Gladys Spears. Picture taken May 26, 1914. No report from radiologist. Plate shows nothing of an osteomyelitic nature.

No. 10. Gladys Spears. Picture taken August 5, 1914, a little over two months after preceding. X-ray report: "Several necrotic areas at lower border of diaphysis, which is displaced anteriorly to lower epiphysis. The skiagraphs are very suggestive of diaphyseal tuberculosis, rather than osteomyelitis." Clinically, this case is essentially an acute pyogenic bone infection. The septic condition was pronounced, and the child almost in extremis, permitting of only the most hurried surgical intervention, the rapid evacuation of the pus. "Smears show staphylococci; staphylococcus aureus in cultures."

No. 8. Our last picture shows a metastatic infection in our second case. X-ray diagnosis: "Bony changes, involving second metacarpal bone and first phalanx third finger, suggesting tuberculosis." This metastasis occurred more or less insidiously, apparently without pain, and our attention was attracted to the swelling, which was opened, and the pathologist's report showed staphylococci.

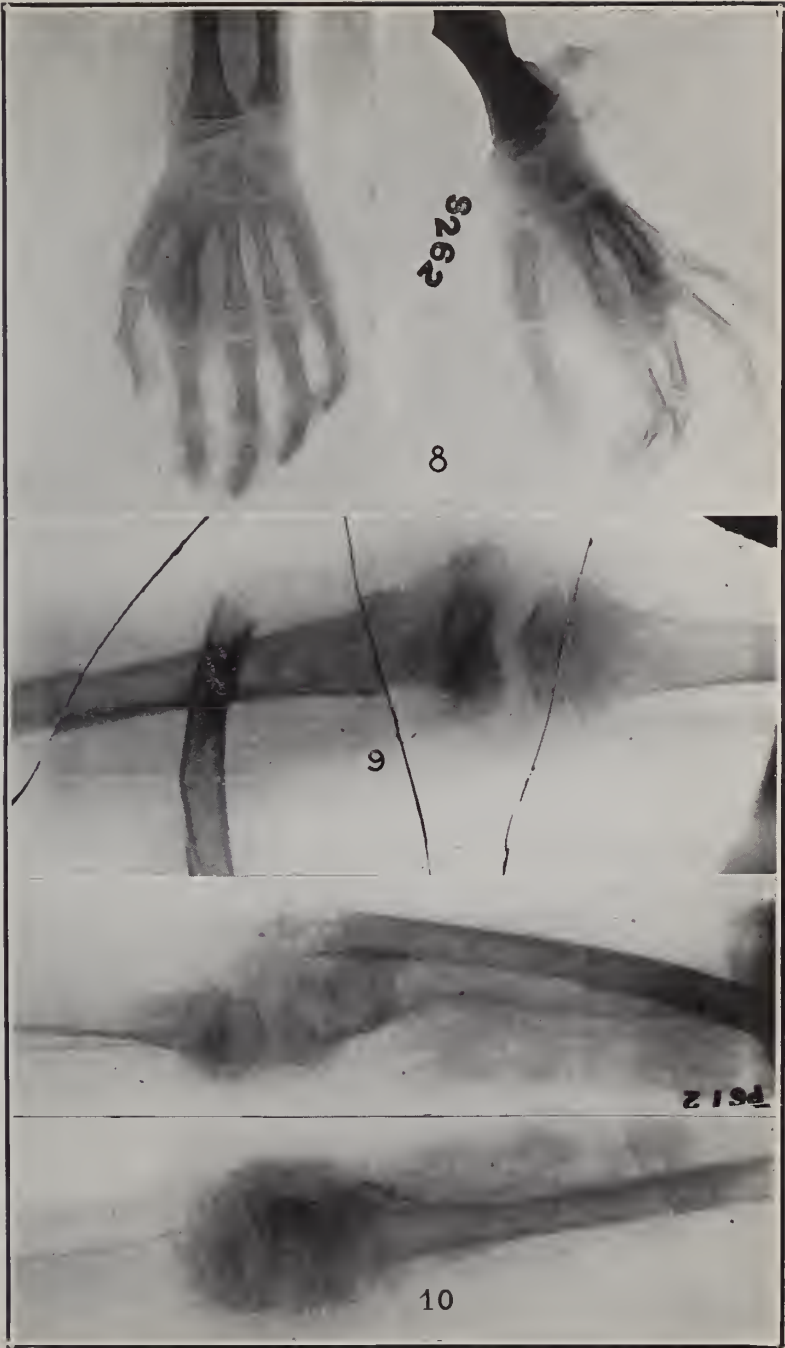
**Differential Diagnosis:** One of the diseases with which osteomyelitis is most frequently confused is rheumatism. It were far better for our patients were this vague and indefinite term absolutely eliminated from our medical literature. Granting the possibility of its existence as an entity, it is never a monarticular affection, and movement of the joints produce pain. In osteomyelitis, movement of the limb *per se* produces no pain. There is pain, unaffected by movement, usually no sensitiveness, and whatever pain may seem to be induced by movement is rather of a psychologic nature. Confusion with typhoid fever should never be possible except in those fearfully toxic and fulminating cases above referred to; typhoid is gradual in onset; osteomyelitis usually sudden. Yet, in two cases which subsequently came under our care, was this diagnosis made.





ILLUSTRATING ARTICLE OF DR. J. F. OECHSNER.





ILLUSTRATING ARTICLE OF DR. J. F. OECHSNER.



It is with the cases of acute epiphysitis and acute arthritis that error is most likely to come to the careful observer. The joint, neighbor to an osteomyelitic infection, is not infrequently involved in an effusion, non-septic in character, but, if doubt exist, there can be no harm in the aseptic trephining of the bone.

I do not think that I can recall ever having seen a case of primary suppurative periostitis in a child; I do not think the condition exists. The periosteal invasion is always dependent upon a primary infection of the bone itself, or secondary to syphilis or some other blood dyscrasia.

**Treatment:** The diagnosis of acute suppurative osteomyelitis once established, there is no alternative in treatment. The infection is of an acute virulent type, capable of untold ravages, and can be met only by heroic measures. The comparatively free atrium of infection, the nutrient artery, the anatomic construction of the circulatory apparatus of the marrow of the bone, with its freely interlacing blood vessels, permitting of a ready dissemination of the infectious agent from one end of the diaphysis to the other, and the fact that "inflammatory products confined under the pressure of the unyielding bone, rapidly destroy the medulla," call for measures that will permit of a free egress of the infectious material. This can be accomplished only by the removal of a greater or lesser section of the compact layer of the bone. Frequently a small trephine opening suffices; at other times the opening must be made larger with chisel or rongeur. The spread of the infection is usually very rapid, and, for this type of surgery to show its best results, the disease must be attacked during the first forty-eight hours and preferably during the first twenty-four hours. Granting an error in diagnosis, far less harm is done by an aseptic opening of bone in an occasional negative case than the far more common failure to open up those of a positive nature. Bone is very tolerant of aseptic traumatism, and we have several times made multiple openings in a single bone in search of an infection without any resultant damage.

#### DISCUSSION.

DR. WM. M. PERKINS: As Dr. Oechsner said, we must explore the cavity of the bone in cases where we suspect osteomyelitis, especially as its ravages are so severe. I recall a case recently, with pain, fever and slight tenderness over tibia. I trephined under

cocain, and the patient soon got well. Dr. Oechsner stated that the bony destruction is often due to the fact that the infection is confined by the bony walls, hence we get pressure necrosis, plus toxic necrosis. It is only by pointing out the terrible end results of these cases that we can emphasize the necessity of early intervention in so-called rheumatism and prevent the ravages of osteomyelitis.

DR. E. S. HATCH: Am I right in understanding Dr. Oechsner to say that osteomyelitis can exist without X-ray proof?

DR. OECHSNER (in answer: ) Yes, in an early case.

DR. HATCH: I cannot imagine a case in which we make a diagnosis of osteomyelitis clinically, and then fail to see the bone condition in a good radiograph; in fact, I am sure that I can show bone disease in any case where osteomyelitis can be diagnosed clinically, and in some cases where we are unable to make the diagnosis without the help of the X-ray.

DR. L. J. GENELLA: Dr. Oechsner has fallen into the same error that many operating specialists too frequently make. A paper by a specialist always contains a criticism of the general practitioner, because he neglects these osteomyelitic cases so long. This whole attitude is wrong, because it has always taken too much for granted.

The first error the specialist will make in these cases is in forgetting that bacterial invasion is normal clinically in all diaphysis, and needs only a slight departure from normal to constitute an excellent focus for infection. The second error, and the most frequent one he will make, is, given an osteomyelitis in a chronic case, he erroneously concludes that the osteomyelitis was always there. Take a child with, say, a chronic case of streptococcal infection that has continued for months, or even years; if at any time this child will show a sudden rise of temperature with a localized bone pain, and he should fall into the hands of an operating specialist, at the time the diagnosis of osteomyelitis is an easy and correct one, but the conclusion that the myelitis was there in a destructive degree and that the myelitis was the original cause of all the trouble is pernicious and erroneous. The best parallel in this one-sided view is to consider the perforation that calls the surgeon to the bedside of the ulcer case as the original cause of the months of morbidity that has preceded this crisis.

The best protection the general practitioner has against this all too frequent accusation is to warn all septic cases that at any time

a localized osteomyelitis may be inaugurated and need surgical intervention.

DR. C. L. ESHLEMAN: I would like to hear from the radiologists. Can they positively tell osteomyelitis from other conditions in every case? I have a case at present causing me worry. A woman, 52 years old, never married, no previous illnesses. She complained of "rheumatism" in left shoulder. I found a fusiform swelling in the upper part of the left humerus. No involvement of the joint or the soft parts. Very painful on pressure; slight local heat. Three possibilities occurred to me: A malignant growth, syphilitic osteitis, and osteomyelitis. The white cells numbered 5,000; Wassermann negative. It had increased none in size in four months. There was no glandular involvement, and I did not think it could be malignant. She has been on potassium iodid and mercury for several days and is improved.

DR. E. DENEGRE MARTIN: I agree with Dr. Oechsner about the X-ray; it does not show the lesions in early cases, unless pus is present. Again, we find albumin casts in the urine in these profound aseptic cases. I made a diagnosis in three cases without the X-ray.

DR. OECHSNER (in closing): Regarding the remarks of Dr. Hatch, I believe we can find in a great many cases some focus on the X-ray plate, if we search diligently for it. In my paper I gave the radiologist's report *verbatim*, showing that the focus, if it were there, had escaped him. In view of this difficulty, I say that we should not depend upon the skiagraph for a diagnosis. Dr. Jacoby is right in saying that the white blood count is usually high. I have seen it as high as 50,000. As to Dr. Maes' remark relative to trephining the bone, while he makes the matter of getting into the bone very intense, and properly so, still the work should be done very aseptically, and is hardly to be recommended as a home treatment, except in emergencies. Exposure is a predisposing cause; the direct infecting microorganisms are present somewhere in the body. Dr. Eshleman's case is probably not one of osteomyelitis, but rather some secondary condition. Involvement of the kidneys, as mentioned by Dr. Martin, is due simply to the profound toxemia, and is not characteristic of osteomyelitis. The point I wish to stress is the simplification, as far as practical, of the symptomatology of acute osteomyelitis, so that the diagnosis can be made by the

family doctor. Pain at the extremity of one of the long bones, with fever and a high leucocyte count, in a child or adolescent, make the trephining of a bone where the pain exists imperative.

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## TWO AND A HALF YEARS' EXPERIENCE WITH THE PHENOLSULPHONEPHTHALEIN TEST.\*

By SAMUEL LOGAN, M. D., New Orleans.

In presenting this report for your consideration this evening I feel as if an apology were due for lack of being able to offer anything new. However, it is submitted because of the period of time covered by this experience, the variety of conditions in which the test was tried and the conclusions which we have thought capable of being drawn therefrom. It is, therefore submitted in the hope endeavoring to bring out the collected experiences of the members, of again focusing the attention of the Society on this test and with the end of definitely concluding as to the benefits we may hope to derive from this method.

The basis of this report rests on work done with the phthalein test from January, 1912, up to the present time. In order to exclude, as far as possible, any inaccuracy or confusion, no test has been counted in this series save those done and read by either Dr. Hume or myself (most by both of us). In all, this aggregates roughly 425 tests, done on about 175 different cases, these being equally divided between medical and surgical conditions. All of these cases have been checked by urine examinations done by us at the time the tests were made, and, as far as has been possible, all of these cases have been carefully followed from a clinical and urinary standpoint up to the present time; therefore, though the entire number be small, we feel that it is more than compensated for by a more careful study of each individual case, and a greater exactness in each individual test. Likewise, the cases reported comprise the most varied pathological conditions, surgical or medical, in which a study of the renal function is in any way worthy of consideration.

The time at our disposal to-night is too short and the test is too well known for us to review it in detail; therefore, for the purposes

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of discussion, our experiences can be broadly classified under three headings:

- 1st. Experiences With Technic of Test.
- 2nd. Experiences as to Value of Test in Different Conditions.
- 3rd. Experiences as to Fallacies or Errors Liable to be Encountered.

With your permission we will take up the discussion of these headings separately.

1st. Experiences With the Technic of the Test.

ACCURACY: Very early in the work we found out that it was absolutely necessary to cultivate a most scrupulous exactness in making the test. Even the slightest error of giving or of dosage was found to cause a marked variation in the subsequent readings, and, as our experience with the method grew, we found that, unless our test was exactly done, the resulting information was always open to error or doubt.

We found that, as a rule, the usual sources of error occurred from two factors: first, a faulty administration of the phthalein; and, secondly, a faulty collection of the urine.

(a) *Faulty Administration*: One of the first errors we found in our use of the test was the employment of an unsuitable hypodermic syringe in giving the phthalein. For instance, the ordinary hypodermic syringe with the asbestos pack and screw-on needle invariably gave incorrect results, due possibly to absorption of the dye by the pack, or to leakage between the needle and the syringe. This type syringe was also found frequently to have a back-leak between the piston and the barrel of the syringe, so that part of the dose would regurgitate and be lost. Again, we found that the syringe of the ordinary type graduated in minims would not do, because of the necessity of measuring exactly one c. c. of the phthalein as a dose. In actual practice, we found that an error of one minim in the dose meant, roughly 6 to 10 per cent. error in the reading.

From this, we soon came to the conclusion that the ideal syringe for this purpose should be one with a solid piston, square end, preferably all glass, graduated in c. c. and with a friction-jointed needle of at least one and one-half inches in length. With this type syringe we could be sure that the exact amount of phthalein was injected, with no leak, either in the piston or at the needle joint. The syringe we used for all of these tests was the Burroughs-Welcome, all glass, c. c. syringe, with a platinum needle of one and one-half inches length and No. 22 gauge.

In this connection it should be mentioned that the injections of the dyes should always be made intramuscular rather than subcutaneous, because of the fact that there is better absorption from the muscles than when the dye is put nearly superficially under the skin.

(b) *Faulty Collection of Specimen:* Simple as it might seem, a great deal of difficulty was experienced in the proper collection of the specimens, due to the fact that the average patient seemed incapable of comprehending the need of accuracy in voiding at exactly the specified time. This source of error had to be watched very carefully, and in numerous instances tests had to be repeated. It should always be remembered that in cases of doubt it is best to keep the patient under personal observation during the time necessary for collection of the specimen, so that this source of error may be eliminated.

**TIME OF APPEARANCE:** At the beginning we were very careful to make an exact note of the time of appearance of the drug in the urine, but as our experience grew we found this was not absolutely essential, except in cases where we were making differential tests between the kidneys; therefore, we adopted the addition of ten minutes to the time of collecting the specimens, this ten minutes being taken as the average time of appearance of the drug when the dose was given intramuscularly. We were very much gratified to find that the originators of the test had arrived at about the same conclusion, and were adopting the same method. This does away with the necessity of catheterizing the bladder in a number of cases to watch for the appearance of the color, a procedure often repugnant and painful to the patient.

When the drug is given intravenously the time of appearance was found to vary from two to eight minutes normally. Strange as it may seem, we have not found in these cases that the addition of ten minutes to the time of collection made any perceptible difference in the readings, so that in the tests done intravenously we made the same ten-minute allowance for appearance without in any way influencing the final readings.

**READING OF THE TEST:** Aside from the ordinary precautions of exactness in diluting and preparing the specimens for reading, certain unavoidable errors were found to occur. The most frequent of these is a brownish hue met in a number of cases, which it has been impossible to account for. At first this was thought to be due to the presence of blood or pus in the specimens, but it was fre-

quently met with in perfectly clear urines. This brownish hue always renders the reading difficult, and is a possible source of error whenever it appears. In these tests we have learned to read the result more by a comparison of the density of color rather than by its shade. In this way, we have been able to approximate very closely the proper reading.

Frankly bloody urines are practically impossible to read with any degree of accuracy, even though the urine be boiled and filtered to get rid of the blood. All tests made in such cases can only be considered approximately correct, and never exact.

Experience shows us that it is much better to do all readings by daylight rather than by an artificial illumination, although a fair degree of efficiency can be obtained after an experience with the latter. Specimens can be kept over night by the addition of either acid or alkali to the urine, which additions seem to preserve the dye perfectly. We have preferred the alkali.

#### 2nd. Experiences as to the Value of the Test in Different Pathologic Conditions.

Our experiences in this line have been too large and varied to allow of our going into detail in the space of time at our command to-night; therefore the statements about to be made will seem more or less dogmatic in character.

Our summed-up experience would be that, as an almost unvarying rule in those cases where the need of an exact knowledge of kidney functional capacity is the greatest, there the phthalein test shows its greatest reliability and value.

The best results have probably been in the following conditions:

(1) *Impending Uremias* (Pre-uremic state). It seems to us that in this class of cases the need for knowing the true functional capacity of the kidneys is perhaps greater than in any other conditions with which this one may be confounded. Here is where the phthalein test seems to give its prettiest result, and where it may be more relied on than in any other place. We can do no better to show this than cite two or three illustrative cases:

(1) N., February 15, 1912. Supposed renal dyspnea. Blood pressure, 220; albumin, 1 gram (Esbach); numbers of hyalin and granular casts; marked dyspnea; heart negative.

Phthalein, 55 per cent. (two hours).

Patient O. K. when last heard of. Walked out of hospital.

(2) Z. May 24, 1913. Uremia. Ill three months with weakness and

vomiting and slight edema; at work all this time, up to three days before, when had to take to bed on account of weakness. Blood pressure, 130; albumin, heavy trace; numbers of casts; total amount, forty ounces in twenty-four hours.

Phthalein, not even trace in three hours.

Patient dead four days later.

(3) Female, 40. Ascites. Blood pressure, 240; albumin, 9 per cent. (Esbach); numbers of casts; daily average (five preceding days), six to eight ounces. Thought uremic.

Phthalein, 66 per cent. (two hours).

Recovery after recuperation from alcoholic debauch.

(2) *Nephritis* (Acute and Chronic). Our experience, on the whole, in this condition, has been that great reliance can be put upon careful phthalein tests frequently repeated, as they are probably the most valuable prognostic guides at our command. By their aid we are enabled to reassure many a frightened patient as to the extent of his trouble, and also are in a position to better outline the treatment necessary for him. The superiority of the test over a simple percentage of albumin present, or the number and kind of casts in the urine, is very evident to the careful observer. To illustrate, we would quote the following cases:

(1) R., February 17, 1912; age 29. Albuminuria; blood pressure, 145; rare casts. In a blue funk, because he has just been turned down by a life insurance examiner. Until this time he never knew he was anything but a well man.

Phthalein, 75 per cent. (two hours).

Patient now O. K. and in better health than ever. The albumin is still present and the blood pressure is the same. He is no longer the least bit worried about his condition.

(2) B., April 8, 1913; age, 55. Nephritis for thirty years; told by my father twenty-eight years ago that he could not live two years. Albumin heavy; swarms of all kinds of casts; syphilitic and a heavy alcoholic. Blood pressure, 165.

Phthalein, 48 per cent. (two hours).

Patient afterwards given neosalvarsan in small dose without any effect on the kidneys.

(3) *Acute Kidney Infection and Pyelitis*. In this class of cases it has been our experience that infection of the kidney *per se* does not cause any material decrease in the amount of phthalein output. This point has been found of great value as an aid to diagnosis between these simple infections and a true pyelo-nephritis with a loss of kidney substance, and a consequent decrease of kidney functional capacity. In this latter class of cases there is always a marked reduction in the phthalein output whether the condition be bilateral or unilateral.

(4) *Surgical Conditions.* Valuable as the test has proven in medical conditions, it has proven, if anything, even more so in the surgical ones. It cannot be too strongly urged as a routine pre-operative procedure in all cases where there is any doubt whatsoever as to the kidney capacity. It will be found far more valuable than the ordinary routine pre-operative urinalysis, on which very little reliance, as a rule, can be placed. The simplicity of the test and the slight inconvenience to which the patient is put by its employment are strong arguments in favor of its adoption by the surgeon as a routine procedure.

While we have nothing positive to state as to the establishment of a more or less positive danger limit as expressed by the phthalein test, we feel that it is but a question of time before we will be able to definitely assert which cases can and which cannot be safely operated from the kidney-function point of view. This, however, will not come, save with more experience than we at present have at our command.

The chief surgical conditions in which the phthalein test has been found of particular value are the following:

(a) *Vesical Obstructive Conditions, with Long-Continued Back-Pressure on the Kidneys,* it was primarily for this class of cases that the phthalein functional test was devised, and it has been markedly of value ever since. It illustrates strikingly, if used judiciously, the fine results obtained by the relief of the back-pressure, either by operative drainage or by retention catheter. It also shows better than any other known test the remarkable recuperative powers of these kidneys. Should the phthalein output not increase following a period of drainage of the bladder, it may be taken that the damage to the kidney substance has been an exceedingly grave one—so much so, in fact, as to render it very questionable as to the advisability of operation. To illustrate:

Male, 55, November 16, 1912. Hypertrophy of the prostate, with residual of 40 ounces. Marked uremic and pressure symptoms for past two or three months (nausea, restlessness, drowsiness, thirst, polyuria, with very low specific gravity).

Phthalein showed none in first hour; trace only in second hour.

Ten days later (retention catheter permanently during the interval): Phthalein test, 27 per cent. (two hours).

Two months later (permanent suprapubic drainage after the last test): Phthalein, 43 per cent. (two hours).

Patient to-day well and, from a kidney viewpoint, in splendid shape.

From our experience in these prostatic conditions we have been able to formulate the following rule:

**Every prostatic case should be tested by the phthalein frequently prior to operative procedures, and the latter are only to be done after the kidneys have recovered to the highest degree of function as indicated by the test.**

(b) *Surgical Kidney.* (Stone, pus-kidney, tuberculosis, neoplasm.) These conditions offer a most brilliant field for the use of the functional test, being the surest means at our command of determining the functional capacity of each kidney separately. It also is a sure means of formulating our prognosis in operative procedures of all descriptions, enabling us to accurately determine the ability of the kidney to stand surgical interference, unilateral or bilateral. In tumor cases with negative urinary findings, its diagnostic value is exceedingly great, being the more reliable the further advanced the condition.

The subject, unfortunately, is too large to discuss in detail to-night. We, therefore, have summed up our experiences in a series of axioms, more or less elastic, which are submitted as follows:

(1) Any obstruction to outflow of the urine (stone, ureteral kink, ptosis, etc.) invariably causes more or less delay in the appearance of the phthalein and a decrease in the output in proportion to the degree of obstruction present.

(2) The percentage of phthalein output is not necessarily in any proportion to the amount of pus or infection present in the kidney urine unless it be associated with an obstructive condition.

(3) Tuberculosis of the kidney invariably causes a decrease in the per cent of output out of all proportion to the extent of kidney area involved, even in the earliest lesions. This is a most suggestive diagnostic point.

(4) Reflex (sympathetic) interference of a diseased kidney with the output of its healthy mate has not been observed to any appreciable extent.

(5) Neoplasms and kidney cysts *per se* seem to affect the output and time of appearance only from the degree of cortex involved or through the production of an obstruction.

**3rd. Experiences as to Fallacies or Errors Liable to be Encountered.**

It must always be borne in mind that any functional test shows only the condition of the kidney at the time of which the test was done. This is a very frequently overlooked point. A test done

to-day is not good for one week later, if there has been any change clinically in the patient in the interim. The ease with which the phthalein test can be done allows of frequency of application, and this should be the rule whenever the case is to be followed for any length of time. A series of tests always is of far greater value than a single one.

When carefully done and carefully interpreted, we personally have found very few sources of error with the phthalein test. However, the following fallacies must always be borne in mind when one is employing this method:

(1) Conditions predisposing to slow absorption of the phthalein from the site of injection. Chief among these may be mentioned edema of the tissues, which, even if microscopic in character, is sufficient to cause a marked delay in absorption, and therefore a marked diminution in phthalein output. In cases of this character, this fallacy may be avoided by employing the intravenous method of injection.

We have at times thought that possibly hypotension could be supposed to interfere with the output of phthalein by causing a decreased absorption of the drug from the tissues. So far, we have not been able to prove or disprove this point, but it should always be borne in mind. Curiously enough, hypertension has not been found to be a source of error.

A third factor which has been reported by some observers, but which we have never personally met, has been a hypermeability of the kidney to the drug. This is possibly explainable either as a personal idiosyncrasy or an excessively rapid absorption from some unknown cause. In this class of cases, the phthalein reading will be invariably above normal, but so far as the true value of the test is concerned, it will usually be found to make very little difference in the end.

In concluding, we wish to emphasize the following points:

(1) Kidney functional tests are of absolute essential value to the modern diagnosis of kidney disorders, and frequently will be found of more reliability than the ordinary routine urinalysis.

(2) The phthalein test, because of its simplicity of performance, lack of discomfort to the patient, and high degree of reliability, is unquestionably the most preferable one for general use.

## DISCUSSION.

DR. A. NELKEN: I have been much interested in listening to Dr. Logan's paper. Those of us who have had experience with phthalein in testing kidney function, must agree with the conclusions that Dr. Logan reaches. It is probably the simplest of all the reliable tests at our disposal. Dr. Logan may have given the impression that the dose injected must be always 1 c. cm. The quantity injected does not matter, of course, provided exactly the same quantity is used in making up the standard solution, the test being altogether a quantitative one.

There is a tendency to follow the suggestion of Dr. Logan, and figure that the excretion of the drug begins ten minutes after the time of intramuscular injection. I believe that it is not correct to ignore altogether the time of beginning elimination in the urine. There can be no question that information can be gotten from that point. We must not forget that indigo-carmin and methylen blue are used in testing kidney function with the time of beginning elimination as the knowledge sought. Dr. Logan has referred to the difficulty often found in matching colors, due to the difference of shade between the standard and the urine containing the excreted dye. I have been forced, as he has, to judge in such cases by the density of the solution rather than by matching colors. In this connection, the recommendation made by the originators of the test, that with pus urine it may be of value to make up the standard with some of the patient's own urine, obtained before giving the injection of phthalein, is worth noting. It has, in my experience, simplified the readings in otherwise difficult cases. The test is of great value, but we must not use it to the exclusion of clinical evidence and unaided by other recognized methods of estimating kidney function.

DR. H. P. JONES: I would ask Dr. Logan if the drug affects the kidneys; also what is the approximate safety limit in considering surgical operations? And also in regard to the brown color he speaks of, I would ask if the patient had been taking any of the coal tar remedies?

DR. J. T. HALSEY: In confirmation of what the essayist has said, I wish to emphasize the prognostic significance of a good phthalein test. Where it is reasonably high, say 40 to 50 per cent., even if the clinical symptoms are severe, we can give a fairly good prognosis, provided the heart function is good.



DR. A. C. KING: I would ask if it is possible to use this test in giving a prognosis in threatened eclampsia?

DR. C. CHASSAIGNAC: There is one point which has not been mentioned. If the catheter is not used, it is impossible to make the correct estimation in men with residual urine. If it is a prostatic case, this precaution would, of course, be taken, but the condition may not be suspected; I have seen many such cases. If the urine is clear and the case is supposedly a recent one, we might easily overlook the presence of residual urine, if we did not look for it. I have seen such cases with a pint or more of residual urine.

DR. L. J. GENELLA: Does this drug have any laxative effects on the bowels?

DR. J. E. KERNEY (a guest of the society): This test originated accidentally. The discoverers were testing out the use of subcutaneous cathartics, and in their experiments with this drug found that the greater part was excreted by the kidneys. So impressed were they with this fact that they carried on a long and exhaustive series of experiments, first in a number of unusual cases, and found the results in percentage of excretions in the urine very constant and reliable. A series of human pathological cases were then taken, both medical and surgical, and in these destructive kidney cases a lower percentage as well as a delayed appearance time was universally noted, in degree corresponding to the amount of pathological change.

As regards technic of the test, I realize, as does Dr. Logan, there are many chances of error if one is not fully aware of the possibilities, and would mention the following points as most important:

The syringe in which the drug is administered should be very accurately calibrated; there should be no back pressure leak around the plunger, nor should a plunger of the asbestos type be used, for a certain percentage of the drug is absorbed in it. If given intramuscularly, one should be sure to use a sufficiently long needle, about one and one-quarter inches being most satisfactory, for if given in the fatty tissue the test amounts to nil; care should be used in pressing down over the point of injection on withdrawal of the needle; exactly 6 m. gm. of the drug should be administered, and not the full contents of the ampoules. It is most important in all cases to determine whether or not there is any residual urine before administering the drug, a catheter being invariably inserted in all parietic, tabetic and prostatic cases, and in cases of vesical

stone or enlarged median lobe cases, where the catheter always overrides the elevation and its end carried above the level of the fluid in a partially filled bladder; the patient should be turned on one side to permit of complete drainage; we should not lay too much stress on the ten-minute appearance time, but determine it in all bladder cases. Dr. Logan speaks of carrying the urine over to the next day. There is liable to be a slight loss in the reading in such cases, unless the urine is kept acid until its reading is to be determined. Permit me to bring up now two very important and practical points in cases where we most need the test and which seem little understood generally. In case of a bloody urine, where it is absolutely impossible to read as such, if we will first dilute that entire specimen to 500 or 1,000 c. c. with distilled water, thoroughly mix, and from this mixture take a test tubeful, boil, filter out the coagulated blood, and then add a drop or two of the alkali to the filtrate, we will then have a clear pink and accurate specimen to judge from. Again, in old prostatic cases, containing stringy gelatinous masses, if you add the alkali directly, it will be noticed that the pigment becomes caught and concentrated within it, thus making an accurate reading impossible; but if the specimen is first diluted up to the desired point of reading and well mixed, then upon addition of the alkali there is an equal distribution of the pigment.

I *do* agree with Dr. Nelken about the greater percentage of excretion in the second hour in some cases, especially noticed in elderly men.

DR. LOGAN (in closing): In regard to the size of the dose, Dr. Nelken is, of course, correct; but the amount used must be accurate. In establishing a danger line in operative cases, we have roughly considered 30 per cent. as the lowest safe margin, unless the patient has been running this reading for a long time. I would ask Dr. Nelken about his typhoid case. Was the injection intravenous or intramuscular?

DR. NELKEN (in answer): Intramuscular.

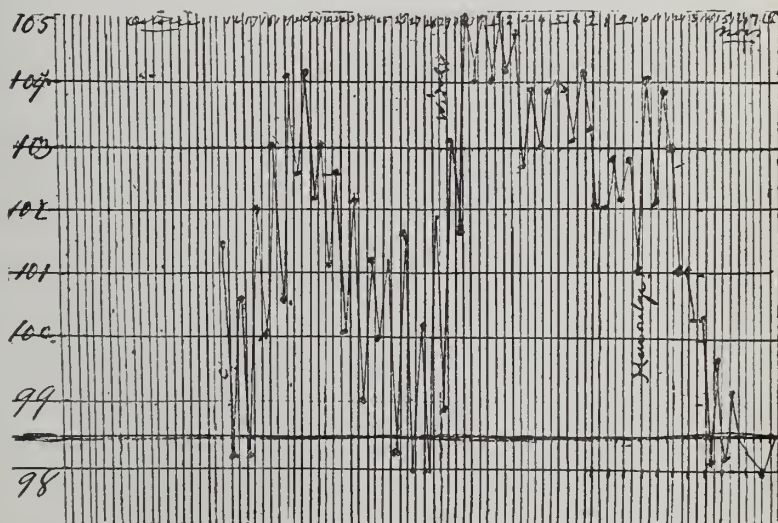
DR. LOGAN (continuing): That may have been a source of error; we prefer the intravenous injection in all cases. The drug has no effect on the kidney or bowels in the dose given. In answer to Dr. Jones' question, would say that in most of these cases there was no coal tar drug administered. In answer to Dr. King, would say that we had a case at the Presbyterian Hospital some time ago,

with his brother, Dr. E. L. King. The case was apparently on the verge of eclampsia, but the test was good and we gave a favorable prognosis, which was borne out by the course of the case. Dr. Chassaingnac and Dr. Kerney are, of course, right. In any case of any suspicion of inaccuracy, we repeat the test. In regard to Dr. Kerney's point as to carrying the drug to the next day, will say we had no such trouble.

### AN INTERESTING TYPHOID TEMPERATURE CHART.

By NARCISSE F. THIBERGE, M. D., New Orleans.

When encountering fever cases one of our first anxieties is to ascertain as early as possible the presence or absence of typhoid. Unfortunately during the first days of observation we possess no one typical symptom with which we can test our case. Even the special ascending temperature of a *continuous* type, on which so many observers lay such stress, sometimes fails us, as can be seen in the chart which I represent below. In fact it was the frequency of *intermittent* temperature during the first week of typhoid in many



of my cases lately which induced me to report the curious fever curve of one of the most severe cases it has been my good fortune to see recover. The case began perhaps a few days earlier than is

marked on the chart but it was started the moment she was sick enough to take to bed. From the first three days curve all of us I think would be inclined to say that the case was *not* one of typhoid but this irregular temperature soon ran into the typical course in the second and third week with Widal positive for the first time on the sixteenth day and a profuse intestinal hemorrhage on the twenty-fourth day. All the classical symptoms were present: spots on the sixth to sixteenth day, typical facies, etc. The diagnosis was fully confirmed by Dr. J. M. Elliott, who also saw the case on several occasions.

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## Translation.

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### "MODIFIED" BUBONIC INFECTION IN RATS AND GUINEA-PIGS.

DRS. N. H. SWELLENGREBEL and L. OTTEN (*Archiv. fur Schiffs-und Tropen-,  
Hygiene*, Band 18, No. 5, 1914.)

Translated by AUGUSTUS McSHANE, M. D., New Orleans.

#### I. INTRODUCTION.

It is well known that special importance has been given to the so-called "chronic" rat-pest in order to explain the continuance of rat-pest between two epidemics.

The British India Pest Commission has shown, however, that this chronic rat-pest is nothing more or less than a bubonic infection that is seen in a state of convalescence. The diseased rats show in the viscera (particularly the spleen) more or less encapsulated foci in which the pest-bacilli may still be demonstrated. In the peripheral blood these bacilli are never found; fleas, therefore, cannot become infected by sucking such blood. The Commission, consequently, attaches no importance to "chronic pest" (*resolving plague*). The rats, for the greater part, do not die of this convalescing pest-infection, and only by a systematic investigation of living rats entrapped in the neighborhood can any reliable information be obtained concerning the extent of this "resolving plague."

In the following remarks we will describe a variety of pest in rats and guinea pigs, which is sharply distinguished from "resolving plague"—because, (1) a typical pest-infection never appears, and (2) the animals almost always succumb after a longer period of time, sometimes more than a month after the experimental infection.

This modified form of pest in rats and guinea pigs, which was accidentally found during the transmission experiments made by us, by means of fleas (*Xenopsylla cheopis* and *Pygiopsylla ahala*), is distinguished by: (1) its long duration (one month or more); and, (2) its anatomic pathological picture.

In the infected animals there are small, multiple axillary or inguinal buboes, that are more or less hemorrhagic, varying in size from a grain of rice to a pea; the spleen is usually not enlarged; subcutaneous edema is almost entirely absent; but, on the other hand, sometimes there are serous effusions into the pleural or peritoneal cavity. Histologically, we often find degenerative changes in the parenchyma of the liver and kidneys, and hemorrhages in all the organs. In the lymphatic glands, spleen, lungs and in the pleural effusion pest bacilli can never be demonstrated microscopically with any degree of certainty. But it cannot be doubted that we are here dealing with the pest, since guinea pigs inoculated subcutaneously with pulp from the spleen or lymphatic glands died of typical bubonic plague. However, this did not occur invariably, since the second animal died after a long time, without symptoms which unequivocally pointed to plague, and without any demonstrable pest-bacilli in the organs. For the most part, in such cases, a second inoculation in a fresh animal was sufficient to establish the bubonic nature of the infection.

This variety of the bubonic plague in rats and guinea pigs we have called "modified plague" ("*Mitigirte pest*"). It shows a certain correspondence with the disease sometimes observed by Kolle and Martini in 1902, in mice inoculated with pest-bacilli of feeble virulence; also, with that described by Albrecht and Gohn (1900) as pest-marasmus; and, finally, with that induced by Gotschlich (1899) with the inoculation of sputum that contained only a small number of plague-bacilli.

We will now describe those cases in which modified pest was observed, then the factors involved in its evolution, and, finally,

their significance from the point of view of epidemicology and diagnosis.

## II. CASES IN WHICH MODIFIED PEST APPEARED.

A. IN GUINEA PIGS.—1. To demonstrate pest bacilli in the different parts of the intestinal canal of infected fleas (*Xenopsylla cheopis*) the rectum was also examined, and four guinea pigs were inoculated subcutaneously with the rectal contents of fifteen infected fleas. The rectum of the flea is comparatively small, and, consequently, contains but a small amount of material for inoculation. The guinea pigs died after 9, 13, 17 and 21 days; all showed the anatomo-pathological changes that we have already described as characteristic of modified plague. Material taken from the spleens and buboes of the first animals was inoculated into a second set of animals, and these latter died in 10, 22, 4 and 8 days, with typical pest, with large numbers of plague bacilli in all the organs.

2. We allowed twenty fleas to suck blood from a bubonised guinea pig that showed only a small number of plague bacilli in the peripheral blood. The fleas afterward bit a healthy guinea pig only once; they did not rest directly on the skin, but did their biting through a piece of gauze, which was so thin that it offered no obstacle to the passage of the proboscis. The second guinea pig was isolated after being bitten. It died in one month with symptoms of modified plague. A third guinea pig was inoculated cutaneously with material from the small buboes of the second. It died in four days from typical plague. On a repetition of this experiment, the guinea pig died in fourteen days of modified plague; in this case, the flea had drawn blood for three consecutive days. On further inoculation with the organs a second guinea pig died in five days with typical plague.

3. Twenty fleas, gathered from rats caught in a pest-village, were rubbed up in a mortar and inoculated into guinea pig No. 1. This one died in twenty-five days of modified pest. Guinea pig No. 2, inoculated with the viscera of No. 1, likewise died of modified plague; and guinea pig No. 3, inoculated with the viscera of No. 2, took sick and died of typical plague, with a moderate number of pest-bacilli in the organs.

It is to be observed, however, anatomo-pathological changes in guinea pig No. 2 corresponded more with those of typical pest than those of No. 1; pest-bacilli were also found, though sparingly, in the inguinal glands. An increase of the infection takes place

during the passage through the animals which leads to typical pest-infection. A similar intensification *in vitro* was obtained by Gotschlich (in 1899) in order to demonstrate very minute numbers of the plague-bacilli in the sputum, but which were fully virulent.

4. In a glass case a plague-infected guinea pig was placed with fifty-six fleas (*Pygiopsylla ahalæ*). After the death of the animal, two healthy guinea pigs (A and B) were placed in the case for four and nine days, respectively.

The first guinea pig (A) died in nine days of modified pest. Inoculation of the buboes on guinea pig No. 2 killed the animal in thirty-eight days with typical pest. Inoculation with the organs of No. 2 in guinea pig No. 3 killed this animal in two days with typical pest.

The second guinea pig (B) died in twenty-nine days of modified plague; or before inoculations and subinoculations were made on two other guinea pigs, and these died in twenty-seven days and twelve days, respectively. Further inoculation on guinea pig No. 4 finally led to typical pest-infection, with a moderate number of bacilli in the viscera.

Several of the experimental tests with *Pygiopsylla ahalæ* gave similar results. Also here the intensification of the virus was shown by the gradual diminution of the duration of the disease in its passage from one animal to another.

(b) IN RATS.—In an apparently healthy rat that had been trapped in a village where human plague had ceased months before, the pathological picture of modified pest was found. This rat was brought to the laboratory alive, and there killed with chloroform. At the autopsy, hemorrhagic inguinal glands and a normal spleen were found, but plague-bacilli could not be demonstrated with certainty. A guinea pig, inoculated with tissue from the inguinal glands, died in seven days of typical pest.

Further experiments along these lines were carried on with guinea pigs, since these were easily obtainable. Still we had the opportunity, in experiments from rats to rats by means of fleas, to observe four other cases of modified pest in rats. These animals died in periods varying from thirteen to nineteen days.

(c) IN MAN.—It was difficult in Java to learn whether modified pest occurred in man similar to that found in rats and guinea pigs. The diagnosis of "pest" in man was only made positively

when the clinical phenomena were unequivocal, or when plague-bacilli were found in the spleen juice. Under this condition, and on account of the lack of autopsies, which were strictly forbidden by the Mohammedan laws, we had to forego all cases of modified plague.

In July, 1912, however, there was a series of fatal cases in the city of Malang, with obscure histories and diagnosis, in which plague-bacilli were never demonstrated in the spleen pulp. This spleen-pulp was now injected subcutaneously in guinea pigs, which succumbed sooner or later to modified pest. In one of these cases, inoculation into another animal produced acute pest. We hold that it is not improbable that the patients that furnished the inoculation material for these experiments likewise suffered from modified plague.

### III. EXPERIMENTS TO SHOW HOW MODIFIED PEST ARISES.

In the attempts to transmit plague from rat to rat by means of fleas we observed not rarely that these attempts had a negative result, although the fleas had taken up large numbers of plague-bacilli and had had an opportunity for whole days to suck blood from healthy rats. These failures in attempts at transmission must be ascribed to immunity on the part of the rats. Along with these completely refractory rats there were some that succumbed to modified pest in from thirteen to nineteen days; and also some that died of typical plague in from three to seven days. Thus we are led to infer that modified pest in rats owes its origin to an incompletely developed immunity.

Subsequent experiments with guinea pigs, in which no natural immunity to plague is demonstrable, showed, however, that modified plague can occur without partial immunity. When the cases in which modified pest in guinea pigs occurred, are examined more closely, it is seen that they all present one feature in common, namely, that the inoculation which called forth the modified pest was always made with material of very slight virulence.

In Case 1, the inoculation was made with the scanty rectal contents of a flea. In Case 2, the twenty fleas had only one chance during the act of blood-sucking, to transfer the plague-bacilli to the guinea pig; moreover, they had previously been able to gather only a small number of plague-bacilli. In Case 4 the transmission was effected by means of the puncture of the *Pygiopsylla ahala*, which bit the guinea pigs only reluctantly and under stress of



hunger, and hence inoculated the host with material that was only feebly virulent.

Thus it was probable that in these cases the pest appeared in a modified form because the bacilli were introduced in too few numbers to produce a typical attack. The following experiment seems to confirm this view:

A guinea pig died of acute plague, and a part of the spleen, which contained large numbers of bacilli, was thoroughly rubbed up with 10 c.c. of an 0.8 per cent saline solution. The coarser particles of tissue were decanted off. Then in each of twelve test-tubes one cubic centimeter of an 0.8 per cent saline solution was placed and one drop of the infected decanted fluid was added to the first tube, and the mixture well shaken (dilution No. 1); a drop of this was added to the second tube (dilution No. 2); from this dilution a drop was added to the third tube (dilution No. 3); and so on until there was a complete series of dilutions from No. 1 to No. 12. These dilutions were now each inoculated *cutaneously* into guinea pigs; the content of each tube was carefully rubbed into the scarified skin of the abdomen of the animals.

The following table gives the results of these experiments:

Dilution.	No. of Guinea Pig.	Result of the Inoculation.
1	1	Died of acute pest.
2	2	Died of acute pest.
3	3	Died of acute pest.
4	4	Died of acute pest.
5	5	Died of acute pest.
6	6	Died of acute pest.
7	7	Died of modified pest in thirteen days.
8	8	Recovered.
9	9	Died of modified pest in thirty-seven days.
10	10	Recovered.
11	11	Recovered.
12	12	Recovered.

It is seen from the above that inoculation with a cubic centimeter of the dilutions 1 to 6 of the supernatant virulent emulsion gave rise to acute infection in the experimental animals. The animals inoculated with dilutions 7 and 9 died of modified pest, and the others recovered. It follows from this that modified pest can be brought about by the inoculation of very small numbers of the plague-bacilli.

These remarks apply only to the *cutaneous* or *epidermic* method

of inoculation, inasmuch as the *subcutaneous* injection of even the smallest amount of plague virus is able to kill the animal, as the following experiment shows:

An emulsion was again made with the spleen-pulp of a guinea pig that had died of acute pest, and the decanted supernatant liquid was made into a series of thirteen dilutions (from 1 to 100,000 to 1 to 1,000,000). The dilution from one in a million to one in a billion contained 2,000, 250, 30, and 10 plague-bacilli per cubic centimeter. The higher dilutions contained no bacilli at all. The guinea pig inoculated subcutaneously with the dilution of one in a billion died in eleven days of acute plague. The animals inoculated with higher dilutions lived. Thus we see that the decanted emulsion was fully virulent subcutaneously even when enormously diluted.

Our experiments show that in *cutaneous* inoculation very small numbers of plague-bacilli can cause a disease to appear in guinea pigs that corresponds to that which we found in rats and guinea pigs, and which we have called "modified plague."

#### IV. SIGNIFICANCE OF MODIFIED PLAGUE IN EPIDEMIOLOGY AND DIAGNOSIS.

(a) EPIDEMIOLOGY.—It is well known that Gotschlich (1903), Feldman (1908), Simond (1898), and others conjectured that pest-infection is perpetuated in a latent form between outbreaks by means of chronic rat-pest. It is true that the British India Pest Commission combatted this assumption, but this criticism was based only on convalescent or entirely healed rat-plague (resolving plague), which is not a true chronic pest.

Modified plague, as described by us, is, on the contrary, a true chronic, fatally-ending form of rat-plague, and it may well be asked if it possesses the epidemiological importance which the above mentioned authors ascribe to it. We can not answer this question with certainty, since the outbreak of 1910 in Java is not yet ended, and shows no sign of intermittency, as, for instance, in British India and Egypt. Still we do not believe that any special importance attaches to modified plague in rats from the standpoint of conservation of the virus over long periods of time, since the duration of modified plague is too short (less than two months), and, furthermore, specially directed experiments have shown us that fleas gathered from rates that died of modified plague were not

infected (by animal inoculations), and are also not in a condition to induce the disease, by bites, in experimental animals.

On the other hand, we believe that those cases of fully developed pest-infection, in which the death of the animal takes place a longer time after the inoculation (22 to 38 days in guinea pigs, and 17 to 22 days in rats), and in which probably a disease running along as modified plague finally developed an acute phase, are especially apt to disseminate the plague, inasmuch as the rats, during the modified stage of the infection, do not look sickly, and can easily migrate from village to village.

Finally, it is to be noted that the fleas cannot, indeed, become infected by sucking the blood of a rat suffering from modified plague, but that such a rat can become a source of danger if they are devoured by other rats, although infection by the the intestinal route is not nearly as dangerous as that by the cutaneous.

Even in case modified pest appears in man, which we hold to be possible, we still do not believe that it has any epidemiological importance, for Java, at any rate, not even when it passes into the acute form, since our observations show that this plays no part in the spreading of the disease. It is only when modified plague brings on an acute pneumonia that it becomes a source of actual danger to a community.

(b) DIAGNOSIS. —For the diagnosis of rat-plague a knowledge of modified plague is of special importance, all the more so when one is called on to determine as quickly as possible whether a rat died of plague or not. One example will make the point clear.

On November 12 of last year, on board the steamship "Delfland," in the harbor of Amsterdam, a rat was caught running around the deck. It was killed and sent to the municipal board of health, as is always done in such cases.

The rat had swollen, somewhat hemorrhagic lymphatic glands, the serosa of the ilium was injected, and the spleen, slightly enlarged; no pleural exudate was found. No plague-bacilli were found in smears from the lymph-glands and spleen. Gland and spleen pulp were injected into a guinea pig. The animal was killed in three days, and the inguinal glands were found to be greatly swollen, hemorrhagic and partly suppurating; plague-bacilli were not found either there or in the spleen, which was not enlarged and appeared normal. The juice from the swollen glands was inoculated cutaneously into a second guinea pig, and this animal died in six

days of typical plague. In the enlarged granular spleen, and in the markedly hemorrhagic buboes, many stained bipolar rods were found, which behaved like typical plague-bacilli in color, cultural and agglutination reactions, and also in experiments on animals. The rat had thus clearly suffered from a pest-infection that completely corresponded with modified pest in its anatomico-pathological relations. If this rat had not been accidentally killed, it would probably have left the ship. When ashore it could have transmitted the infection to other rats in one of the ways already indicated.

No other plague-infected rats were found on this ship, and no harm arose from the fact that the establishment of the diagnosis was so long delayed. As a rule, however, it is better to determine the existence of "rat-plague" as soon as possible, and modified pest presents great difficulties, even when it is practical to investigate it. Not infrequently this is not the case, since the rats seem perfectly healthy and run about as usual, so that attention is not drawn to them. Special care should be used by sanitary officers in inspecting ships, not only for rats found dead, but also for all rats caught aboard, for only in this way can the existence of modified pest on a ship be determined.

#### V. CONCLUSIONS.

1. There appears in Javanese rats, and also in ship rats, and in guinea pigs experimentally infected, a form of pest to which we have given the name of "modified plague."

2. Modified plague pursues a fatal course, usually lasting for several weeks; probably it can also assume the acute form after a shorter or longer time.

3. It is distinguished from acute pest by the feebly developed anatomico-pathological changes and the negative bacillus-finding renders the diagnosis difficult, since even inoculation with pulp from the viscera of animals dead of the disease does not always at first produce the disease; indeed, several successive subinoculations are required. It is also distinguished from chronic pest (resolving plague) by the absence of cured or encapsulated old plague-foci and adhesions in the various organs (especially in the spleen).

4. Modified plague is produced, either accidentally or intentionally, when, in superficial (cutaneous or percutaneous) inoculation, a minute insufficient quantity of the virulent material is employed. We do not mean to say, however, that this form of plague cannot

arise in other ways (for instance, by the inoculation of feebly-virulent plague-bacilli, or the infection of semi-immune animals).

5. Modified plague, particularly when it passes into the acute form, derives its importance from the liability of being carried, unsuspected, to great distances.

In the regular examination of ship rats, such as is carried on in many European ports, the modified form of plague can cause many difficulties and loss of time, and might lead to the eventual slipping-in of the plague through rats apparently healthy but really plague-smitten.

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## Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

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### MINUTES.

At the regular meeting of the Touro Clinical Society for November cases were presented by Drs. Matas, Kohlman, Weis and Feingold. Pathological specimens were presented by Dr. John Lanford.

### PROCEEDINGS.

#### Report of Cases.

DR. R. MATAS.

(1) Dr. Matas exhibited a **large hair ball** (*Trychobezoar*) removed successfully at the Touro Infirmary in May, 1914, from the stomach of a young white woman, aged 19 years, who, as a child, had acquired the hair-eating habit while suffering from uncinariasis. The patient had been discharged from the hospital completely recovered after operation, on June 19, 1914. The mass weighed two pounds, three-quarter ounces, or approximately 967 grams. It was shaped like an inverted gourd and was moulded to the contour of the stomach. In the dry state it measured 18 inches, or 46 cms., in its longest diameter (along its convexity);  $10\frac{1}{4}$  inches, or 26 cms., in its broadest circumference;  $8\frac{1}{4}$  (or 20 cms) around its middle portion, and  $8\frac{1}{8}$  inches, or 17 cms., in its narrowest circumference. The widest part filled the fundus of the stomach and its narrowest filled the pylorus and duodenum. It consisted of a mass of matted black hair which, when dry, was felted and gave the appearance of the fur of a wild animal. Mixed with

the hair were particles of earth and vegetable foodstuffs which had gravitated to the center of the mass and were held in the tangle by mucoid and other organic matter. The mass not only filled the stomach in its entirety but was gripped tightly by its walls in many places. An incision  $6\frac{1}{2}$  inches long along the anterior surface of the organ was required to permit its extraction. When extracted from the stomach it was covered with a thick, slimy coat of extreme foulness. The only space for the passage of food was a narrow interspace between the mass and the lesser curvature, where fluids and semi-solid foods could be forced from the cardia to the pylorus.

After discussing the history, statistics and clinical peculiarities of gastric and intestinal hair balls, and the results of surgical operations for their removal (which were eminently satisfactory), the speaker dwelt with special emphasis on the X-ray and the pre-operative diagnosis of this rare condition. The great value of the fluoroscope and radiograph in the diagnosis was demonstrated by the exhibition of X-ray plates of this case, and the reports of the few cases in which X-ray studies had been made in very recent years for diagnostic purposes. By following the rules laid down by C. Thurston Holland, of Liverpool (*Archives of the Röntgen Rays*, London and New York), July, 1913, and March, 1914, it was comparatively easy to make fluoroscopic diagnosis not only of a gastric tumor, but of an intragastric and detachable mass, which, if moulded to the shape of the stomach, would practically rule out any other condition but a hair ball.

(2) After reporting this case, Dr. Matas exhibited a **large radiograph of an enormously dilated esophagus** from a girl of 17 years, suffering from the effects of a long-standing cardiospasm, who was at the time undergoing treatment at the Infirmary. The pouch, when filled with bismuth meal, was as large as the stomach itself. When first examined, the pouch held practically all the food that the patient would take during the day, amounting to three full meals and more, but little food finding its way into the stomach. At night, during sleep, the patient was awakened by the regurgitation from the pouch, which emptied itself into the mouth in a rythmical and often spasmodic fashion. The regurgitated food and liquids brought on a condition bordering on suffocation from the entrance of the ingesta into the larynx. Before awakening, the patient made extraordinary noises, like loud stridor and gurgling as of one drowning, which could be heard a long distance from the

patient's room. This preliminary stage culminated in the final ejection of the food from the pouch; the ejected matter coming up in enormous quantities until the pouch was emptied and the patient was relieved. This nocturnal disturbance had been kept up for weeks and months, the patient steadily growing weaker and thinner. The radiographs and fluoroscope revealed the true cause of this condition. At first, no stomach tube or bougie could be passed into the stomach, but after swallowing a thread, and using this as a pilot, a series of perforated bougies were readily passed into the stomach. At present, an ordinary gastric tube was introduced with no serious difficulty, and the esophageal pouch was kept clean and empty. An improvised hydrostatic rubber dilator, which was attached to the hydrant and controlled by a water gage (on the lines suggested by Russell, Plummer, Lerche), was now being used to dilate the cardiac orifice of the stomach to the maximum compatible with safety. By first introducing the bag in a collapsed state and then filling it with water under pressure, a sausage-like cylinder, full three inches in diameter, was obtained, which, being gradually extracted by steady traction from the stomach, safely dilated the cardia sufficiently to overcome the spasm. One dilation with this appliance had been made and the improvement in the patient's condition had been notable. Sleep had become normal; the nocturnal disturbances had ceased altogether, and comparatively little residue remained in the pouch after full meals. These retrograde dilations would be repeated at intervals until it became quite evident that the cardio-spasm had been completely overcome and the cardiac orifice sufficiently and permanently dilated to insure the free and unobstructed passage of food from the esophagus into the stomach.

The patient is now rapidly gaining flesh, color and strength.

DR. WILLIAM KOHLMAN presented the following cases:

**(1) Case of an extensive vesico-vaginal fistula.**

Mrs. M. D. Age 27. Admitted February 9, 1914. This patient has been under my care for a long time, as only after several operations closure was possible. Vaginal examination showed the entire loss of the anterior wall of the vagina. The mucous membrane of the bladder could be seen protruding in the vaginal outlet.

Operation February 13, 1914. Bladder was loosened in the entire circumference of the vaginal wall and sutured. Long incisions were made on both sides of vagina to produce a movable

flap, which was united by sutures. This operation was only a partial success.

Sometime later a second operation was made. As there was not enough vaginal wall left to cover defect an excision of the uterus was decided upon. After opening abdomen a pan-hysterectomy was done and the bladder was loosened thoroughly. After closing abdomen opening in bladder was closed by vaginal route.

Patient made a good recovery with the exception that one small opening persisted in the corner of the vagina. This opening continued and I decided to make another attempt, which was done on October 8. By vaginal route the fistulous opening was exposed. The bladder was loosened again and sutured by continuous suture. As there was not enough vaginal mucous membrane to cover exposed bladder, I decided to cover the suture line of bladder by sewing the anterior flap of vaginal wall to the bladder. In the same way the posterior vaginal wall was sewed to the bladder, leaving a free space of bladder wall fully an inch in width which could not be covered by vaginal mucous membrane.

As you see, the parts are granulating well now, and there is no more leakage. The bladder holds about two ounces of urine.

**(2) How much a kidney may be damaged and yet do satisfactory work.**

The patient I am presenting to you to-night is of great interest as she shows how much a kidney may be damaged and yet do satisfactory work.

The patient at the present time is, as you see, in perfect health, and is able to perform all her duties.

Miss M. Age 36. Admitted May 2, 1910. Discharged May 14, 1910. Patient complained of pain in the right side. Examination showed a displaced kidney, complicated with hydro-nephrosis.

Operation: Lumbar incision. After opening the pelvis of the kidney stricture of the ureter was found which was impossible to overcome. Extirpation of the kidney. Normal recovery.

Two months later patient took sick again, with pain in region of left kidney and chill and high temperature. Examination showed an enlarged and displaced left kidney. Condition of the patient demanded immediate relief.

Operation: Lumbar incision. Pelvis of kidney was opened by small incision and over a pint of sero-purulent liquid was evacuated. Decapsulation of kidney and Edebohl's fixation. Patient made a normal recovery and is in good condition now.



**(3) Specimens of carcinoma of the cervix after previous supra-vaginal hysterectomy (five years ago).**

These cases are important, as such cases seem to demand that a total hysterectomy ought to be done in all cases of fibroid of the uterus. It is true that the operation is more difficult and more prolonged, but I do not think that the mortality is any higher. This is the second case that I have seen this year, and I have seen altogether, as far as I can remember, in the last five years, five cases of this kind. Statistics show that fibroid complicated with carcinoma occurs in about 6 per cent of all fibroid tumors.

**(4) Specimen of hypoplastic ovary.**

The condition seems to be congenital. The patient suffered from indefinite abdominal pains, which I think were due to these findings.

**(5) Gunshot wound of abdomen.**

H. G. Age 16. Admitted October 3, 1914. Patient came under my observation in the hospital two hours after injury. Normal pulse, normal temperature. Examination showed that the entrance of the ball, 38 caliber, through left buttock. The ball itself was found under the skin of the abdominal wall, about one inch below the umbilicus, and a little to the right. Catherized urine showed a few drops of blood. X-ray examination does not show injury to any bone.

Operation: A three-inch incision a little to the right of median line from umbilicus downward. An opening in the peritoneum which was large enough to introduce tip of finger was enlarged; blood and feces were found in abdomen and removed by sponging. The ileum was found to have nine perforations; three different resections of bowel had to be made—one, two, and three inches in length. The peritoneum was found perforated in the posterior cul-de-sac, which opening was closed by Lembert suture. Abdominal wound closed. Examination of rectum showed perforation. Retention catheter was put in bladder. External wound of buttocks was not further disturbed, as patient's condition did not justify more investigation. Recovery was uneventful in regard to abdomen, showing that in cases of this kind early surgical interference is indicated.

**(6) Short resume of fixation of the uterus in cases of retroflexion with adhesions in complication with tubo-ovarian diseases.**

I employed the method of Olshausen's round ligament fixation,

as recommended by Bumm in 1905. It gives a stronger fixation and insures a normally movable uterus, therefore preventing interference with pregnancy and delivery.

I have employed this operation since 1907 and have recently re-examined forty-eight cases out of a total of about two hundred. The most important fact, as already mentioned, is normal delivery. Ten of those cases have been pregnant since operation, two twice. All had normal deliveries. In two cases only low forceps were employed. Re-laparotomy was done in a few cases, which was necessary on account of recurring pelvic disease, showed uterus in a normal position with round ligaments only slightly lengthened.

DR. FEINGOLD demonstrated a patient where a **Cosmetic operation** was done to do away with a sunken-in appearance of the upper lid following the loss of an eye and total symblepharon brought on by injury with hot lead. The Weeks' operation for restoring upper and lower fornix had been performed, so that the patient is now able to wear a glass eye, but the sunk-in condition of the upper lid was still very disfiguring. In order to relieve this, a *transplantation of fat*, taken from the patient's lower extremity, was made under the skin of the upper lid, thereby relieving a great deal of the deformity.

This operation, if proven satisfactory, would have a great usefulness in all cases where the upper lid is sunk, following enucleation.

DR. JOSEPH D. WEIS presented the following cases:

(1) Mrs. A. L. This patient came to the medical clinic October 13, 1914, complaining of *loss of appetite, and large, reddish, painful spots on her legs.*

She showed a hemoglobin percentage of 70; 5,280,000 red cells and 11,400 white cells. Her Wasserman was +++.

She was put on mixed treatment and sent home.

October 20, 1914, the patient was admitted to the hospital.

History: Five years ago she had an eruption on her body, which persisted for a month. This rash consisted of tea-colored spots, which were not elevated. They were distributed over her body from the knees to the breasts. At that time her face became red and swollen and stayed so for three years.

Last April the patient had fever for three days. The fever followed a severe chill, "being cured with fever powder."

Last Tuesday, October 13, 1914, she came to the clinic, being worried by some red splotches on her legs. The splotches appeared

last April, when she had fever. They were red and angry looking during the time of the fever, but became black after she took the "fever powder."

She went home from the clinic and began to have fever. The splotches became red again, and were so on her admission into the hospital. The fever continued from Tuesday until Sunday.

She has never had any trouble with any of her joints.

I show her as a probable case of **erythema multiforme** of toxic origin. This origin or etiologic toxic agent is open to discussion; it seems probable that it is leprosy, however.

(2) A. B. Family history negative.

During the past three or four years the patient has suffered from "rheumatic pains" in the feet and knees. One year ago, while in Brazil, he had beri-beri, and five months ago he had his only attack of malaria.

Present Illness: Six years ago the patient noticed a mass in his right side which he thought was an enlarged spleen. At that time he had fever for about ten days and remained in the hospital during the temperature, his mass being reduced considerably in size.

The mass did not entirely disappear and three years ago it began to grow again. He again had fever and was detained in the hospital for ten days, during which time the mass decreased in size.

Five months ago he had an attack of fever which was called malaria and which subsided after four or five days, quinine being administered during the temperature.

During the past four or five months, he has had about six attacks of fever, the temperature ranging between 102 to 104° F. and persisting for four or five days. At each attack there has been some increase in the size of the mass, but this has decreased between attacks.

Three weeks ago he had his last attack and the mass has grown steadily in size since.

During the past four months he has lost about twenty pounds in weight and has been disturbed by his stomach; slight eructation of food after meals, but vomiting of entire meal about once a day, usually five or ten minutes after the evening meal. He has never vomited blood. He has grown much weaker since these attacks became frequent.

Physical Examination: Poorly developed, anemic individual; panniculus fairly well retained. Hair dry and thin.

Eyes. Reflexes and movements normal. Left eye shown corneal scar due to an injury during childhood. Slight icteroid tinge to sclera.

Heart. Soft systolic blow at base; heard in second right interspace, not transmitted.

Lungs. Both lungs show dullness posteriorly. Right lung below seventh rib and left lung below sixth rib. Slight diminution in respiratory sounds.

Abdomen. In left hypochondrium, a large, visible mass corresponding to an enlarged spleen. Lower edge or pole, however, on palpation presents three large, globular, prominent areas—distinct from what above them I take to be spleen. The rounded masses may even be seen.

The question is: Is this an enlarged spleen *only*—or is it indeed an enlarged spleen plus a neoplasm coming perhaps from the left kidney and connected by contact pressure with the lower pole of the spleen, or again may it be a neoplastic growth of the spleen itself added to the enlargement due to a constitutional condition as Banti's disease?

This patient is here for your examination and opinion.

Follows the blood findings with dates.

Urine 11-3-14 Sp. Gr. 1010, Trace of Albumin.

Blood 11-3-14 Hg 30%, Total red 1,860,000; color index 1; Total whites 2,650; L. 19%, L. M. 10%; Neut. 17%.  
11-5-14. Wassermann negative; Tsch., negative.

11-7-14 Intravenous phenolsulphophthalein: Appearing time: Rt. Kidney 12½ m.; Lft. Kidney, 18 m. First hr. Rt. Kidney 10 m.; Lft. Kidney 4 m.; Both 12 m.

Cystoscopic examination reports right kidney secreting about four times as fast as left.

11-13-14 Total red 1,480,000; Hg. 30%; color index 1.

Urine: 11-15-14, Sp. Gr. 1020; No albumin nor sugar. Microscopic pus and R. B. C.

11-18-14, Phenolsulphophthalein: First hour, 25 m.; second hour, 15 m.; total, 40 m.

11-23-14, Rise in temperature.

Total whites, 2,950.

Neut.	30%
Lymph	56%
L. M.	6%
Eos.	4%
Nuc Reds	4%

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100%

Urine: 11-24-14, Sp. Gr. 1012; trace of albumin; microscopic, pus.  
12- 1-14, Sp. Gr. 1012; albumin 1.2%; pus.

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## Miscellany.

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### BY THE WAY.

It may not seem bizarre that a journal whose initials spell N O M S should present a review of peoples' doings, and of things; and if appropriate (even if Gallic, not galling, let us trust) this space may allow discursion as valuable, if not as severe in its science, because it permits just that latitude which is neither arctic in focus, nor equatorially enlarged. There is a pleasure in looking at points of interest from other grounds, and as though from eyes of other lands or eras. In December we broached the philosophy which an abdominal section may deliver, and in January gave a glimpse of little evidence which in their significance appertain no less to the personal than to that definite solution which approaches the general.

The rationale of initials suggests letters, and the current which has, in its course, related "letters" and "medicine." We have just seen a note of the act of the King of Sweden. He has conferred a silver medal on Professor R. Tait McKensie, of the University of Pennsylvania, for the latter's "finely sculptured shield for the athletic arena at Stockholm." We have known Dr. McKensie's published and otherwise exhibited designs in an art which for him is, naturally and effectively, one part of the scientific product of his occupation.

If we find fewer medical men doing the sort of thing this Phil-

adelphian essays, it can only be interpreted, as historically it must be, along lines of the persistence of force, natural lines. For every individual, and every era, there has been, has to be, an escape valve. In the intellectual destinies of us, surplus ideas pass over by a psychological metabolism into poetic, architectural, social or political organization. So that eras of political rearrangement follow certain scientific discoveries, geographic, chemic, or mathematical, as they are. Musical and literary cycles are also in parallel revolutionary successions. It has always been so. And wise rulers used to forbid certain forms of music, or forms of science, because they knew that political or social alterations would be subtended. Pushkin, a hundred years ago, though of the court circle, had to be admonished. And only the intervention of the imperial censor, *in propria persona*, allowed him to continue his versified expression. The Tsar undertook to revise what Pushkin produced, and to publish what was suitable.

Paracelsus: "And while my foot is on the threshold  
 "Of boundless life—the doors unopened yet,  
 "All preparations not complete within—  
 "I turn new knowledge upon old events,  
 "And the effect is—but I must not tell;  
 "It is not lawful. Your own turn will come  
 "One day. Wait, Festus! You will die like me."

Festus: "'Tis of that past life that I burn to hear."

Paracelsus: "You wonder it engages me just now?  
 "In truth, I wonder, too. What's life to me?  
 "Where'er I look is fire, where'er I listen  
 "Music, and, where I tend, bliss evermore.  
 "Yet how can I refrain?" \* \* \*

And so science, unleashed, turns to wider creation. And McKenzie's triple racers are still dashing in the century. Holmes, Weir Mitchell, Gould, Waugh, Ridpath, Osler, Walton, the Charakans, these give us a view as real, if wider, as significant, if beautified, as existing, if imagined; while one has only to know, to correlate, the musicianship of the German physician.

This by-way is more important.

The time is one of less art, and more artifice.

Every stage in the last year-hundred illustrates the cycle. The possibilities of surgery rapidly segmented on the obtaining of good anesthesia. Then the pages of advertising showed us the trend; for every journal of that time, from the *Lancet* down, was filled with patterns of new instruments. This was an evolution *pari passu* to

general mechanics. Then the flood came, and ebb. It was followed by a therapeutic tidal which burst the dykes. And the National Council is still paddling across a tempestuous bayou.

During this development, people admired a resource of form and beauty, until that had equalized the intellectual pressure, but the sense of the community has reached a point where it prefers the political ambitions of a doctor of medicine to his musical or literary renown, and this only accentuates the position which men like S. Weir Mitchell, Oliver Wendell Holmes and R. Tait McKenzie have attained.

The mysterious, even mystic, influence of letters extends to the simple components of the alphabet itself. We use the magical *B* daily. Other forms of special "signature" have marked instances of historic psychology. It was the great Hapsburg, Friederich III (1415-1493) one of the Emperors of the West (just before the time of Paracelsus) who employed the vowels *A, E, I, O, U*, to signify: *Austria est imperare orbi universo*. (In his own Viennese: *Alles Erdreich ist Oesterreich unterthan*), and this characterization seemed to give him a lot of comfort. Indeed, this imperial *I O U* is even to our day in circulation (at a discount, though some hold it!).

We can also add to this the "*O. K.*" whose origin no man knoweth, thought to be Indian. And the long list of chemical letters *K, Na, Br*, talismanic, but not vague in their symbolism, points to our newer poetry which guides the imagination by another path to Olympus. And we can never forget that if it was Friederich of Brandenburg, founder of the modern kingdom of Prussia who gave us the Academy of Sciences of Berlin, it is also the king of Prussia today who has made German medicine the wonderfully perfect organization that it is. Here is a practical recognition of letters in both literal and literary bearing on the polity of a country. And the foundations built so deep can only more and more influence as time goes on. An hour's digging cannot imitate. A moment's thought will not excel.

It was while rambling through these "literary" researches that I came upon an antique, which I discovered to be the "mirror of Paracelsus." I have always enjoyed letters, which are as curious in their tricks as figures. The tokens upon library doors, reading on one side *PUSH*, on the other *PULL*, always cause me to hope

to find the word push, as I enter! I never like to find *PULL* staring me in the face as I advance towards an object, who does?

I hesitated to view anything in the mirror of Paracelsus. For his time was that of alchemy and of metaphysic and of the meticulous doctrine of signatures. And I am sure that no reasonable (which means, today, respectable) physician would care to infuse his thinking with any of these.

But a persistent feeling of curiosity led me to use the mirror.

I thought I would try the significance of the new Rockefeller Foundation in its cinquecento light. And when I looked there it stood, the initials *G. E. B.*

That has a German sound, I thought, as I remembered Maria Einsiedeln. *Geb* means give. But I turned it around, and saw very clearly its translation, which illumined the mirror: *B. E. G.*

What was more exasperating, the doctrine of signatures, more mighty today than ever, came clearly to the surface.

I should like to try the mirror on some other matters but, on inspection, I perceived it was cracked, and I put it away. Not, however, until it had caught a reflection from an echo of Oken, and his friend, Dr. Mizes.

From Texas comes another Dr. Mezes (to the presidency of the City College of New York). There is a euphony which hangs about historic personages, whose psychology this mirror of Paracelsus reintegrates. The kings of Seba and of Sheba find an alliterative parallel in those of Prussia and of Russia. Language not only expresses, it re-addresses. So that we find a coercion of the subconscious whose impetus is better known than disdained. The argument of whether thought progresses with or without words is not concluded. And a *laissez aller* must give way to a *laissez rallier*. The Synthetic Philosophy has become a syncrete psychology. And a sport with letters is not undignified.

Frederick the Great could write to his guest, M. Voltaire, the card,

P	à	çi
Venez		100

and the latter could reply:

G. a.



So we read, *venez sous p à cent sous çï (venez souper á Sans-souci)* and the acceptance, "*j'ai grand appetit.*" Is this science?

“ ‘Dear Lord, it hath a fiendish look,’  
The Pilot made reply;  
‘I am a-feared’— ‘Push on, push on!’  
Said the Hermit cheerily.’ ”

### SPITTING IS UNLAWFUL

In matters of hygiene, at least, we have gotten well past initials. The larger the community, the more rigidly its hygienic bonds multiply, and more familiar agents take on the guise of medicinal relations. I refer to the subway cure for smoking as an example.

Smoking is nearly universal. The time for smoking, however, varies, and the amount. The question of arteriosclerosis is still a moot point. In large cities the necessities of office routine compel many of our workers to take a morning and evening “puff” on one of the cars of transit. *Sic transit delicia mundi!* Long suburban trains pull in and out, five or six cars devoted to smokers exclusively. When the subway occurred, smoking in it was found objectionable, and so the elevated and the steam roads convey the smokers, and the surface and subways carry those who do without their daily nicotine. In all probability the questions of transit have more to do with changes in habits of smoking and drinking, both of the drivers and those driven, than one would have been prepared to estimate. General health laws are less likely to be obeyed than a prohibition posted on the wall of a railroad station, and so we are receiving our moral education at the hands of the financier rather than the physician.

In referring, then, to the modern railway magnate, it is truly a case of O Eu-hygienist!

The development of the subway may take its place beside the achievement of Sir Robert Peel. For if his policemen, in London, immediately affected the incidence of street disorder, the amount of nicotine is at once reduced by a trip under Broadway, Market or Boylston street. And when one realizes the state of a smoker deprived of his morning cigar, we can see that the entire business world is dependent on such an influence. The street cars contain placards advertising a brand of tobacco. A baseball star is figured and quoted, saying, “I smoke T—— because it makes me feel natural and pleasant-like.”

We have watched the habitual commuter crush into his seat, light the pipe or cigar and settle back with a sigh of relief to read his newspaper.

The economics of waste disposal bring up a further trend of thought. For if a newspaper, or a cigar butt is to be thrown away the genus of the person is therein disclosed. The "genius" needed to get rid of such an article on a city street under present rulings, one might say; for the street-receptacle is often invisibly secreted.

As we saw, some rid themselves of these furtively, and others rankly break the health-code.

Chickens, given a clean pan of water, will stand in it, dirtying the water with earth and excrement. This bird will view the earth as a part of its alimentary organ, for food and waste as well. So with people, it is a matter of hereditary psychology. They throw waste into the air, out of the window. Others pitch papers, sticks or cigar stumps onto the floor. While a third group requires a receptacle containing fluid. Tell me how a man spends his leisure, and I will tell you what he is, we are informed. The glance of an eye, the turn of a phrase, is more to another. But the hygienist says, let me see how he disposes of his waste. Some one observed that people illustrated a terrestrial, an aquatic, or an aerial atavism, and with the fitness of things we rely again upon dominant and recessive, gamete and zygote. The problems of renovation, in slum or environ, regain coherency only by a classification of the characters to be affected. It is this adaptation of the guarded water-trough for the chicken, and the guarded garbage-pail for the masses, calling again for a separation which is both serial and instinctive.

And, in the stations of the Pennsylvania railroad, we have noted, in this hygienic and literal relation, a (perhaps) unintentional use of initials; for in declaring that one must not spit upon the station floor, the separation of letters causes "SPITTING IS UNLAWFUL," by a lengthened "L" to appear as "awful" as if the UNL had no syllabic sequence.

Again the transit authorities are vice-presidents of the board of education!

Continuing with a note of the hospital movement, we see that Nebraska has asked the legislature for \$100,000—to secure A-1 rating.

The Philadelphia General Hospital notes the appointment of Dr. John B. Carnett *vice* Dr. Edward B. Martin as attending surgeon. Knowing the men, this suggests Gen. Lew Wallace with his "Down Eros, up Mars!" (Dr. Carnett is the football player of the golden era in the 90's). And, so, re-enter the line of thought.

"Heap cassia, sandal buds and stripes  
 Of labdanum, and aloe-balls,  
 Smear'd with dull nard an Indian wipes  
 From out her hair: such balsam falls  
 Down sea-side mountain pedestals,  
 From tree-tops where tired winds are fain,  
 Spent with the vast and howling main,  
 To treasure half their island gain  
 And strew faint sweetness from some old  
 Egyptian's fine worm-eaten shroud  
 Which breaks to dust when once unroll'd;  
 Or shredded perfume, like a cloud  
 From closet long to quiet vow'd,  
 With moth'd and dropping arras hung,  
 Mouldering her lute and books among" \* \* \*

So Paracelsus in *Alsatia*, 1528, and

"\* \* \* Pledge me, good John—  
 Basil; a hot plague ravage it, and Pütter  
 Oppose the plague! Even so? Do you, too, share  
 Their panic, the reptiles? Ha, ha!" \* \* \*

And we are still relying upon Pütter to oppose the plague.

[R]

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## Communications.

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LOUISIANA STATE BOARD OF MEDICAL EXAMINERS,  
 New Orleans, Dec. 7, 1915.

*Drs. Chassignac and Dyer, Editors,* ..

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. ..

Dear Sirs: Enclosed is a communication received from Dr. M. R. McAlpin, Secretary of the Vernon Parish Medical Society, with the reply to same by our counsel, Mr. Ernest T. Florance.

This correspondence, which is self-explanatory, is of such vital importance, not alone to the medical profession, but to the people of this State who are the real sufferers, that I am requesting you to publish it to see if the publicity given same will not have some beneficial result. It may also enlighten some, who have in the past

been prone to criticism, as to the difficulties at times encountered by the State Board of Medical Examiners in the prosecutions of these cases.

By some concerted action the organized medical profession of this State should be able to coneract any influence exerted by a few illegal practitioners, whether it be through politics or any other channels.

I would also add my endorsement to Mr. Florance's last paragraph, relative to the support given this Board by many of the District Attorneys throughout the State, and especially is this true in Orleans Parish, and in the Second and the Fifteenth Judicial Districts.

Very truly yours,

(Signed)

E. L. LECKERT, *Secretary.*

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LEESVILLE, LA., December 21, 1914.

*Secretary Board Medical Examiners,*

New Orleans, Louisiana.

Dear Sir: I am enclosing you a copy of the minutes of the meeting of the Vernon Parish Medical Society, held on December 19. You will observe therein a resolution which explains the very unsatisfactory state of affairs which obtains in this parish in regard to illegal practitioners of medicine.

"After considerable discussion of the deplorable condition existing in this parish in regard to the illegal practice of medicine, the following resolution was unanimously adopted:

"Whereas, there are quite a number of illegal practitioners of medicine in this parish; and, whereas, the grand jury did, something like a year ago, return bills of indictment against several of them, and they are still allowed to continue their illegal practice; therefore, be it resolved, that the secretary of this society is hereby instructed to put the facts before the State Board of Health, requesting that it take some action in the matter."

"On motion, the secretary was instructed to present copies of these minutes to each of the parish papers, requesting that they be published."

This society has for more than three years been trying to interest our district attorneys and grand juries in this matter and has finally succeeded in getting a few indicted; but it seems to stop there. I think some have been arraigned before the court; no trial has been had, however, and so far as I know all have continued in their violation of the law unmolested.

If this thing cannot be stopped by law, we would like to know it,

so as not to be trying to press our district attorney to do a thing which I suppose he thinks would probably detract from his popularity in the political field.

Very respectfully,  
M. R. McALPIN, M. D.,  
*Secretary Vernon Parish Medical Society.*

(Signed)

NEW ORLEANS, December 26, 1914.

*E. L. Leckert, M. D.,*

Secretary State Board Medical Examiners,  
New Orleans, Louisiana.

Dear Doctor: I acknowledge receipt of your letter of December 24, enclosing to me letter from Dr. M. R. McAlpin, Secretary Vernon Parish Medical Society, in regard to the failure of District Attorneys to prosecute violators of the medical law of the State, even after such violators have been indicted by the grand juries.

I agree with the proposition advanced by Dr. McAlpin that this condition of affairs is most deplorable.

Without discussing the reasons or the motives of many of the District Attorneys in protecting from punishment indicted criminals, the fact nevertheless exists that in many of the judicial districts District Attorneys are not only unwilling to prosecute, but are unwilling even to reply to letters concerning the prosecution of such criminals.

You will understand that the counsel of the board has no authority to initiate a criminal proceeding in the name of the State.

There is possibly a remedy in the hands of the physicians themselves in the country parishes, if they will make a determined effort to put an end to this conspiracy against the law.

The only reason that has been suggested for the inaction of District Attorneys is that the illegal practitioners of medicine can control some votes. I do not believe that these illegal practitioners are more influential than the regular practitioners of medicine throughout the State. I cannot help thinking that if the physicians in the country parishes would make it their business to work up a feeling in the voters adverse to the election of any District Attorney who assists charlatans to victimize the people of the parish, there would be sufficient public opinion to defeat such a candidate for the district attorneyship. If the health of the people of this State is jeopardized from the politics of the State, then its maintenance must be supported by politics.

Of course, it is out of the question to proceed by impeachment against these District Attorneys. The Legislature would not have time enough during its whole session to try all the District Attorneys who refuse to enforce this law.

The revenues of the Board are insufficient to permit of the tak-

ing out of an injunction against every illegal practitioner, as this requires the employment of a lawyer, to whom a fee must be paid. For me to file proceedings in injunction (even though it be without compensation to myself) would be useless; as local influences would be sufficient to render it impossible for me to ever get a trial of a rule for contempt for the violation of an injunction.

If local physicians can find some local attorney sufficiently public-spirited to take out injunctions against these illegal practitioners, and take his chances of compensation in the attorney's fee prescribed by law as a part of the judgment maintaining the injunction, I would be pleased to prepare and forward in shape for action a petition for injunction against each violator of the law, but this is all that in the nature of things I am able to do. Your board must act either through District Attorneys, or through local private attorneys. If the District Attorneys refuse to perform their duty, and if local attorneys cannot be obtained to take charge of the civil proceedings, your board is powerless. It is then a matter which the local physicians must try to fight with the same methods as they are being fought.

I do not wish you to understand that this unwillingness on the part of District Attorneys to perform their duty is universal. There are many such officers who are ready at any time to assist the board in the enforcement of the law; but, on the other hand, there are some who insist upon the affidavit being made by a member of the board, which, of course, means that the members of the board must travel throughout all the parishes of the State in order to make such affidavits (and this is equivalent to refusing to enforce the law, because the requirement is an impossibility). And others shoulder the responsibility on the grand juries, who seem to be unwilling to bother with what they evidently consider unimportant violations of law. One would imagine that when an officer of the State government under his official responsibility gives notice of violation of the law and names the witnesses by which such violation can be proven, and requests the officer of the law charged by the statute with the prosecution of such offenses to perform his duty, nothing more would be required. As I have said before, there are some District Attorneys who require nothing more.

With assurances of regard, believe me,

Very truly yours,

(Signed)

ERNEST T. FLORANCE.

# N. O. Medical and Surgical Journal

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## Editorial Department.

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CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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### SEX HYGIENE IN THE SCHOOLS.

There are on many sides vaporings of instruction in sex hygiene. Congresses of various sorts have attacked the general question and it has been debated eugenically, sociologically, physiologically and even medically and morally. Opinion is still divided as to how the subject should be taught and when and how.

Text-books have already appeared and so have brochures for boys and for girls, all worthy enough.

The accomplishment so far has been worth while, but it has occasioned full license in the discussion of sex questions, and the public, that is, the reading public, need no longer be mawkish over reading sex problems.

We confess to some lack of understanding so far as sex hygiene is concerned and believe that any discussion of the subject should be prefaced by a definition of exactly what is aimed at in proposing instruction in sex hygiene in the schools. Everybody accepts the fact that the improvement in society needs first of all an improvement in moral viewpoint and that this may be obtained if the young person begins early to know moral sex life with the idea of training up to it. Sex knowledge comes soon enough, but usually this is not in a wholesome way.

The schools have begun by the teaching of physiology, in a primitive way, by leading young minds to think of the body as a delicate machinery, needing care and suffering if abused. Some schools even expand the sex side by presenting ideas on reproduction, carrying the child through plant life and lower animal life, up to human reproduction. All of this is commendable, but is this sex hygiene?

The real question involved is usually side-stepped, namely, the instruction of the young in prevention of vicious conceptions of sex to the point that a moral plane may be established and maintained during adolescence and until a natural and moral appreciation of sex may later on establish its own virtue.

What the consideration ought to be is the preventing of sex abuse as a phase of sex hygiene, and with this as a text direct instruction might be given with better effect, but *not* in the schools.

It is the parents' function to teach such things, and we should more and more educate those in the home, responsible for the coming generations, to the end that they may take up the burden by teaching the young. Sex instincts develop early enough to be observed, and the parent who is careful will see the signs sooner than a teacher could. The instruction should be aimed at enlightening the parents, then, as to the need of their charging themselves with the guidance of the young.

Social hygiene is developing. Only within the month a regular publication is announced, emanating from a national organization, engaged in educational propaganda for social hygiene. The work of such a body should enter every home, to anticipate by a proper prevention the necessity of a later reform.

We are learning to see through the veil of hypocritical conventionality and to look at vice as a disease of society with remedies at hand, but with certain difficulties in administration, needing only



a proper understanding to make them effective. If everybody preaches sex hygiene, and if most everybody practices it, the youth will not need much instruction beyond that which example teaches.

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### DERELICT DISTRICT ATTORNEYS.

Attention is called to an important communication from the secretary of the Louisiana State Board of Medical Examiners in regard to the dereliction of many of the district attorneys in Louisiana as far as the prosecution of illegal practitioners of medicine is concerned.

This communication embodies a set of resolutions adopted by the Vernon Parish Medical Society in protest, and a letter of explanation from the attorney of the State board.

While there is no excuse for the neglect of duty on the part of the public officials concerned, no matter what the cause, it would seem likely that by means of one of the alternatives suggested by Mr. Florance the desired end could be attained. It would require more trouble on the part of qualified practitioners than should be expected of them, but the end in view justifies the increased labor and thought.

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## Department of Obstetrics and Gynecology.

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In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

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TREATMENT OF UTERINE HEMORRHAGE WITH RADIUM.—At the last meeting of the American Medical Association, Dr. Howard Kelly (*Jour. Amer. M. Assoc.*) reported his results of radium treatment in uterine hemorrhage. These results are most unusual and add a new chapter in the use of radium as a curative measure.

Although the series is rather small, comprising in all but thirty-nine cases, the results as recorded equal or excel those obtained in the German and French clinics, which for some years have been expending so much energy on this line of work. The cases are divided into four groups, as follows: (1) Adult women with marked menorrhagia or metrorrhagia, but with no disease of the pelvic organs, except perhaps a slight enlargement of the body of the

uterus, the endometrium being microscopically normal. Of these, there were eight patients; amounts of radium varying from 60 to 268 mg. were applied for periods of from two to twenty-four hours. In only one case was more than one application necessary; in two, there was no recurrence of bleeding whatever after the first treatment; in the remaining five, one normal period occurred after treatment, to be followed by complete amenorrhea. (2) Young girls suffering from hemorrhages, presenting the same anatomical findings as Group 1 or 3. Of these there were five cases, ranging in age from thirteen to twenty-three years. In all there was severe anemia, with a bad cardiac lesion in one. The dosage used here was much smaller, varying from 12 to 60 mg., applied for five to twenty-four hours. In three instances the treatment was followed by the re-establishment of normal menstruation; in one case the periods became irregular, but never excessive, and in the fifth (the heart case) complete amenorrhea was produced. (3) Elderly women having the polypoid condition of the endometrium, commonly termed "polypoid endometritis," associated with bleeding. In this group there were likewise five cases; four were relieved at once by a single application, the fifth case was not relieved, and hysterectomy was performed five days after treatment, owing to severe hemorrhage.

(4) This is the most important group, comprising twenty-one patients with good-sized fibroid tumors. The ages varied from 32 to 59 years; excessive bleeding was present in all but two, one of whom was several years past the menopause. In sixteen of these patients complete amenorrhea was produced within one to two months, in some instances immediately after the treatment. In two others the remarkable result of the persistence of normal menstrual periods with complete disappearance of the tumors is claimed, and in almost all cases a marked reduction in the size of the tumor was seen. Only one case was a complete failure and required surgical intervention.

*Technic:* Kelly lays stress on the fact that the radium must be applied directly into the interior of the uterus, and not in the cervix or vagina. His procedure is to give the patient gas, make a thorough examination under the anesthetic, and then curette the uterus. The radium is introduced into the uterine cavity in a glass tube, which is encased in 0.5 mm. of platinum, 0.5 mm. of zinc foil, and 0.3 mm. of rubber. The amounts used varied in different

cases from 12 to 560 mg. and the exposures from one and one-half to forty-eight hours. (In expressing the amount, this is always given in terms of radium element, no matter what the salt actually employed.) Kelly says that his general tendency has been to increase the amount of material and reduce the time, finding that he gets better results in this way. He is extremely enthusiastic and believes that this type of treatment has a great future in store for it.

MILLER.

AN UNUSUAL CASE OF VICARIOUS MENSTRUATION.—Hirschberg (*Zentralbl. f. Gynäk.*, 1914, No. 26) reports a case in which regular menstrual periods were accompanied by a passage of blood from the breasts. From the age of 15 to 17 there was a watery discharge from the breasts at each menstrual epoch, which began a day or two before and continued for several days after the genital flow. After 17 this breast discharge was bloody. During three pregnancies the flow did not appear. She aborted twice, after each of which the flow returned as usual. After the third pregnancy, which went to term, the flow ceased and did not return. The doctor reports another case wherein the breast-bleeding occurred after a hysteropexy with castration.—*Am. Jl. of Obstetrics and Diseases of Women and Children*, Sept., 1914.

MICHINARD.

TRACHELOPLASTY FOR STERILITY.—Edward A. Schumann, M. D., of Philadelphia, recommends this new operation for the relief of sterility due to setnosis of the cervix. The operation consists in dilating the cervix to the extent of one and one-half inches, removing a strip of cervical mucosa one centimeter wide from the posterior cervical lip, extending from the internal os to the external os. This strip must include the entire mucosa down to the muscular tissue, the edges to be smooth and regular. Then, with volsella, the cervix is to be drawn upward and out of the way. A strip of mucous membrane is now cut from the posterior vaginal vault, the "top of the strip corresponding to the upper attachment of the vagina to the cervix." This strip must fit exactly the cervical denudation. The lower margin of this strip is left attached to the vagina in order to insure the continued nutrition of the strip, while the upper is cut across. The raw surface produced by this denudation is closed with fine sutures. This strip of vaginal membrane is now caught at its upper extremity and drawn into the cervical canal and made to fit snugly in the denuded canal made in the cervical lip, where

it is fastened by interrupted sutures. At the expiration of seven days the narrow band connecting the vaginal strip with the vaginal floor is cut away.

The doctor claims many advantages for this operation.—*Am. Jl. of Obstetrics and Diseases of Women and Children*, Oct., 1914.

MICHINARD.

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## Miscellany.

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SIMPLIFIED TECHNIC FOR FORMALDEHYD STERILIZATION.—Hauswirth describes a technic which is proving constantly very effectual. Several chemical reactions are involved, with generation of large amounts of steam, which supplies the needed moisture, and the process starts at once with extreme violence, so that the effect is realized even if the room is not quite hermetically sealed. There is no danger of fire, he says, while the ingredients are comparatively cheap, and no special skill is required. The ingredients can be put in two packages for the layman to mix. He reviews the chemical principles involved; the generation of heat is an important factor, and the tin tub or wooden tub used must not be too thick-walled, or it would absorb too much heat. The substances used are molecular amounts of potassium chlorate and metallic iron in fine powder and calcium carbonate in an amount corresponding to the size of the room. These are all mixed well together. Then formaldehyd is added in the proportion of 20 c. c. to the cubic meter of space. The reaction occurs when to this mixture sulphuric acid is added in an amount to correspond to the molecular relations of the  $KClO_3$  and Fe. He mixes the 98 per cent. sulphuric acid with kieselguhr (diatomaceous earth) and dilutes with 20 c. c. water to the cubic meter of space. When these two mixtures are poured together the steam and fumes rise in such clouds that even two liters of fluid soon evaporates and leaves the vessel dry.

(The potassium chlorate should be in finely powdered form and be mixed with the iron and chalk without friction, as otherwise there might be danger of an explosion.—Ed.)—*Journal A. M. A.*

J. A. S.

PERSISTENT LOW ARTERIAL BLOOD PRESSURE IN CARCINOMA OF THE TONGUE, WITH AMYLOID DISEASE, is a case reported by H. D. Rolleston, M. D. The case showed a persistently low pressure, 90, and usually under 75 mm. Hg. Male, 62 years of age, an account-

ant in South Africa, sent to London for radium treatment for inoperable carcinoma of tongue. Specific history, negative. The growth had extended to the left anterior pillar of the fauces. Slight enlargement of cervical glands. Albumin, specific gravity 1002 to 1022. No casts. Liver and spleen were not enlarged. He died with great pain. The right leg became livid and cold. The necropsy showed carcinomatous growth of tongue, palate, but no secondary growth in any other part of the body. The right leg showed commencing gangrene. The heart, eight ounces, was small, and showed brown atrophy. The intestines, kidneys, spleen and adrenals were amyloid. The liver, negative to amyloid reaction. The persistent low pressure is accounted for by the general asthenia and the amyloid disease. Ten days before the final collapse, blood pressure 35 mm. Hg., with the normal difference of 30 mm. Between the systolic and diastolic pressures.—Lon. *Lancet*, 1914, clxxxvii, 692.

T. J. DIMITRY.

**EXTERNAL CANTHOTOMY.**—This classical operation of enlarging the palpebral aperture is adopted as a procedure by Dr. Robert Scott Lamb. He pleads for the frequent and more general use of this well-known operation. The reasons for this procedure:

First. By the hoe-like action of the margin of the lids, ordinary foreign bodies are removed.

Second. That desquamated cells or foreign bodies are removed by this hoe-like action. Canthotomy removes the drawback to healing in ulcers. Relief in ophthalmia gonorrhœa, or in Parinaud's disease, is obtained by this operation. Numerous cases have been investigated.

External canthotomy has been, in his experience, a distinct advantage and advance over any procedure in connection with the treatment of corneal ulcer. This operation is performed in the earlier stages, and not as a last resort. In conclusion, he states that since he has adopted this procedure he has not found an ulcer that has not been benefited by it. He lays special emphasis upon the fact that external canthotomy should be used as a first resort, and not as a last resort.—*Ophthalmic Rec.*, 1914, xxiii, 437.

T. J. D.

**SOME MANIFESTATIONS OF INFLUENZA IN YOUNG CHILDREN.**—The study of influenza, chiefly carried on in the Eastern hospitals, begins to throw considerable light upon a number of conditions which formerly were very vague and puzzling.

Dr. L. Emmett Holt, in a recent article, brings forward some valuable data concerning the affection. Aside from proving the pathogenicity of *B. influenza*, Dr. Holt records many clinical symptoms which are associated with the organism.

In 1,650 sputum cultures obtained from 1,053 patients in the Babies' Hospital, New York, during the past five years, 35.5 per cent. showed the *B. influenza* the first year, 32 per cent. the second, 33 per cent. the third, 28 per cent. the fourth, and 42 per cent. the fifth. While there is seen a general correspondence in the different years, it will be noted that there has been an unusual prevalence during the present or fifth year. Influenza was observed to begin as the cold weather approached, progressively increasing through the early spring months. It disappeared regularly with the advent of warm weather, about the middle of May.

The following clinical types are recorded:

(1) Pneumonias, with unusual, often extraordinary, fluctuations of temperature or with a persistence of temperature after physical signs have disappeared.

(2) Pneumonias running a protracted course, with a slow resolution. Frequently there are recurring attacks.

(3) Cases of otitis, with very mild catarrhal symptoms, often only a moderate cough, with a few coarse rales in the chest, but a temperature quite out of proportion to the general or local symptoms.

(4) Cases with very few or no catarrhal symptoms whatever, but with a very unusual temperature curve.

(5) Unusual temperature curves accompanying tuberculosis, and sometimes other diseases.

(6) Cases resembling whooping-cough, seen chiefly in older children, seldom in infants.

Dr. Holt lays stress upon the last mentioned group, which, in his opinion, is rather frequently met with. The fact that both Pfeiffer's and Bordet's bacillus have many points of resemblance; that the clinical symptoms of both affections persist for from six to eight weeks; that paroxysmal cough may characterize each condition, may, and often does, lead to wrong prognoses. Some points of differential diagnosis mentioned are blood picture, clinical symptoms and contagious character of influenza.

*Prognosis:* Uncomplicated influenza has a good prognosis. The influenza organism were found to persist for months in the sputum

of children, and during that time there was a constant tendency to recurrence of the catarrhal symptoms of greater or less severity.

*Treatment:* On the whole, unsatisfactory. Isolation, fresh air, but not cold air. Change of climate may bring about a complete cure.—*Archiv. of Pediatrics*, October, 1914. D. P. WEST.

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## Medical News Items.

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MEETING OF SOUTHWEST PRACTITIONERS.—At the annual meeting of the Southwest Medical and Surgical Association, held in El Paso, Texas, December 11 and 12, the following officers were elected: Dr. John E. Bacon, president, Miami, Ariz.; vice-presidents, Drs. Jesse R. Gilbert, Alamogordo, N. Mex., and James Camp, Pecos, Texas; secretary-treasurer, Dr. Chas. P. Brown, El Paso, Tex. El Paso was selected as the next meeting place.

TRI-STATE MEDICAL SOCIETY MEETING.—At the annual meeting of the Tri-State Medical Society of Arkansas, Louisiana and Texas, held at Shreveport, La., December 8 and 9, the following officers were elected: President, Dr. Wm. G. Hartt, Marshall, Texas; vice-presidents, Dr. Edwin L. Beck, Texarkana, Texas; Oscar Dowling, Shreveport, La., and Edward H. Martin, Hot Springs, Ark.; secretary-treasurer, Dr. Jacob M. Bodenheimer, Shreveport, La. (re-elected). Marshall, Texas, will be the next meeting place.

MEETING OF CANAL ZONE PHYSICIANS IN SAN FRANCISCO.—At the November meeting of the Medical Association of the Isthmian Canal Zone, it was decided to hold an extraordinary session at the Panama Pacific Exposition, San Francisco, some time during the medical period, about June 14. It is the request of the society that all former and present members will endeavor to assemble at San Francisco during that week.

EASTERN PEDIATRICIANS HOLD MEETING.—The New England Pediatric Society held its annual meeting in Boston, December 4, 1914, and the following officers were elected: President, Dr. Edward M. Buckingham, Boston; vice-president, Dr. Edmund F. Curry, Fall River, Mass.; and secretary-treasurer, Dr. Richard M. Smith, Boston.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—At the annual meeting of this association, held in Asheville, N. C., December 16-17, the following officers were elected: Dr. Bacon Saunders, Fort Worth, Texas, president; Dr. Thomas S. Cullen, Baltimore, first vice-president; Dr. S. M. D. Clark, New Orleans, second vice-president; Dr. W. D. Haggard, Nashville, secretary; Dr. Le Grand Guerry, Columbia, S. C., treasurer. The next annual meeting will take place in Cincinnati. Dr. Joseph Taber Johnson, Washington, D. C., and Dr. N. Shilling, Cedar Bayou, Texas, were elected to honorary fellowship in the society.

THE NEWTON-NESHOBA-WINSTON TRI-COUNTY MEDICAL SOCIETY (Mississippi) met at Newton on December 8, 1914. The following officers were elected for the ensuing year: President, Dr. A. M. Harleson, Newton; vice-presidents, Drs. W. H. Mars, Philadelphia, and J. A. King, Hickory; secretary-treasurer, Dr. S. A. Majure, Union.

THE LAMAR-MARION-PEARL RIVER COUNTY MEDICAL SOCIETY (Mississippi) held a meeting on December 8, 1914, at Lumberton and elected the following officers: President, Dr. R. F. Nimocks, Poplarville; vice-president, Dr. E. W. Mackey, Purvis; secretary-treasurer, Dr. D. B. Stevens.

AVOYELLES PARISH MEDICAL SOCIETY MEETING.—The quarterly meeting of the Avoyelles Parish Medical Society was held at Mansura, La., January 15, 1915. The following officers were elected: President, Dr. A. T. Barbin, Marksville; vice-president, Dr. G. L. Dreuin, Mansura; secretary-treasurer, Dr. S. J. Couvillon, Moreauville. Dr. T. A. Roy was delegated to the annual convention, and Dr. Emile Regard, alternate. The next meeting of the Society will be held at Marksville the first Tuesday in April.

U. S. PUBLIC HEALTH SERVICE PROMOTIONS.—Passed Assistant Surgeons A. D. Foster and Holcombe McG. Robertson have been promoted and commissioned surgeons in the Public Health Service. Drs. Sanders L. Christian, Paul M. Stewart, Charles J. McDevitt, Roscoe R. Spencer, Walter C. Teufel and Royd R. Sayers have been commissioned as assistant surgeons in the Public Health Service.

THE AMERICAN GYNECOLOGICAL CLUB held a meeting in St. Louis, January 29 and 30, 1915. The program consisted princi-



pally of a series of clinics held by Drs. H. Ehrenfest, F. J. Taussig, Geo. Gellhorn and H. S. Crossen, on gynecologic operations; Drs. F. T. Murphy, W. Bartlett, V. P. Blair and E. Fischel, on abdominal operations, and Dr. H. Schwarz on obstetrical demonstrations, with a lecture by Dr. E. P. Opie, Dean of the Washington University Medical School. The meeting terminated with a dinner at the Hotel Jefferson.

**NATIONAL LEPROSARIUM.**—The establishment of a national leprosarium, under the control of the public health service, has been recommended to the commerce committee of the house of representatives by Surgeon-General Rupert Blue, U. S. P. H. S.

**LANE LECTURES FOR 1915.**—Dr. Frank Billings, Chicago, has been selected to deliver the Lane Lectures for 1915. Dr. Billings is the fifth American to be so honored, the other four being Dr. Nicholas Senn, Chicago; Dr. Wm. H. Welch, Baltimore; Dr. Reginald Heber Fitz, Boston, and Dr. Oscar H. Allis, Philadelphia.

**LOW MORTALITY FOR CHICAGO.**—According to the record of the health department for the year 1914, the death-rate for Chicago was 14.17 per 1,000, being 3.6 per cent less than the average yearly rate for the last decade and 6.2 per cent less than the rate for the previous year. The chief reductions are in deaths from typhoid fever and from infantile diseases.

**PLAGUE IN ITALY.**—In view of the fact that various ports in Italy have lately become foci of bubonic plague, the authorities in Naples have ordered that all ships must take strict precautions and use guards, etc., to prevent rats getting ashore from the ships. No ship can anchor less than five meters from the dock.

**FOOTBALL AND BULL-FIGHT CASUALTIES COMPARED.**—A Spanish daily, according to the *Medicina Contemporanea* of Lisbon, November, 1914, compares the casualties at football during the last three months in the American university teams (14 dead and 175 injured) with the casualties at the bull-fights in Spain during the same period. "The bull-fights," says the exchange, "make a better showing, and it is still better when we consider that football often entails a predisposition to lung and heart disease."

**ALCOHOL AMONG THE SOLDIERS.**—Because of the cold and damp bringing on intestinal trouble in many of the soldiers, the prohi-

bition of alcohol among the German troops has been partly lifted. The authorities affirm that only red wine will be allowed the soldiers and that the temperance movement in the army will otherwise be promoted in every way.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for physician, for men only, on February 3, 1915, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Indian Service at the Hayward School, Wisconsin, at \$1,100 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

For the position at the Hayward School, Wisconsin, unmarried eligibles without dependents are desired.

Qualified men have an excellent opportunity for appointment to the Indian Service as a result of this examination. The usual entrance salaries range from \$900 to \$1,100 a year.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. Anatomy and physiology (regional and minute anatomy, general physiology, the physiologic functions, and relations of organs) .....	10
2. Surgery and surgical pathology (general and special surgery, surgical diagnosis, pathology, treatment, and technic)	20
3. Chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry, the physiologic action and therapeutic uses and doses of drugs) ..	10
4. Bacteriology and hygiene (the technic of bacteriologic laboratory methods and the practical application of the principles of bacteriology and hygiene to prophylaxis and treatment) .....	15
5. General pathology and theory and practice of medicine (the etiology, pathology, symptomatology, and treatment of diseases) .....	20

6. Obstetrics and gynecology (the general practice of obstetrics, diseases of women, their etiology, pathology, diagnosis, symptoms, and treatment, medical and surgical).....	10
7. Training and experience .....	15
	<hr/>
Total .....	100

Applicants must be graduates of or senior students in recognized medical schools. The names of such senior students will not, however, be entered on the eligible register in the event they pass the examination until they have furnished proof of actual graduation.

Statements as to training and experience are accepted subject to verification.

Applicants must have reached their twenty-first but not their fortieth birthday on the date of the examination.

Applicants must be in good health and must attach to their applications a statement showing the number in their family dependent upon them that will require accommodations at the Indian school or agency in case they receive appointment.

Each applicant will be required to submit to the examiner on the day of the examination an unmounted photograph of himself taken within two years. An applicant who fails to present such photograph will not be admitted to the examination. Tintypes will not be accepted.

No sample questions of this examination will be furnished.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board at any place mentioned in the list printed hereon. No application will be accepted unless properly executed, including the medical certificate, and filed with the commission at Washington in time to arrange for the examination at the place selected by the applicant. The county officer's certificate in the application form need not be executed. The exact title of the examination as given at the head of this announcement should be stated in the application form.

THE SINS OF THE FATHER.—*The Southern Practitioner* for January, 1915, under the heading of "The Sins of the Father," quotes from the *Dietetic and Hygienic Gazette* the following:

"Twelve per cent. of human sickness to-day arises from diseases growing out of the social evil. Fully 80 per cent. of the young men who sow wild oats become physically tainted and carriers of loathsome infection. Wives and children reap a ghastly share of the wild-oat harvest. Thirty-three per cent. of the deaths of children under six months; 80 per cent of the blindness of new-born infants; 25 per cent. of all blindness; 80 per cent. of the diseases peculiar to women; 75 per cent. of all surgical operations performed on women; over 60 per cent. of the work done by specialists in diseases of women; all these are the result of hideous infections thus most innocently contracted. It is the solemn duty of all parents to advise their adolescent sons of such facts as these; of all physicians to do the like with all the young men they can influence; of all teachers in personal touch with students who look to them for guidance; of all clergymen able to impress the potent influence of religion upon the consciences of the youths in their congregations. If such influences as these succeed, none others will be needed."

ROLLER TOWELS, COMMON BRUSHES, FORBIDDEN.—The State Health Department of New York has recently adopted regulations forbidding the use of roller towels, the barber cup with soap for all comers, the unsterilized hair brush in public places, spitting on the street and in public buildings and various other indecent and insanitary acts. The regulation, the violation of which will be a misdemeanor, will go into effect on March 15 and will rule in all parts of the State north of Bronx County.

DOCTOR CRILE VISITS AMERICAN AMBULANCE HOSPITAL.—Doctor Crile, visiting surgeon to Lakeside Hospital, sailed on December 30 for Paris to visit the American Ambulance Hospital, established by the faculty and board of governors of the American Hospital in Paris. Shortly after the declaration of war, between August 12 and September 1, this group of men, with the cooperation and assistance of United States Ambassador, Myron T. Herrick, converted the Lycée Pasteur at Neuilly into the "American Ambulance of Paris" and made it one of the best equipped hospitals in Europe. Dr. Dubouchet, the head of the American Ambulance Hospital, has placed one division of that hospital, consisting of 150 beds, at Dr. Crile's disposal. Dr. Crile took with him an assistant surgeon, Dr. Samuel L. Ledbetter, Jr., Resident Surgeon at Lakeside Hospital; Miss Agatha Hodgins, anesthetist, and Miss Ida Davidson, nurse, also of Lakeside Hospital.

**DRUG-SELLERS ARRESTED.**—Because of complaints recently received by the police from the parents of many school children in New York City, that cocain sellers had been plying their trade outside public schools and that school children had come under the influence of the drug, six men were arrested and charged with selling the drug. Three other men were arrested about the same time, which led to the discovery of a large stock of cocain, heroin, morphin, veronal, and other narcotic drugs, amounting to over \$10,000.

**GIFT TO COLUMBIA UNIVERSITY.**—Dr. and Mrs. Frederic S. Lee have recently given \$20,000 to Columbia University for the purpose of establishing a fund for the endowment of the department of physiology. For the present, however, the income will be used to maintain the departmental library.

**TWO FRENCH MEDICAL PERIODICALS SUSPENDED.**—It has been announced by the publishers of the *Revue de médecine* and *Revue de chirurgie* that, due to the mobilization of the editors and their collaborators in the field hospitals, as well as the enlistment of the compositors in the army, the journals have been compelled to suspend their publication. It is the intention of the publishers to make good the missing numbers when the war is over and all the issues for 1914 will be supplied.

**IMPROVEMENTS TO LOUISIANA LEPER HOME.**—Extensive improvements to the Leper Home, Indian Village, Iberville Parish, have been made. The improvements include two large cottages, a clinic building, a new power house, sewerage, drainage, plumbing and electric light, cold storage and refrigeration plants. The State has paid for the work.

**SHREVEPORT'S HEALTH RECORD.**—A remarkable record as to contagious diseases has been published by the Shreveport health authorities, as follows: Diphtheria, two deaths in four years; smallpox, three deaths in eight years; scarlet fever, no deaths in eight years; infantile paralysis, no deaths in eight years, and only one white death from typhoid fever in 27 months.

**DAMAGED GOODS SHOWN AT DALLAS.**—After investigating the moving picture known as "Damaged Goods," the Dallas County Medical Society reported that in their opinion the picture was an

educational one and should be exhibited to the citizens of Dallas. The picture had been restricted to men and boys alone, but the Society recommended that it should also be shown exclusively to the female sex of the city.

EUGENIC MARRIAGE LAW IN OREGON.—At a recent convention of county officials in Oregon unanimous disapproval was voted against the present eugenic marriage law in that State, requiring a physical examination of all male applicants for matrimonial licenses. The repeal was advocated on the ground that it has proved ineffective and even harmful.

A WARNING.—The *A. M. A. Journal* has sent out a warning to physicians to the effect that a man appeared in Lima, Ohio, and sold to physicians such apparatus as hypodermic syringes, stethoscopes, thermometers, etc., collecting money in advance and allowing an extra percentage for cash. No goods were ever received and letters sent to the Keystone Mfg. Company, which he purported to represent, were returned unclaimed.

CANNABIS INDICA.—A little brochure has been received from H. K. Mulford Company, Philadelphia, showing the successful growth of cannabis in the United States at their Glenolden farms. During the past three years much has been accomplished in improving the quality of the drug, and it has been found that American-grown cannabis is as efficient therapeutically as that grown in India. For this reason, it is said, the ninth revision of the United States Pharmacopeia will officially recognize this drug as grown in the United States.

AMERICAN PHYSICIANS' BELGIAN RELIEF FUND.—For the week ending January 2, 1915, \$662.50 had been contributed by American physicians for the relief of the Belgian profession. Contributions are being sent in to the treasurer of the fund, Dr. F. F. Simpson, 7048 Jenkins Arcade Building, Pittsburg, Pa.

SMALLPOX IN PARISHES.—Every precaution is being taken by the health authorities to stamp out smallpox which has appeared in several parishes in the State. Acadia and St. Landry parishes are the places where the disease is most general, and great difficulty has been found among the Creoles there, who have objected to vaccination.

THE GORGAS MEDAL, to be given yearly in honor of Surgeon Gen-

eral Gorgas, has been established by the Medical Reserve Corps Association, New York State Division. This medal is open to competition to members of the Medical Corps of the United States Army, the Medical Reserve Corps of the United States Army, and to members of the Medical Corps of the organized militia. Officers may submit papers on any subject of a medico-military nature. Gen. Gorgas has appointed the following board of officers to act upon papers submitted: Col. Charles Richard, Lieut.-Col. Champe C. McCulloch, Jr., and Major Eugene R. Whitmore, Army Medical Corps. These officers are members of the faculty of the Army Medical School, and will have sole authority to appoint the time that papers are to be submitted, and to pass upon the merits of the papers. All inquiries should be addressed to one of these officers.

**LOUISIANA INSANE ASYLUM.**—The report of Dr. Clarence Pier-son, superintendent of the Louisiana Insane Asylum at Jackson, shows the admission of 310 patients for 1914. There are 1,600 patients now confined in the asylum. Although it has recently added several new buildings and has five more under construction, the demands are always in excess of the accommodations, and it is not able to care for all who ask admittance. The increase in the number of insane in asylums all over the country is not as great as it would actually seem by the figures shown. The fact that people go to these institutions, knowing that they will get the best of treatment and preferring it to private asylums and sanitariums, and, also, that cases are taken to the asylum earlier than they were of old, in the first stages of mental disorder, when it is apparently only a slight nervous affection, shows that the apparent increase is not as bad as the figures would indicate. The Legislature will take up the matter of providing for the care of the inmates of the two State asylums at its extra session, which will meet in two months, and it is hoped that a liberal provision will be made.

**POLLUTION OF LAKES A MENACE TO HEALTH.**—In his annual report, Surgeon General Rupert Blue, of the Public Health Service, points out the fact that the pollution of the Great Lakes and tributary rivers is becoming a serious menace to health. He says that about 16,000,000 passengers were carried each year over the Great Lakes and that more than 1,600 vessels use those waters. It is thought by Dr. Blue that these inland vessels play an important part in the maintenance of the high typhoid fever rate in the United States.

NEW ORLEANS HEALTH FIGURES.—According to the report furnished by the Registrar of Vital Statistics of the City of New Orleans, the figures showing the number of births and deaths for 1914 are satisfactory, but the death rate is slightly more than for the previous year. This, however, is due, to some extent, to the high death rate among the negro population, which was higher last year than for the preceding twelve months. The mortality for the resident white population was only 14.31 per thousand. Smallpox has been entirely eliminated; scarlet fever nearly so; measles and whooping-cough are practically gone, but there has been an increase in the number of deaths from tuberculosis, mainly, however, among the negroes. There was a large increase in deaths from violence, especially suicides. The birth rate was 7,900, or 22.07 per thousand—twice the birth rate of New York.

PERSONALS.—Dr. J. William White, emeritus professor of surgery, University of Pennsylvania, Philadelphia, and Dr. R. Tait McKenzie, head of the department of physical education, have offered to the British Government their professional services during the war.

Dr. Mary M. Crawford, of Brooklyn, has been chosen as one of the six American surgeons selected for hospital and field service in France.

Dr. William Lofland Dudley, formerly dean of the medical department of Vanderbilt University, died suddenly on a train near Chicago on the 8th of November.

Sir Frederick Treves is quoted as saying that the American Red Cross Hospital near Torquay is the best equipped war hospital in England.

Dr. C. Jeff Miller (New Orleans) attended the meeting of the American Gynecological Club, held in St. Louis, January 29 and 30, 1915.

Dr. and Mrs. Sidney K. Simon (New Orleans) returned during the month and are located in apartments at Broadway and Freret streets.

Dr. H. W. E. Walther announces that after January 1 he will limit his practice to genito-urinary surgery. Office, 411-412 Machecha Building.

REMOVALS.—Dr. William H. Deaderick, to 410 Dugan-Stuart Building, Hot Springs, Ark.



The *Medical Economist*, from Masonic Building, 302 Broadway, New York City, to 898 Park avenue, Brooklyn, N. Y.

Dr. Henry Blodgett McIntyre, to 158 West Fifty-eighth street, New York City.

MARRIED.—On January 5, 1915, Miss Amelie Marx Metz, daughter of Dr. and Mrs. Abraham Louis Metz, to Mr. Charles William Townsley, both of this city.

DIED.—On January 5, 1915, in Mexico City, Dr. Sterling J. Gates, of Franklin, La., a graduate of Tulane University and for many years the leading physician of Franklin.

On January 11, 1915, Dr. Henry Bezou, for many years a prominent physician of New Orleans.

On January 13, 1915, Dr. John Wesley Mitchell, of St. Martinsville, La., aged 78 years.

On January 15, 1915, Dr. Maxime Landry, well-known physician of New Orleans, aged 42 years.

On January 15, 1915, Dr. Theophile Gouaux, formerly of New Iberia, La., but a resident of New Orleans for the past twenty years, aged 65 years.

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## Book Reviews and Notices.

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*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.*

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**The Practice of Surgery**, by James G. Mumford, M. D. Second edition, revised. W. B. Saunders Company, Philadelphia, 1914.

This work differs from other text-books in that the reader's preliminary training is assumed and the endeavor is made to present to him the practice of surgery as surgeons see it. The principles of surgery are discussed only incidentally and the author confines himself consistently to the presentation of the practice of surgery.

The book, however, will prove invaluable to the student as well as to the practitioner of surgery, but it is not intended for those not yet prepared in the fundamentals. The book is written in a most agreeable style and will furnish most delightful and profitable reading, since, while sufficiently comprehensive, it is never prolix, and presents the practice of surgery in proper perspective.

PARHAM

**Case Histories in Obstetrics—Groups of Cases Illustrating the Fundamental Problems Which Arise in Obstetrics**, by Robert L. De Normandie, A. B., M. D. W. B. Leonard, Boston.

This is one of the Case History Series published by W. B. Leonard. It contains some seventy-six histories of obstetric cases occurring in the author's practice, together with a certain amount of suggestions and comments as to treatment, thus assuming some attempt at the text-book attitude.

For a history of a case to be interesting and instructive it should be clear, concise and contain matter pertinent only to the case. Unfortunately, the author at times is too prolix, and not sufficiently chronological; and intersperses rather indelicate criticism of his consultants. His idea of keeping a normal parturient in bed eighteen to twenty-one days will not meet with general approval, neither will the calisthenics advised. To illustrate, it is recommended that beginning from the seventh day after delivery the woman should begin a leg and thigh flexion exercise which terminates in rigidly extending the legs, and while in this condition flexing the thighs at right angle to the body, the legs being then slowly lowered. This exercise is to be continued for a few days on the floor after having left the bed. And all of this to preserve the contour of the body.

His idea of "Twilight Sleep" is not in harmony with those of all writers on this subject; in fact, it is not "Twilight Sleep" at all. The treatment of the cases being altogether of his individual election is not open to review.

Some of the histories and comments are very interesting and instructive, making the book as a whole very acceptable to the general practitioner, for whom it is intended.

MICHINARD.

**Blood-Pressure; Its Clinical Applications**, by George William Norris, A. B., M. D. Lea & Febiger, Philadelphia and New York, 1914.

This book presents in a condensed and practical form the subject of blood-pressure, which is becoming increasingly important to every one practicing medicine. Nearly one-half of its three hundred and fifty pages are given up to the discussion of the physiology of the circulation, the various instruments and methods of determining blood-pressure, rate of blood-flow, etc. The latter portion of the book, given over to clinical and therapeutic subjects, will be of interest or value to one wishing to acquaint himself with the present status of this subject. The work shows unmistakable evidence of diligent and intelligent collection and weighing of evidence, and his own clinical study of the various problems has enabled the author to lay proper stress on those points which are of especial importance in the sick room. J. T. HALSEY.

**Immunity, Methods of Diagnosis and Therapy and Their Practical Application**, by Dr. Julius Citron. Translated from the German and edited by A. L. Garbat, M. D. Second edition. P. Blakiston's Sons, Philadelphia, 1914.

This is a short text-book for the general medical man and dealing with the various methods of immunity diagnosis, especially those relating

to tuberculosis and syphilis. While the majority of general practitioners will find it hard reading, there can be no doubt that its careful perusal will prove interesting and valuable to many of this class. The Wassermann reaction alone has become of such fundamental importance in daily practice that each of us should be familiar at least with its theory and also with its practical limitations. This is presented in this work with much ability and conviction. The mysterious and important subject of anaphylaxis is briefly considered and the discussions of the various types of immunity are well and interestingly handled. J. T. H.

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**Practical Therapeutics**, by Hobart Amory Hare, M. D., B. Sc. Fifteenth edition. Lea & Febiger, Philadelphia and New York, 1914.

This work has been noticed over and over again in these columns. The medical profession has bought it in such numbers that since its first appearance in 1890 fifteen editions have been printed. We note that Dr. Hare has included in this new edition such important, more recently acquired knowledge, as that of the actions of digitalis on the conductivity of the auriculo-ventricular bundle, of adrenaline on the bronchi and of pituitary extracts on the uterus and the intestine. No more need be said than that it is up to the standard of the earlier editions. J. T. H.

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**Handbook of Pharmacology**, by Charles Wilson Greene, A. B., A. M., Ph. D. William Wood & Company, New York, 1914.

This work has been written for the student of pharmacology, not for the general practitioner. Its author believes that "medical students should have placed in their hands a work dealing solely with pharmacology; i. e., with the reactions of the normal body to drugs and drug agents, without being burdened and confused by a mass of matter on practical materia medica and therapeutics." This point of view has much to commend it, and Professor Greene's book will doubtless find a field of usefulness in school work. The reviewer doubts, however, whether this work will interest the graduate physician. J. T. H.

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**Diseases of the Ear, Nose and Throat**, by Jonathan Wright, M. D., and Harmon Smith, M. D. Lea & Febiger, Philadelphia and New York, 1914.

This volume is the result of a very happy combination by a pathologist and an oto-laryngologist, as a consequence we have a product differing in a very important way from most volumes of this kind.

Special stress is laid upon the etiology, histology and pathology, and this must represent the very foundation upon which any student must build. The building, viz: the diagnosis and treatment, is the result of a valuable, long existing, painstaking clinical experience and is a fitting superstructure to the foundation so excellently laid.

One is refreshed to see new descriptions, new plates, new illustrations; in fact, the volume is especially pleasing from beginning to end, and is one of the very best that I have had the pleasure of reviewing for some time. The volume from the publisher's standpoint is excellent, and they are to be congratulated upon its execution.

It deserves a place on the "five-foot shelf" of every medical library.

LYNCH.

**A Manual of Diseases of the Ear, Nose and Throat**, by Dr. E. B. Gleason.

The third edition of Gleason's Manual covers in a clear, compact style the subjects considered. Many changes have been made and some new matter added to bring the work abreast of the times.

The chapters on tonsils, internal ear and intra-cranial complications of middle ear disease have been rewritten. Much new material has been added to the chapter on accessory sinuses.

Special attention should be called to the formulary at the end of the book, which is decidedly more than a formulary, really a small materia medica of the special drugs in use.

The work is good, the illustrations very numerous and clear, and the book as a whole must appeal to those for whom it is intended.

LYNCH.

**Life and Law: The Development and Exercise of the Sex Function With A Study of the Effect of Certain Natural and Human Laws and a Consideration of the Hygiene of Sex**, by Maude Glasgow, M. D. G. P. Putnam's Sons, New York and London, 1914.

The title of this book is somewhat misleading, as almost the whole of the book is devoted to sex and its shadows, with enough reference to the law to excuse the use of this in the title. The book is well written and worth reading. The contents cover a wide array of miscellany, dealing with the origin of sex, the natural predominant rights of the female, and with the function of sex, as these relate to ethical, moral, physical and social phases of human life. Many parallels are drawn with lower organic life as examples, and throughout there is a vein of cynical philosophy which might be expected with an intelligent woman at the pen.

An excellent review of the evolution and status of prostitution is given and a strong criticism of existing neglect of venereal diseases is afforded.

DYER.

**Anatomy and Physiology of the Eye and Its Appendages**, by Jno. Welsh Croskey, M. D. Smith-Edwards Company, Philadelphia.

This is a concise statement of the whole subject, plainly and clearly put. There are two very good colored plates illustrating the anatomy. It may prove useful to those wishing a reference in small compass on the subject.

BRUNS.

## **Publications Received.**

**J. B. LIPPINCOTT COMPANY**, Philadelphia and London, 1914.

**International Clinics.** Volume four, twenty-fourth series, 1914.

**PAUL B. HOEBER**, New York, 1914.

**Therapeutics of the Circulation**, by Sir Lauder Brunton, Bt., M. D., D. Sc., LL. D., L. R. C. P., F. R. S. Second edition.

**Fever: Its Thermotaxis and Metabolism**, by Isaac Ott, A. M., M. D.

**Public Health Laboratory Work**, by Henry R. Kenwood, M. B., F. R. S., D. P. H. F. C. S. Sixth edition.

Gonorrhœa and Its Complications in the Male and Female, by David Watson, M. B., C. M.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1914.

The Clinics of John B. Murphy at Mercy Hospital, Chicago. December, 1914.

C. BLAKISTON'S SON & COMPANY, Philadelphia, 1914.

Selected Addresses, by James Tyson, M. D., LL. D.

WASHINGTON GOVERNMENT PRINTING OFFICE, Washington, D. C., 1914.

Public Health Reports. Volume 29, Nos. 50, 51 and 52; Volume 30, No. 1.

The Friedman Treatment for Tuberculosis, by John F. Anderson and Arthur M. Stimson.

Poliomyelitis, by Chas. S. Coverly, M. D.

Bacteriological Standard for Drinking Water.

Malaria, by H. R. Carter, Surgeon-General, U. S. P. H. S.

Annual Report of the Surgeon-General of the Public Health Service of the United States for the Fiscal Year, 1914.

The Sanitation of Iquitos, Peru, by G. M. Converse.

The treatment and Prevention of Pellagra, by Jos. Goldberger, C. H. Waring and David G. Willets.

Some New Siphonaptera, Etc., by Carroll Fox.

Studies Upon Leprosy, by Moses T. Clegg, Geo. W. McCoy and Harry T. Hollman.

#### MISCELLANEOUS.

Cancer in Plants, by Erwin F. Smith. (Department of Agriculture, Washington, D. C.)

Quarterly Bulletin of the Louisiana State Board of Health. New Orleans, December 28, 1914.

The City Hospital Question and a Reply to Bulletin of Board of Trustees of University of Louisville. (Issued by Louisville Medical Club.)

Nursing Manual. (Metropolitan Life Insurance Co., New York, 1914.)

#### Reprints.

The Effects of Goitre Operation Upon Mentality; The Question of Anesthesia in Goitre Operations; The Present Status of the Surgery of Septemic Goitre, by Wm. Seaman Bainbridge, M. D.

The Tangent Curtain; Convergence Insufficiency; The Convergence Index As a Measure of the Converging Power, by A. Duane, M. D.

The Continuous Warm Water Bath the Rational Treatment in Tetanus, by A. Rose, M. D.

Stomach Disorders Requiring Surgical Intervention From the View-point of an Internist, by Chas. D. Aaron, M. D., Sc. D.

A New Antidote for Corrosive Sublimate Poisoning, by Wm. A. Hall, Ph. B.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for December, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever	17	10	27
Intermittent Fever (Malarial Cachexia)		1	1
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough	1		1
Diphtheria and Croup	15	6	21
Influenza	9	7	16
Cholera Nostras			
Plague			
Pyemia and Septicemia	1	2	3
Tuberculosis	56	58	114
Syphilis	5	6	11
Cancer	35	8	43
Rheumatism and Gout	2		2
Diabetes	3		3
Alcoholism	2		2
Encephalitis and Meningitis			
Locomotor Ataxia	2		2
Congestion, Hemorrhage and Softening of Brain	23	13	36
Paralysis	1	1	2
Convulsions of Infancy		1	1
Other Diseases of Infancy	12	9	21
Tetanus		3	3
Other Nervous Diseases	6	1	7
Heart Diseases	71	39	110
Bronchitis	4	2	6
Pneumonia and Broncho Pneumonia	41	39	80
Other Respiratory Diseases	1	1	2
Ulcer of Stomach		2	2
Other Diseases of the Stomach	3	1	4
Diarrhea, Dysentery and Enteritis	16	13	29
Hernia, Intestinal Obstruction	2	1	3
Cirrhosis of Liver	14	3	17
Other Diseases of the Liver	3	1	4
Simple Peritonitis			
Appendicitis	4	1	5
Bright's Disease	36	35	71
Other Genito-Urinary Diseases	7	15	22
Puerperal Diseases	2	5	7
Senile Debility	2		2
Suicide	7	1	8
Injuries	26	17	43
All Other Causes	19	11	30
<b>TOTAL</b>	<b>448</b>	<b>313</b>	<b>761</b>

Still-born Children—White, 21; colored, 17. Total, 38.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 19.76; colored, 37.19. Total, 24.48.

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

Mean atmospheric pressure.....30.12  
 Mean temperature .....51.  
 Total precipitation .....3.99 inches  
 Prevailing direction of wind, northeast.

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## Original Articles.

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

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### "SPLENIC ANEMIA."\*

By JOSEPH D. WEIS, M. D., New Orleans, La.

The proper title of this communication should be "A Preliminary Report of Four Cases of Acute and Sub-acute Banti's Disease."

Purposely I do not use the term Splenic Anemia, as after the observations made upon my series of cases it seems that the term splenic anemia is only a stage in what ultimately is a picture corresponding to what Banti has described as a disease now known by his name.

Splenic anemia is described in the literature as a condition characterized by an enlarged spleen, a more or less severe anemia associated with hemorrhage from the mucous membranes, and with temperature and leukopenia. That the syndrome may be acute or chronic is not stated, but in my observations of seventeen cases

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extending over a period of six years, I am able to state that acute cases of splenomegaly with fever and hemorrhage do occur.

Samuel West alone in the literature speaks of an acute splenic anemia of six months to two years duration, but there seems to be some confusion in his mind, for he described no case of longer duration than three years, and finally he makes the extraordinary statement that "the nature of these rapid cases is somewhat doubtful." Splenic anemia is a disease most common to men or young boys, however it is also seen in women or young girls. One girl of ten years and one adult woman of twenty-six years are in my series. The condition known as splenic anemia would seem under certain circumstances to be part only of a picture of the disease which bears the name of Banti, and as described by him in 1882 as primarily a splenic anemia, which later shows a definite hepatitis or cirrhosis of the liver with ascites as a terminal feature. Such being the facts, there is no doubt that Banti's disease as an entity would be composed of two separate factors, splenic anemia and cirrhosis, and it seems probable that splenic anemia as an entity itself does not exist.

The literature of splenic anemia is confusing. One fact only seems to stand out prominently, namely: that a splenomegaly is evident in all cases; that hemorrhage may or may not occur; that fever may or may not exist, and that Banti's disease may ultimately result is either affirmed, denied, or discussed as a possibility. It was with these conflicting statements that I began the series of observations upon cases of so-called splenic anemia, Banti's disease, and allied splenomegalys.

The proposition advanced by Osler that "the conditions separately described in the literature as primitive splenomegaly, splenic anemia, splenomegalic cirrhosis of the liver, or Banti's disease, are stages of one and the same malady" has been widely accepted. I can accept this proposition only with the following change, that splenic anemia, with or without cirrhosis, both in its acute and sub-acute and chronic forms, are all Banti's disease in varying stages of its development. Many observers believe that the group of cases now included under the name of splenic anemia as defined above will ultimately be resolved into separate and distinct etiology. The name splenic anemia is therefore used in the literature as covering a certain group of cases with a fairly definite symptom-complex that cannot be explained by any known cause.



Synonyms of splenic anemia are anemia splenica, splenic form of pseudo-leukemia, or Hodgkin's disease or primitive splenomegaly, endothelial hyperplasia of the spleen, splenomegalic cirrhosis of the liver, and, finally, Banti's disease. The disease is probably an intoxication of unknown nature and in all literature it is characterized by great chronicity and a primary progressive enlargement of the spleen which cannot be correlated with any known cause. Also by an anemia of a secondary type and leukopenia with marked tendency to hemorrhage, particularly from the stomach, and in many cases of a terminal stage with cirrhosis of the liver, ascites with or without jaundice—Banti's disease.

#### Pathology.

The essential pathology of these conditions consists of hyperplasia and fibrosis of the spleen, anemia of secondary type and cirrhosis of the liver. In some cases the hyperplasia is of one or more parts of the constituent parts of the spleen. In the larger spleen the lymphoid and endothelial hyperplasia is greatest.

As the connective tissue overgrows, the spleen may be reduced in size, owing to reduction in the amount of lymphoid and endothelial elements, and secondary cirrhosis of the liver is associated with great connective tissue overgrowth and degeneration of the pulp of the spleen. No great change is noted in the lymph glands, so far as I am able to find anywhere in the literature. This, with silence as to any acute stages with febrile reaction, at once tended to make me place my four acute cases under suspicion. I have now come to a definite conclusion, however, that these were cases of acute and sub-acute splenic anemia, or Banti's disease, a conclusion which is based upon the pathology in three of the cases, one by autopsy findings and in two of the cases upon microscopic examination of the extirpated spleen itself.

Mandelbaum, in an analysis of twenty-two cases, thinks there are certain spleens from clinically doubtful cases of splenic anemia which the pathologist cannot distinguish from the spleens of clinically undoubted cases. Yet it must be said that the finding of a great hyperplasia of one or all of the tissue elements of the spleen without any diagnostic lesions elsewhere in the body is strong corroborative evidence of the clinically diagnosed splenic anemia. Hence splenomegaly of any sort constitutes a sufficient condition or sign for a diagnosis of splenic anemia according to some authori-

ties. This is obviously an error, for we now know that splenic anemia is not simple splenomegaly, nor is it the same condition known as Gaucher's disease, though Hutchinson thought Gaucher's disease and Banti's disease identical. Splenic anemia, therefore, must be distinctly kept apart from Gaucher's type of the disease.

Broadly speaking, no etiology exists in any form of splenomegaly, excepting, of course, the enlarged spleen, which is found in known diseases, such as plasmodia infection, syphilis, tuberculosis, rickets, circulatory obstructions in the portal system, the leukemias and Hodgkin's. Besides these there is then a group of splenomegaly associated with cirrhosis, or without liver changes, which the French and the Italian observers have called attention to. This group of primary or primitive splenomegaly must be subdivided, and for simplicity I have made the following subdivisions, because I have found that all of my cases may be placed under one of the following three headings:

1. Simple Splenomegaly.
2. Gaucher's Disease.
3. Banti's Disease (splenomegaly with marked secondary anemia, leukopenia with hemorrhage and fever, etc.)

1. Simple splenomegaly without anemia is described; such condition is possibly questionable. In my series, one such case probably exists.

2. Gaucher's Disease. Brill and Mandelbaum have fully gone into one form of splenic anemia known as Gaucher's disease, and first described by Gaucher in France. Gaucher's disease is a family type of splenic enlargement occurring in two or more members of the family. The enlargement of the spleen is always chronic, and the liver enlarges hand and hand with it, hemorrhage occurs only late in the disease, most commonly from the gums and nose. The disease is most common in women and is never acute nor febrile. There is a wedge-shaped thickening of the conjunctiva on the nasal side of the eyeball with its base on the edge of the cornea. Brill describes this as similar to a condition known as Pinguecula. This conjunctiva thickening is said to be constant in Gaucher's disease; there is no jaundice, but a hemolytic action is seen in the skin (hematogenous jaundice, better still a skin of hemolysis). The clinical manifestations are pronounced hypertrophy of the spleen, subsequent enlargement of the liver, absence of palpable lymph nodes, absence of jaundice and ascites, absence of characteristic

blood changes, and with a discoloration of the skin with pigmentation and a tendency to epistaxis or gum bleeding. Lesions are found in the spleen and lymph nodes, bone marrow and liver. These organs show the presence of iron containing pigment and lymph multinuclear cells with characteristic cytoplasm. The disease is evidently a chronic one without any of the manifestations of malignancy and always terminating as the result of some intercurrent affection. The etiology is unknown, although a family predisposition to some toxic agent which causes an irritability of the follicles in the hemapoietic system seems probably to exist. The possibility of some protozoan infection as an etiologic factor must not be overlooked.

Here, then, is a chronic disease without symptoms, excepting only the enlargement of the abdominal organs, epistaxis and gum bleeding. Such patients die of intercurrent disease, or live for nineteen to thirty or forty years undisturbed. Splenectomy has either caused death in Gaucher's disease, or relieves the patient of the weight of the spleen without appreciable effect upon the course of the disease. The blood in Gaucher's disease shows anemia and a leukopenia as low as 500 leukocytes, the average being 3,000. The differential count showed an average normal blood count. The red cells are not affected until very late and may often be normal for years, an anemia occurring, therefore, only late in the disease. This disease is considered by some to be malignant, but its chronicity may be said to be against this opinion. A peculiar endothelial type of cell is found in the spleen, lymph nodes, liver and bone marrow.

A discussion of whether Gaucher's disease is not related to Hodgkin's disease and the blood diseases known as the leukemias is now going on. In 1912 Mandelbaum published the first case of Gaucher's disease described since the original description in 1882. During that time only nine cases had been recorded, showing how rare the condition is. It must be distinctly admitted now that Gaucher's type is a distinct disease, related in all probability to the blood diseases. The diagnosis rests entirely upon the finding of the peculiar endothelial cell described by Gaucher. In my series no certain case of Gaucher exists. No cells such as described by him were found, but one of the cases clinically bore out Gaucher's description. The spleen, which was extirpated, leaving the patient in about the same condition after operation as before, showed no

characteristic cells. This case may be one of simple splenomegaly.

3. Banti's Disease. Probably no such disease as splenic anemia exists independent of the syndrome known as Banti. By splenic anemia is meant all those cases of primary splenomegaly with hemorrhage and with possible enlargement. In my series of seventeen cases this was a constant and positive factor. The splenic mass always preceded any symptom of anemia. The anemia itself occurs either for the first time with the onset of temperature, or in chronic cases gradually without temperature. The cases which I call acute splenic anemia are remarkable and nowhere do I find them adequately described in the literature. Marked glandular enlargement has caused some confusion, and some cases of splenic anemia have been classed as Hodgkin's disease. It must be stated that no case of true Hodgkin's disease ever showed a spleen the size of the spleen in splenic anemia, and it is because of the size of the spleen that my four acute cases, showing glandular enlargement, have been called Banti. Neither does Hodgkin's disease show the extreme of leukopenia that my cases showed. Usually, in Hodgkin's, the leukocytes are normal, or only slightly increased or diminished from the normal. The pathology of Hodgkin's glands (Reed, Longcope and MacCallum) is characterized by changes resembling a chronic inflammatory process and consists of proliferation in endothelial and reticular cells, formation of giant cells, the presence of many eosinophiles and a progressive fibrosis.

Warthin believes that the clinical complex of Hodgkin's disease has no pathological entity, but may be produced by a variety of conditions quite different in nature, as, for instance, many cases classed as Hodgkin's showed the histologic picture of lymphocytoma, epithelioid tuberculosis without caseation and myeloid changes in the lymph nodes. Such cases, he believes, are not Hodgkin's. Since the glands in two of my cases showed no Hodgkin's picture, but on the contrary were distinct, general lymphocytoma with fibrosis, I believe them to be glands occurring in an acute splenic anemia. In all descriptions of Hodgkin's it is noticeable that no acute stage is mentioned. Hence, these two cases of mine, showing lymph gland enlargement, both being acute, do not come under any known heading. Neither do my other two cases with febrile curves constant and without lymph node enlargement, and since microscopic identity is found in all three of the acute cases and a clinical identity in the fourth with all my chronic

cases also exists, I feel obliged to place them as forms of acute and sub-acute Banti.

Acute splenic anemia is a fatal condition, and may last from six weeks to six months. The fever may be constant, and is so in cases of short duration. The glandular swelling may occur only towards the end of the disease and be a precursor of death, and the glands may appear to disappear as a final picture. In the sub-acute or chronic forms the glandular enlargements and the fever are synchronous. Usually at death the glands and fever are present, often the lymph follicles in the throat being much swollen.

In my series there are four such cases; two were acute in the sense of being under two months' duration, both of which showed permanent gland enlargement, with temperature ranging from 101 to 105. Autopsy in one showed general glandular enlargement and splenic tumor, which microscopically showed fibrosis of the spleen with hyperplasia of the lymph nodes. The bone marrow was negative. The anemia in both was under a million, with a leukopenia of 800 in one and 1,200 in the other. In two sub-acute cases, one of eighteen months and one of eleven months, there had been in one a previous attack, as described under the heading acute, and a second, which was fatal. Both showed the same condition as in the acute; namely, a leukopenia below 1,000 and the red cells below a million. The fourth case, which I call acute or sub-acute, showed a condition of fever which had been constant for eighteen months, with no great glandular enlargement at any time. Leukopenia was below 1,500 constantly, and the reds averaged 1,500,000 to 2,000,000. In this case splenectomy was performed, and the patient lived six weeks. There was no autopsy.

The remaining twelve cases, covering a period of seven years, all showed the following: Splenomegaly, followed by secondary anemia with a marked leukopenia as a prominent feature. In all, the count of the white cells averaged below 3,000, or from 1,800 to 2,000; the reds averaged from 1,000,000 to 1,500,000 in these twelve cases. Nine showed hepatitis occurring in the first six years of illness. None of these showed any fever. The three cases showing no hepatitis were remarkable in that profuse hemorrhage was a prominent symptom. Two of these cases came under notice first for hematemesis. Of these three cases, two were operated upon, with death in the first week from hemorrhage. One of the three cases has been lost track of. The remaining nine were cases showing

Banti's syndrome, seven of which had ascites. Of these nine, seven are dead, and autopsies in four showed splenic masses and cirrhosis. There remain two cases, which, so far as I know, are still alive; one I still see occasionally, but the progress is steadily downward. Not in this list are several cases known to have been splenic anemia which I only saw once and from whom I draw no conclusions.

The detail of my seventeen cases would obviously be too long for the present purpose. I shall, therefore, reserve it for future publication when the series is larger and more pathological work has been accomplished. I am aware that statistics from so small a number as seventeen cases cannot be entirely convincing. However, I feel that I can make some preliminary statements which will have value upon future observations of such conditions. The detail of the four acute cases I wish to give:

**Case 1.** A woman of 26 years, who, two months after a normal puerperium, began to have fever. I saw her in the second week of the temperature and found a greatly enlarged spleen with blood of secondary anemia and marked leukopenia as low as 920. She died after five weeks with a typhoidal type of temperature, an extremely large spleen and an acute enlargement of the superficial glands of the neck and swollen lymph tissues of the throat. In this case there was no autopsy.

**Case 2.** A man of 30 years, whom I saw in the Charity Hospital, with a history of "malarial fever" of three weeks' duration, presented upon entrance examination, an enormous spleen and the blood showed a secondary anemia with leukopenia of 800. There were no plasmodia in the blood, and the temperature was typhoidal in character. This patient died after six weeks with glandular enlargements in the neck. Spleen showed at autopsy hyperplasia and fibrosis of Banti, and the glands a general lymphocytoma.

**Case 3.** A man, 32 years, with a history of temperature having lasted six weeks before observation. Examination showed an enormous spleen with a secondary anemia and a leukopenia of 1,200. After two weeks in bed the temperature subsided and the patient became, apparently, much better. Enlargement of the spleen and a leukopenia persisted. After an interval of three months the patient again presented himself for admission at the Touro, with a temperature which subsequently ran a five-weeks course and abated, leaving the spleen much larger than it had been upon entrance. Leukopenia was still present. After two months of a non-febrile stage, the patient returned to the Touro with fever again. This was the termination of the disease, death occurring after four weeks of constant temperature, with great enlargement of the glands of the neck and adenoid tissues, as in Cases 1 and 2. Autopsy showed general leukocytoma of the glands and hyperplasia and fibrosis of Banti's spleen.

**Case 4.** A man, 34 years old, who is said to have had fever for nine months previous to his entrance to the Touro. Examination showed a very large spleen, marked secondary anemia and a leukopenia of 2,000. There were no plasmodia and the temperature ranged from 101 to 102. In this case, I advised splenectomy, which was done successfully. The

patient's temperature, however, continued to range between 101 and 102 after operation and persisted up to death, six weeks later. There was no enlargement of the glands and the extirpated spleen showed a typical Banti.

It may be argued that since my cases showed glandular nodes, they are not splenic anemia. I contend they are, since these glands were not of the type of Dorothy Reed, Longcope or MacCallum's pseudo-leukemia or Hodgkin's, but were lymphocytoma in character and did not occur in one case of undoubted splenic anemia of sub-acute form, and in one case of undoubted identity in the acute form.

Finally, there is, then, a primary splenomegaly. This condition must be subdivided into (1) Simple splenomegaly, without anemia or without symptoms of any kind, other than the weight of the spleen mass; (2) Gaucher's type, always chronic, without great tendency to hemorrhage, occurring in families, common in women, with a late secondary anemia. A rare disease which is related to the blood vessels and should be called Gaucher's disease. (3) Banti's disease, subdivided into acute, sub-acute and chronic, the acute being an overwhelming toxemia with great febrile movement and a final swelling of the lymph tissues and death in six to eight weeks, always associated with extreme leukopenia. The chronic form, with sub-acute febrile movement, and death like that in the acute, lasting from eleven to eighteen months, or continuing into chronicity with fever only occasionally, and finally completing the picture with an atrophic hepatitis and ascites without true jaundice, but with great hemorrhage and hemolysis, showing in a yellow color of the skin.

I refrain from speaking of any etiologic factor, because I have been unable to demonstrate any factor either by culture or inoculation of spleen pulp or patient's blood into animals.

Splenic anemia, then, as we speak of it, is either acute Banti's disease, or a part of sub-acute or chronic Banti's disease, and consequently as an entity does not exist independent of Banti's syndrome as described by Banti himself.

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### DISCUSSION.

DR. J. B. ELLIOTT, JR.: I have had the pleasure of seeing many of the cases mentioned by Dr. Weis. I had a case at Touro a year ago, seen in consultation with Dr. Gill, in which there was some doubt as to the diagnosis. The history of the case was as follows:

J. M., aged 10, white male, resident of New Orleans. Family history negative. Past history negative. On September 1, 1913, the boy felt badly and kept to his bed all day. On September 3 had a temperature of 102 degrees, but no chill. The fever kept up daily until entrance into Touro on September 7. On entrance he was stupid and drowsy and had a temperature of 103 degrees. He had had no stool for three days. On examination we found an underweight boy, very pale, teeth good, no enlarged glands, lungs negative, systolic blow over cardiac area; heart slightly enlarged; pulse regular, but easily compressed and rapid. Liver slightly enlarged; spleen very much enlarged, extending to three inches below costal arch, abdomen tense, no rose spots. The blood count showed W. B. C., 3,600; poly's, 62; lymphocytes, 32. On the following day the blood showed a slightly positive Widal reaction. The temperature ran between 103 and 105 degrees from September 7 to September 20, and then fell rapidly to normal. On September 24 the blood count showed R. B. C. 1,300,000; W. B. C. 8,700; a few nucleated reds, anisocytosis; few myelocytes, poikilocytes; poly's were 70 per cent.; lymphocytes, 30 per cent.; spleen had enlarged until it reached almost to the umbilicus; hemoglobin was 40 per cent. On the 27th the blood was about the same as on the 24th, the hemoglobin being a little lower. On October 3 the red cells were 2,000,000; white cells 9,000; hemoglobin, 30 per cent; color index, .75; a few nucleated reds still present; spleen still same size. On October 15 the red cells had gone to 3,850,000, and white to 10,000; the hemoglobin was 60 per cent.; the spleen had not been reduced to any extent.

The patient left the hospital with the spleen still enlarged and I feared very much that it was a case of splenic anemia; the subsequent history, however, shows the spleen became normal in about two months and the boy to-day is perfectly well and has a normal sized spleen. Simply a case of typhoid with enlarged spleen.

I had another case in Ward 20 of Charity Hospital last year who came in on account of the enormous weight of the spleen, which had been gradually increasing for the last year. I thought that it was a case of splenomegaly of possibly the Gaucher type, and advised operation, which was done at once, and the patient left the hos-



pital in good condition and is still in the same condition at present, though has not regained his strength. The pathological report did not confirm the diagnosis of Gaucher type.

A second case, occurring in Ward 21, Charity Hospital, gave a history of enlarging spleen for two years with fever and jaundice. He had not improved under arsenic and iron and cacodylate of soda in two months' time, and, against advice of Dr. Weis, I advised an operation, believing the case to be a Banti. This patient died two days following the operation.

The great question in all these cases is when or when not to operate. While in Vienna in June, 1913, all cases with enlarged spleens not leukemic were being operated upon with results a little better, if anything, than the ordinary treatment with arsenic and iron. With the experience I have had in the past and with the accumulated statistics from recent articles in the journals, I am forced to believe that an operation in early Banti is justifiable.

DR. I. I. LEMANN: A case not included in Dr. Weis' series was one seen by both of us. It was interesting in view of the fact of the difficulty of classification. At one time a diagnosis of splenic anemia was made. Later the case ran a sub-acute course, with enlargement of the cervical lymph nodes and of the lymphatic tissues of the throat. The latter terminated in a gangrenous condition which dominated the clinical picture at the end. Post-mortem showed the typical Dorothy Reed picture.

The question is, are we dealing in these various apparently kindred diseases, with some common cause or infection, giving a different reaction in different patients?

DR. C. W. DUVAL: The case referred to by Dr. Lemann was diagnosed pathologically as Hodgkin's disease of the Dorothy Reed type. Dr. Lemann seems to think that this group is a sort of wastebasket. It is easy to distinguish Banti's disease from the other forms, but not the other forms from each other. In this case at Touro the enlargement of the retroperitoneal lymph nodes showed the histology of the Dorothy Reed type. I think we have here a special infection. This is also Mallory's opinion.

The Gaucher type is an exception; it may be a real neoplasm. The work of Brunling and others has led men here and elsewhere to look for an organism in splenic anemia cases and some think that they have been found; but the organism thought to be

the cause of the Dorothy Reed type is found in many other conditions.

DR. JOHN T. HALSEY: I would ask Dr. Weis the results of operation in cases of chronic Banti's disease. He confined himself to pathological and clinical aspects. I looked up the literature on the subject last year, and so far as I could find references to the final results of operative treatment were very scarce or almost entirely lacking.

DR. WEIS (in closing): The first point that I want to bring out is that the bone marrow does not enter into the pathology of Banti's disease in the same manner in which it does in Hodgkin's disease and in cases of primary anemia. This case of Dr. Lemann's seems very similar to my subacute cases, but Dr. Duval told me that the bone marrow showed changes, hence it was not a case of Banti's disease.

I think the Gaucher type is an essential blood disease, as other types of so-called blood diseases are. All the organs in the Gaucher type show the special cell I have described. No such cell is found in Banti's type. We must remember that in leukemia the blood is probably a metastasis of a malignant tumor, considering the blood as a tissue.

It is possible that an acute variety of the Dorothy Reed type may exist, which may have been the case in this one patient of Dr. Lemann's. In each of his febrile attacks the spleen would enlarge, and then later decrease in size. In splenic anemia the spleen enlarges each time and stays enlarged. Dr. Duval seems to think that the Gaucher type may be malignant, but, if so, it is a very slow form of malignancy, as some of these patients live forty years or more. Also it seems to run in families.

In answer to Dr. Halsey's questions as to operation, would say that my experience is very discouraging. Only one of the cases operated on is alive, and I never thought he had splenic anemia. The others, not operated on, are also dead. The literature is very unsatisfactory, because I do not think observers follow their cases long enough. My cases operated on had peculiar violent post-operative hemorrhages, but not at the site of the operation; they all bled in the intestinal tract. In the case I described, with the intestinal canal full of blood, at post-mortem we found no point of hemorrhage at all, such as varicose veins of the esophagus, from

which blood might have come. Dr. Kock says that all cases of splenic anemia show change in the splenic vein.

DR. E. D. MARTIN: Does not splenectomy help to make a differential diagnosis?

DR. WEIS (continuing): I do not think we need any help.

DR. COURET: Have you noticed any change in the blood platelets?

DR. WEIS (continuing): No. I studied the blood platelets in Boston ten years ago, and think that the study of the platelets is of not much practical importance. The form of the platelet seems to depend on the preparation of slides, the presence of artifacts, etc.

DR. COURET: I notice that in such cases the platelets seem to be diminished in number.

DR. WEIS (continuing): I think this is due to the diminished number of cells.

## A GENERAL DISCUSSION OF SOME OF THE MOST COMMON DISEASES OF THE CERVIX UTERI.\*

By SAMUEL M. D. CLARK, M. D., New Orleans, La.

Injuries sustained during labor form the fundamental background to the pathology of a goodly number of the diseases of the cervix, hence, a brief discussion of the management of these injuries at the time of labor may well be first considered.

There is no method of managing a normal delivery that tends to diminish the extent of the cervical injury. The main consideration is, should all cervical injuries be repaired at the time of the birth of the child? As a routine measure it seems to me that it is a baneful practice to attempt immediate repair and the only condition that would justify such action is when there is a well contracted uterus and an *active hemorrhage*, which, when analyzed, is found to come from an injured cervical artery.

In the first place, the cervix is so thinned out that its tissues are quite like wet blotting paper in consistency and thickness, and in attempting accurate approximation, it is most unsatisfactory and taxing. Secondly, and most important, is the grave danger of *carrying infection* to this ideal site for its rapid dissemination. Still further, many of the moderately severe tears spontaneously heal, or

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are greatly reduced in dimensions. Furthermore, even in properly equipped institutions, this infection risk is great and the good accomplished does not compensate for the increased danger. The great bulk of obstetrics is done in private homes, where assistants are at a premium, the light is poor and asepsis quite approximate, therefore the impossibility of accomplishing this difficult task without infection. I have never tried the restoration of these tears twenty-four or forty-eight hours after delivery, hence am not in a position to discuss it, but I understand that some men practice this policy with reported good results. Though this may be true in the hands of a few, as a routine plan it is bad teaching and in the end would show many cases of infection that otherwise would not have occurred. Therefore we have to accept cervical injuries as a legacy of childbirth and handle them at a later period.

Is it a wise plan to subsequently, say in the first six months after delivery, advise the suturing of cervical injuries? It has seemed to me sane not to disturb this condition until after a woman has apparently finished her child-bearing period, except in cases demanding assistance from this or allied conditions, such as liberal damage to a pelvic floor, etc., then while attending to this pathology, the cervix may be incidentally restored. What is the use of sewing up a cervix to have it broken down the following year? I teach that the best plan to follow is that if the woman shows no definite pathology or distress from injuries in childbirth, it is wise to let the woman finish her family. A great number of women will bear children in the regular order of every two years, until she is about thirty-two or thirty-four years, and then apparently cease. If in this type of case, she has gone four years without a pregnancy, is thirty-eight or forty years old, then this is the time that every woman should be closely analysed with special reference to the cervix, and then by all means, *every vestige* of wrong would be adjusted.

The time is not far distant when physicians will fully appreciate the full significance of this policy as a prophylactic measure, notably against the dreaded scourge, *cervical carcinoma*. Even aside from cervical carcinoma, this is the time to correct all damages accruing from parturition, thus sending a woman into her critical epoch of life, free from the most inviting field for the oncoming of malignancy and still further free from those anatomical

injuries, which though during her normal resiliency and tonicity do not present a condition imperative of treatment, do, on the other hand, as she advances in the menopause, with its associated atrophy and general relaxation, terminate in a sad picture and definite impaired efficiency.

How much better is it to operate on a woman at the age of forty, than on one sixty or seventy years old, when surgically she is a poor risk and in the meantime has suffered all the inconveniences of an advanced, difficult, neglected and preventable pathology.

Many cervical injuries are insignificant, give rise to no symptoms, and require no attention. Various degrees of pathology follow in the wake of tears of any consequence. The mucosa that is accustomed to an alkaline medium is suddenly thrust into an active acid bath, a hyperemia follows, the cervical glands with the mucosa are thrown into excessive activity, accompanied by a noted increased mucous discharge. The mucosa in its exposed position is prone to infection; as a result of cicatrical infiltrations, there is a passive hyperemia; the cervical glands become infected; the contiguous cervical tissue becomes involved in the inflammatory process; there is a swelling and rolling out of the infected mucosa, copious, ropy discharge and finally ends in marked hypertrophy, hyperplasia and many retention cysts.

**ENDOCERVICITIS:** One of the most common diseases of the cervix is chronic endocervicitis. Here is found the characteristic ropy, muco-purulent discharge for which so many women seek relief. The membrane with its cervical glands is infected, the glands pour out the muco-purulent secretion, the mucosa is swollen, rolls out, producing the *eversion* and as a result of the discharge there is a metoplasia of the squamous cells of the vaginal mucosa, producing the all common trouble of *erosion*. A woman with this condition complains primarily of two symptoms, leucorrhœa and a heavy, dragging sensation in her pelvis.

Ninety per cent of physicians when inspecting the vault of the vagina, label as an ulcer anything having a reddened appearance. The common expression "ulcers of the womb" is in nearly every case erroneous; it is an unfortunate habit we have allowed to become so firmly rooted. As a matter of fact, simple ulcers of the cervix are rare and the vast proportion of all true ulcerations of the cervix are malignant. What is mislabeled ulcer is eversion or

rolling out of a swollen cervical membrane and the reddened area due to a metaplasia of the squamous cells of the vaginal portion of the cervix.

What is the most satisfactory method in treating these cases of chronic endocervicitis? Since we believe that it is not a good plan as a routine to interfere with cervical injuries during the active childbearing period, and further since it is recognized that a certain percentage of cases are definitely annoyed by a chain of disagreeable symptoms, then, therefore, we must employ some non-surgical procedure that is applicable during this interim as a palliative or curative measure.

In cervices where the mucosa is primarily involved and the deeper cervical structures have not been seriously embarrassed, there is no one agent comparable in results to the Paquelin cautery. Dr. Guy Hunner of Hopkins introduced and popularized this simple measure; it is extremely easy in application, can be done without an anesthetic as a routine office treatment. When Hunner first wrote on this method it sounded plausible, but I was fearful that a stenosis would follow. However, beginning as a skeptic and treading most cautiously, I was converted to its merits and feel that when used with judgment in suitable cases, it is far superior to any other non-surgical method and one that every man in general work should know. It consists in making stellate incisions just deep enough to penetrate the thickness of the mucosa, having between each burn strips of mucosa. When completed, the membrane is radiated as the hubs of a wheel. It can be applied several times, at intervals of ten days or two weeks. Douches are used in the interim and it is striking to witness the recession of the pouting mucosa. All erosion disappears, as well as the discharge. In our operating clinic at the Hospital, it is employed. My assistants, though slow to be convinced, now are ardent advocates.

Until I began using this Hunner's cauterization in a certain percentage of these moderately infected cervical mucosa cases, I would operate, performing a low amputation in order to remove the offending membrane, but since witnessing the excellent results of this method, I have been able in quite a few cases to substitute this burning in place of the operation. Glycerin tampons containing 5% ichthyol used in knee chest position two to three times a week, followed by a hot douche in the interval of its removal, has, through the hygroscopic effect of the glycerin, a definite depleting influence

over the hyperemic condition of the cervical tissues. These douches should be given just as hot as the patient can tolerate, temperature of not less than 110°, with patient lying down and the douche bag not more than a foot and a half above the level of the pelvis. It is in the application of these conservative measures, associated with the proper instructions to the patient, that end results are obtainable. Many of us give these instructions in a most desultory sort of a way and the patient leaves the office with a hazy idea of what is desired, ending in unsatisfactory carrying out of instructions.

Another valuable measure in handling these cervical catarrhs is the application of pure carbolic acid. After wiping away the purulent mucus, a strip of gauze carrying the acid is inserted into the cervix, allowed to remain two minutes, all acid on the vaginal surface neutralized and the patient instructed to douche with hot boracic acid and anhydrous zinc sulfate solution. The acid can be reapplied from time to time.

It must seem strange to hear one, surgically inclined, advocating these medical measures, but the older one gets the more conservative he becomes. The importance of neglected cervices as a basis for the future destruction of women's lives is fully appreciated by all of us, but on the other hand, it cannot be denied that a great deal of unnecessary surgery is done on this easily accessible field.

**CERVICAL MUCOUS POLYPUS AND FIBROID POLYPUS:** The cervical mucous polypus frequently gives rise to copious bleeding, and is often found associated with a chronic infection of the mucous membrane. In point of pathology, the mucous polypus is a result of marked local hypertrophy of the wall of the mucosa, which in time becomes pedunculated. This condition is quite easily remedied with a sharp curette, followed by a carbolic application.

The fibroid polypus, as a rule, is definitely larger and of a firmer consistency; gives rise to symptoms quite like the cervical polypus, only the hemorrhage is usually more profuse. This type of polypus can be relieved by clipping the pedicle near its base and inserting an iodine pack to be removed in twenty-four hours.

There is just one point in diagnosing. I recall an interesting story told me by Prof. Ernest Lewis, where a prominent surgeon had been treating a case with tampons for about six months, believing that he was dealing with a chronic inversion of the uterus. It

became necessary for this surgeon to leave the city for a few days and the patient consulted Prof. Lewis. When she came to his office, after examination, he said, "Madam, I will come down to your home this afternoon and relieve you in five minutes." The patient replied, "Why Doctor, this cannot be possible, since my womb is turned inside out and I do not see how you are going to give me this relief." However, the Doctor went to her home that afternoon and clipped the pedicle of this fibrous polypus, and the "chronic inversion of the uterus" was cured.

This story points a good lesson in that some of these fibrous polypi are shaped exactly as an inverted uterus and can be easily mistaken for this condition. Therefore we should always be on guard in diagnosing these diseases. Another common error into which we are liable to drift is to conclude that every stinking, sloughing mass is an advanced carcinoma of the cervix. I have seen two cases that had been diagnosed as inoperable carcinoma and thought to be hopeless, when the true condition was a large, sloughing fibroid polypus, and which could of course be cured by the simple measure of cutting the pedicle. I think the reservation we should make is never conclude that we are dealing with an inoperable carcinoma until we have completely investigated the origin of the sloughing mass. Always try to get your finger along the lateral margins of this sloughing mass, going on up to where the cervix can be palpated. If this growth originates and incorporates the cervix as a whole, then it is most likely a carcinoma. Whereas, if the cervix is felt dilated, though intact, and the pedicle found leading up into the uterus, it is clearly a fibroid polypus.

**CHRONIC HYPERTROPHIC AND HYPERPLASTIC CERVICITIS:** This condition of the cervix results from long standing infection of the mucosa, the entire cervical structure has been involved in the infection, and there is a definite alteration of the normal cervical tissue. On examination, the cervix can at once be felt larger, of denser consistency, and as a rule scar tissue is in marked evidence as a result of the laceration. The membrane is swollen and rolled out and bathed in a ropy discharge. The surface of the cervix is frequently studded with numbers of pearl like cysts which on puncture spurt out a thick, often purulent mucus. These are *Nabothian Cysts*, or retention cervical gland cysts. When these cysts are numerous they often permeate the entire area producing the classical picture of *Chronic Cystic Cervicitis*.



The *symptoms* from this cervix are similar to those of chronic endocervicitis, only much aggravated. Hemorrhage, as in excessive menstruation, is often manifest. Often a chronic metritis is present and the cervix is only a part of the picture.

The *treatment* of these cervices is high amputation. Frequently after this operation, not only are the leucorrhœa and dragging sensation cured, but the large chronic metritis rapidly subsides and menstruation becomes normal. It is striking to see the constitutional upbuild following the removal of this chronic source of toxæmia.

How frequently in the past have we seen trachelorrhaphy employed in these advanced pathologic cervices. When done, it produces a hard, sclerous snout which has no possibility of being restored, only partially removes the disease, and offers a splendid soil for carcinoma. Both amputation and trachelorrhaphy have their well defined fields of application. When a cervix is extensively destroyed, as it were, by chronic infection, it must be removed. Where, on the other hand, the cervical tissue has not undergone material alteration and its consistency is normal, a trachelorrhaphy is the operation of choice.

A woman having a trachelorrhaphy performed is more apt to conceive and carry her child and much less likely to post-operative hemorrhage. Always perform trachelorrhaphy as the method of choice, only keep in mind its limitations.

**CARCINOMA OF THE CERVIX:** This is too important and common a disease of the cervix to allow to pass unmentioned. It is not possible to treat it in its entirety to-night. I simply wish to briefly speak of the value of the Percy cautery, as well as to show the apparatus. For two years we have been using this elaborate heat method and are daily recognizing its value. In December at the Southern Surgical Association, I hope to give a synopsis of our cases, with especial reference to the cautery as a preliminary to the Wertheim operation. This is the best cautery on the market; it is no plaything, and is a true joy to one having experienced the limitation and inconvenience of the former hot irons. It has a wide scope in handling advanced cases and we have recently operated upon two cases that when first seen were considered inoperable, but after the repeated use of the cautery were converted into favorable operable conditions.

Byrne of Brooklyn first called our attention to the value of heat in carcinoma, but Percy's cauterization with his water-cooled speculum is a great step forward in the heat treatment. This method in our hands has given us renewed courage in this field of work, and we hope, in the next five years, to make a full report of our work, and judging from those results obtained up to the present time, we expect to see a definitely greater per cent of cures than has been realized in the past.

#### DISCUSSION.

DR. M. A. SHLENKER: I listened with pleasure to Dr. Clark's paper concerning the diseases of the cervix.

In regard to the repairs of the cervix after delivery my opinion is in concurrence with that which was arrived at at a meeting, I think, of the American Obstetrical Society, which in their discussion concluded that the repair of the cervix after delivery was only indicated when there was an active bleeding from the lacerated part.

In reference to the Doctor's remarks concerning ulcers, I wish to impress upon you the fact that ulcers of the cervix do occur, though with no very great frequency and it is not unusual to see a chancre or chancroid ulceration and less often we see a tubercular ulceration. Now as to the causation of erosion, the etiology has been well stated by the essayist, but I do wish to caution you as regards looking upon this condition too lightly, for I recall to my mind one case in particular of a cervix which eroded one of its vessels causing such a profuse hemorrhage that necessitated packing the vagina. As to the treatment suggested by Hunner it was my impression that that method of treatment should be limited to those cases where there is an extensive cystic degeneration.

I have had excellent results in the treatment of the superficial erosion by the local application of a ten per cent nitrate of silver, or a ten per cent formalin solution, or four per cent solution of calcium chlorid followed by a tamponade of ten per cent ichthyol in glycerin.

DR. P. B. SALATICH: I began some years ago to suture the cervix immediately after delivery or within fifteen to twenty hours. I do not find the cervix thinned out, as Dr. Clark mentions; my experience is that the cervix is then as thick as the normal cervix.

In regard to the treatment of chronic eversion, I find that the

Hunner method is of value. In some cases we may have to amputate or to a tracheorrhaphy, but remember that amputation is more often followed by sterility. I recall a case of thickening and edema of the rugae of the cervix with rush section negative. I did a panhysterectomy and the specimen showed malignancy.

In the matter of polypi remember that we may find the pedicle very high up. I had one case which was previously operated on, with recurrence, in which I used a snare and found the pedicle attached near the fundus.

Dr. Clark mentions Percy's method. I would say that Percy does not use this as a preliminary to radical operation, but instead of it. He always opens the abdomen and burns until the heat is all the assistant's hand, holding the fundus, can stand. Murphy said that he had seen several cases living five years after cauterization and none living that long after the Wertheim operation.

DR. H. W. KOSTMAYER: I attempted immediate repair of the cervix in the Charity Hospital once with all the equipment and assistance necessary and had such difficult time of it that I never tried it again. I certainly do not think it is feasible.

DR. E. DENEGRÉ MARTIN: I am glad to confirm what Dr. Clark says in regard to the treatment instituted by Dr. Hunner. I know of no condition in gynecology which is more distressing to both the physician and patient. Some years ago Dr. Craig, of Boston, had a set of instruments made for this purpose, the principal thing being the cone dilator, with which I was so much impressed that I bought one of the sets and believe that with the use of the instrument I had better results. It was not, however, until I became familiar with Hunner's method that I really felt that we could actually cure these cases. A case that I had curetted several times and treated for a period of more than six years, was cured by two applications of the cautery and has been well for the past six months. A second case has been well for four months. The treatment is simple and can be done in the office. We have a thermo cautery with a long narrow blade which I use after the application of a ten per cent cocain solution. The cauterization is done without pain or discomfort to the patient.

DR. CHARLES N. CHAVIGNY: I would like to get some suggestions about a case which I have been treating. She had a miscarriage three years ago, at three months, with no laceration. She

now has a perfectly normal cervix. She complained of severe itching and very slight discharge. She improved under local treatment, but itching gets worse eight or ten days before the menstrual period. This is the second such case I have seen.

DR. E. D. MARTIN: Where is the itching?

DR. CHAVIGNY: On the vulva.

DR. C. W. DUVAL: I would like to ask Dr. Clark if metaplasia is common in these cases? Does he get an actual conversion of one tissue into another?

DR. CLARK (in closing): I am still of the opinion that true ulceration of the servix is rare. Very few of us see tuberculosis, chancre or chancroid of the cervix. I think it is the wisest plan as a routine to let cervical injury after delivery alone. I find it very hard to repair these fresh lacerations accurately and my results have been very disappointing. In Dr. Chavigny's case I would think that there must be some discharge to cause the itching. I find that packing these cases with pure carbolic acid, placing the gauze well in the cervix, will very often give relief. In answer to Dr. Duval will say that there is some difference of opinion as to the pathology of these cases. Erosion to some means a partial destruction of the mucous membrane; to others a replacement of the squamous epithelium of the vaginal portion by the columnar epithelium or the cervical canal. The textbooks differ on this point.

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## THE EMETIN TREATMENT OF PYORRHEA OR RIGGS' DISEASE.

By EUGENE S. TALBOT, M. D., D. D. S., Chicago, Illinois.

In the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* (November, 1914), appears an article by Drs. C. C. Bass and F. M. Johns on "The Specific Cause and the Prompt Specific Cure of Pyorrhea Alveolaris or Riggs' Disease." Similar articles have also been written by Angelo Chiavano, of Rome, Italy, and Smith and Barrett, of Philadelphia. In the article by Bass and Johns, they state that since the endamœba is found in the mouth and since emetin acts favorably in inhibiting amebic dysentery, hence the endamœba is the cause of pyorrhea or Riggs' disease and emetin is the specific for this germ and Riggs' disease. The thought that appeals to one

is why these men should publish such an article claiming so much without first proving conclusively the value of their work? Why did they not inject the germs into the mouths of animals and produce the disease and then cure it by injecting emetin? Since there are at least 150 varieties of bacteria in the mouth, to select one and give it all the credit for pyorrhea and the 149 remaining most violent bacteria to be innocent bystanders is a paradox. No one up to this time had demonstrated that emetin is a specific in treatment of this disease.

The fact is that the disease which attacks the gums and alveolar processes and causes the teeth to loosen and drop out and is called Riggs' disease by Bass and Johns, is, in my opinion, not due to germs. Chiavano does not believe the amœba to be a pathogenic germ in the mouth.

Their relations to Riggs' disease have not been demonstrated. The dental profession is as much at sea in regard to etiology, pathology and treatment now as they were forty years ago.

Before discussing the subject further, we must have a clear idea of terms, and what takes place in the tissues. While this disease had been discussed by a number of foreign writers, it was not until 1875 that John W. Riggs, of Hartford, Connecticut, presented his paper, "Suppurative Inflammation of the Gums and Absorption of the Gums and Alveolar Processes," did the disease receive much attention in this country. He believed it to be due to "local concretions near and under the free margin of the gums." Dr. F. H. Rehwinkle, of Ohio, a little later, called it "Pyorrhea," and that it was a constitutional disease and not of local origin.

Both Riggs' disease and pyorrhea became popular terms from that time on. Investigations upon this disease began about 1880, and it was found that many people had inflammation and absorption of the gums and alveolar processes without pus, and a number of terms were suggested to designate their views as to the etiology or pathology. Researches have shown, however, that the beginning of the disease is due to irritation.

This alveolar absorption and loosening of the teeth may be either local or constitutional in origin. I have stated more than twenty-nine years ago that modern dentistry was as much a factor in producing the disease as any other single cause, by injuring the tissues immediately surrounding the teeth. To understand the etiology of this disease, one must understand the nature of the tissues under

discussion. The pathologic changes which take place are due to the unique function of these structures. My investigations have shown that the blood supply of the jaws is diminished. The bone which covers the roots of the teeth originally was quite heavy and was well nourished. At the present time it is often as thin as a sheet of paper and in some cases there is little or no bone on the outer surface of the roots of the teeth.

With this evolution of structure going on the jaws and their alveolar processes may be called "transitory structures." This, however, is not all. At birth there is no alveolar process, when the first set comes into place the processes build themselves about the roots to hold them in place; when they are shed the bone absorbs away. As the second teeth erupt, the bone is redeposited to a greater extent, because the roots are longer and more work is required of them. When these teeth are removed the process rapidly absorbs away. The bone, therefore, seems to be intended to hold the teeth, as long as they remain in the jaws. Again we note that the alveolar process is a changing structure. We have, then, in the alveolar process a doubly transitory structure very susceptible to irritation and disease. The alveolar process is in many respects like an end organ. The arteries and nerves that supply it are small and tortuous. The tooth so far as the disease is concerned is almost a foreign body. Poisons circulating in and about them set up irritation and inflammation. After the process has obtained its growth it becomes senile, so to speak, having performed its function, the art of mastication having in a sense been lost. This low vitality results with absorption, which I have called "Osteomalasia." And I have shown this to hold true as all animals, possessing two sets of teeth, have this disease. Dogs, especially house dogs, are the best animals upon which to study this disease. After this explanation of the structures and function of the tissues involved, we can understand how the slightest irritation, either local or constitutional, will set up an irritation, followed by inflammation and absorption of bone, as a result which will continue until the tooth becomes loose and drops out. Place a rubber ring around the neck of the tooth against the gums in the healthiest mouth and inflammation of the gums throughout the alveolar process to the end of the roots is the result, and if pus-germs are in the mouth they will infect the tissues. The pyorrhœa, so-called, is a secondary condition. Treat a patient with mercury for a specific disease until when? Until the gums become

sore and inflamed and then stop. Why watch the gums and not the fingers or toes or other structures? Because the alveolar process is a transitory process and an end organ. Therefore, the process is one of the first, if not the first structure in the body, to respond to constitutional irritation. Many of the English soldiers in South Africa, our own soldiers in Cuba and in the Philippines, had what was called "scurvy." In most of these patients it was nothing more than a severe attack of intestinal gingivitis, with and without pus, due, in part, to change of climate, from a moderate temperature to a hot climate. Change of food assisted in producing the disease. The system did not adjust itself quickly and disturbances took place in the alveolar processes and absorption resulted. If pus-germs are in the mouth they will join in this disturbance. I could go on indefinitely with illustrations which have come under my observations, but enough has been given to show the relation between systemic disturbances and alveolar inflammation.

In a general way, therefore, a local or a constitutional irritation will start the absorption. Germs are always present in the mouth. Infection is always a secondary consideration and therefore cannot be the sole rôle of the disease. I am considering the cases which come to the dentists and are called pyorrhea, interstitial gingivitis or Riggs' disease, and not such infections as tuberculosis, anthrax, actinomycosis, etc., which have other constitutional symptoms and require the care of a general practitioner of medicine. Focal infection from the mouth, producing systemic disease, is not considered in this paper. It seems to me, therefore, that the only influence pus-infection has in connection with the disease "pyorrhea, so-called," is that it is a medium through which the absorbed alveolar process is conveyed from the process and deposited upon the roots of the tooth and is called by the dental profession "serunal deposits." Every person after he has obtained his first set of teeth has interstitial gingivitis, to a greater or less extent throughout life, or as long as he has his teeth. The extent of this condition will depend upon his vitality and general health. If the person has any disease whereby the eliminatory organs are not performing their function, this inflammatory process, although slight in healthy people, will become much more severe and the process will absorb away rapidly. I have shown that everyone has this disease, "interstitial gingivitis," while only about 10 to 15 per cent. have pyorrhea. In considering this subject, then, the two conditions must be studied sepa-

rately. Let me ask, then, will emetin or the vaccin treatment have any material effect upon the inflammatory process? All the investigators in America admit some failures in the use of these methods of treatment. Remove the irritation, whether it be local or constitutional, eliminate the congestion, and even applications of warm water with vigorous gum massage will remove the pus-germs and reduce the inflammation without medication. The unfortunate part of this procedure is that no matter what treatment may be used the disease is not cured in the same sense as of curing measles, diphtheria, pneumonia, typhoid fever, etc., once the disease has become established. I have already mentioned that after the process has established itself, the disease will continue. At best we can only hope to arrest its progress.

When I began my researches, I used iodine and have used it to the exclusion of all other drugs in the treatment of this disease. The results obtained are all that can be desired. The official tincture of iodine contains 7 per cent. of iodine dissolved in alcohol, to which is added 5 per cent. of potassium-iodide. This preparation, if used often, will cause the membrane to become tender and sore; it will also, in some patients, destroy the mucous surface. To overcome this difficulty, many years ago I formulated the following, which I have called "iodoglycerole":

Zinc iodid .....	15 parts or grams.
Water. . . . .	10 parts or grams.
Iodin. . . . .	25 parts or grams.
Glycerin. . . . .	50 parts or grams.

As compared with the ordinary tincture of iodine, its astringent and antiseptic properties are greatly increased. The glycerin causes rapid absorption and the irritating effects are reduced to a minimum. The penetrating effect is remarkable. The glycerin thickens the preparation and prevents it from mixing with the saliva and running over the mouth as the ordinary tincture will. Long, round, wood applicators can be obtained at the drug and instrument houses. On one end cotton is wound, this is saturated with the preparation and the gum margins above and below are painted. The jaws are closed, the lips and cheeks distended and the application made as before; the teeth are also covered; the lips and cheeks are held away from the jaws until the iodine has dried. These applications should be made every other day and continued until the patient is dismissed.



Since the germs are in all mouths, I have advocated the use of this preparation in the mouths of all school children at least once a week. When epidemics are present it should be used two or three times a week. Soldiers confined in barracks or subjected to extremes of temperature will find great relief by frequent applications of iodine.

In this short paper I have given the summary of thirty-five years of experience in pus investigations upon animals and human beings by infection and the use of all manner of drugs and local irritants, and until similar experiments have been performed and my findings have been found incorrect, and some other cause which will produce the disease has been discovered, my conclusions must stand.

I would not discourage research. No one has as yet discovered a germ which will produce the disease. It is possible that one may yet be found. Certainly there are enough of them in the mouth. This paper is only intended to assist those who are doing research along these lines to what has already been accomplished and to lay the foundation for future work, and not so much as criticism of Bass and John's paper.

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## **Proceedings Orleans Parish Medical Society.**

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ANNUAL MEETING, JANUARY 11, 1915.

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### **ANNUAL ADDRESS OF RETIRING PRESIDENT.**

DR. CHARLES N. CHAVIGNY, retiring president, delivered the following annual address:

When the Administration which has just come to a close assumed charge of the affairs of the Society, it was confronted with a task which required tactful and rigorous measures to combat—the untangling of the financial issues, which had for years been the bane of our predecessors. Although the reports of the outgoing treasurers, in many instances, showed a healthy balance on hand, yet it failed to take into consideration the fact that there were outstanding obligations which we had to meet in the very near future, such as paying for the printing of our transactions, the interest on our new domicile bonds, etc., all of which should have been deducted from the

balance on hand, as they really were expenses of the closing year. As the deficit became larger year by year, it was imperative that something should be done. The remedy was a knotty problem. At the end of 1913, although the report of the treasurer showed a balance on hand of \$198.35, there really was a deficit, if the obligations which had to be met early in 1915 had been considered. The new Board of Directors discussed the matter over and over again and many timely suggestions were made by the members and plan after plan proposed. It was finally decided to discuss the matter in open meeting with the entire membership and for this purpose a special meeting of the Society was called, at which the question was thoroughly gone over, with the result that a special finance committee was named to sift the situation. The committee appointed by the President carefully studied the financial status of the Society and found that we had obligations amounting to \$3,106.36 for 1915, while our anticipated revenues were only \$2,200.44, leaving a deficit of \$1,000, or to be more precise, \$905.92.

The report of the special finance committee was read before the membership and after prolonged discussion it was decided to levy a special assessment of five dollars on each member, payable at once, to meet this deficit. The question was put to a vote and carried.

This special assessment and retrenchments in the running expenses of the Society have placed us once more on a sound financial basis, and it is with pride that I point to the annual report of the treasurer for 1914.

Much needed repairs to the extension of our building and the payment of insurance for three years increased our running expenses; last, but not least, your Board of Directors have seen their way clear to redeem two bonds.

Gentlemen, it is not with a spirit of self-adulation that I dwell at length upon these details, but I do so because I deem it an honest duty to give a meed of praise to my co-workers on the Board of Directors, who have labored hard and willingly with me in an effort to uplift the finances of our beloved Orleans Parish Medical Society.

Another new feature fathered by the 1914 Administration was the creation of a membership committee, which matter was put to popular vote and unanimously passed. Under the old regime applicants for membership were balloted upon in open meeting and five black balls sufficed to disqualify. The injustice of such a mode

is apparent, for the reason that it is the easiest thing in the world for a man who has a personal grievance against another to induce four of his friends to join in blackballing him and thus keep him out of the Society. Under the new rule, each name is posted for thirty days and if within that period no complaint has been lodged with the membership committee and the committee knows nothing militating against the applicant, he is elected and a report to that effect made to the Society.

The credit committee was also born under our regime. It is meant to deal a death-blow to that class of people who make it a habit of not paying the doctor his fee. If given proper support by our members, it will add much to the revenues of the profession. The idea is that when a member of this Society has a patient on his books who can pay, but does not do so, for no valid reason, the name of the delinquent is furnished in writing to the credit committee and when two like complaints have been made against the same person, the name, address, occupation, etc., of the deadbeat is entered in a book kept for that purpose in the office of the Society, to which any member in good standing can have access. In this way, members can be put on their guard and avoid the risk of making calls upon undesirable persons.

Our Society has been more than successful in the number of papers read, totaling fifty-five, making an average of three to each meeting. It is not only in numbers that we may feel proud, but the character of them; thus with pleasure I refer to the paper of Drs. Bass and Johns on the emetine treatments of Riggs' disease, also that of Dr. Lynch, who demonstrated the use of original instruments in tracheal work.

The public meeting held at the Hutchinson Memorial on bubonic plague was of especial interest, being well attended not only by the members of our Society, but the medical men of the city; we are indebted to the members of the United States Public Health Service for their papers, which added very materially in disseminating medical knowledge of plague.

A dark cloud in the fair skies of 1914 was the invasion of bubonic plague, which, like a gaunt specter, menaced the general health of this community and threatened to paralyze the commerce of the port. The Orleans Parish Medical Society held special meetings to discuss the ways and means of fighting the disease and named a committee to co-operate with the Federal authorities. What we

have accomplished in this direction is a matter of record and need not be dwelt upon in this address. Suffice it to say that plague has been banished from our shores by the energetic measures adopted.

We also dabbled a little in politics. The optometry bill, thanks to the untiring work of the committee appointed by this Society, was killed in the legislative halls of the State. We were less successful in our fight to abolish the paying of licenses by physicians, but we have sown the seeds on fertile soil and may reap victory in the very near future. We also were invited to step into the national political arena by medical societies in other States to memorialize Congress against the transfer of the Surgeon-General's Library to the Library of Congress and also protesting against the discontinuance of the *Index Medicus*. The fight was won and a great calamity to the searchers in the field of medical literature averted. We also joined the movement inaugurated by the Shreveport Medical Society and the City Board of Health to petition the Federal authorities to institute a reform in the method of publishing mortuary statistics of the South, so that this section of the country would be presented in a more enviable light to the world.

Among the pleasant events of the year were the quarterly clinical meetings held in the Amphitheater of the Charity Hospital. These meetings were well attended, the presentation of cases interesting and instructive, and a continuance of the custom will no doubt redound to the benefit of the Society.

Our membership has not made as many gains as it should, owing to the fact that resignations and deaths, coupled with the unfortunate fact that we were compelled to drop several members, have militated against an increase. I earnestly trust that the new administration will make every effort to induce the strayers to return to the fold as, in most cases, it is negligence, pure and simple, and then, obstinacy, which prevents a dropped member from becoming active once more.

As it is the custom of every outgoing President to recommend some reform or to show some defects which can be remedied, I respectfully call the attention of my successor, Dr. W. H. Knolle, to the following recommendations, which I feel certain will redound to our welfare:

#### RECOMMENDATIONS.

(1) As membership is the backbone of our organization, which, owing to the financial situation, brought about by the European

War, and two deaths in our membership, I regret to say, has diminished our roll, I would suggest that a canvass be made of the eligible medical men, with a view of having them join our Society.

(2) About forty members have not paid their special assessments. I believe the time is now ripe for the Society to decide what action should be taken.

(3) Quite a number of societies elsewhere have acted upon the important question of fee-splitting. This practice seems to be growing and there is no doubt that it is belittling medical science in the layman's eye, as well as lowering the high standard of medicine. I believe the time is ripe for some action on our part in this most important matter.

(4) That the by-laws be so amended that some penalty be placed upon members failing to turn their papers in after reading.

(5) I regret to say that the important committee on hospital abuse has made no report during their long tenure of office. I would suggest that the proper steps be taken towards eliminating or at least diminishing the long standing and increasing condition of hospital abuse.

In conclusion, allow me to extend my thanks to my associates on the board, to the various chairmen and members of committees and last, but not least, the individual members whose efforts have made my year's service a pleasure and has resulted in so much good to our Society.

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#### ADDRESS OF INCOMING PRESIDENT.

DR. W. H. KNOLLE, Incoming President, delivered the following address:

*Mr. President, Ladies and Gentlemen:*

To have been elected your president from among so many illustrious men of medicine is indeed a distinguished honor, the appreciation of which is deeply felt by me and for which I most heartily and sincerely thank you.

Great as is my appreciation of this honor, greater still is my recognition of the responsibility which goes hand in hand with it, and to successfully meet the demands of nineteen hundred and fifteen, much will depend upon the earnest co-operation of each and every member of this society. The efforts of your president and newly elected Board of Directors, though ever so earnest, cannot alone pilot you to safety, the voyage is not one through rough seas

or storm swept roadways, but through that thorny path of very limited finances, and my friends always remember that we have only one source of revenue—dues from our members. It may be appropriate here to mention that there are at least one hundred and twenty-five eligible medical men in this city not members of this society. Will not every one of you, my friends, make an earnest appeal to these gentlemen? By securing a member you add twelve dollars a year to our exchequer, and you many times over benefit the applicant, as by this means alone may he become affiliated with the State society and American Medical Association. Impress each prospective member with the importance of the Medical Defense feature, and try to convince him that there is still something for him to learn by regularly attending the scientific sessions which will be devoted to the most interesting and important subjects on every branch of medicine.

The Scientific Essay Committee will give you only the cream, being composed of able, active, and conscientious members, willing to "labor for those they love." Do not hesitate to present or secure scientific contributions, but consider yourself one of a committee of the whole on scientific work, and you will materially assist the committee to be named to-night. I wish to impress upon every member the importance of giving more time and attention to our executive sessions, knowing as I do that the majority of times we transact business with only a quorum, and it being at these short but stormy meetings that our finances are handled I urge that you lend your aid by your presence.

I wish to call attention to our newly constituted credit committee; the object of which if aided and assisted by every member of the society, will be to convert into cash many of our "Profit and Loss" accounts, and I can see no just nor valid reason why those who can pay, should pay, but will not pay their doctor's bills, should not receive our collective attention. Do your part and the committee will do the rest. But only by each and every one contributing their lists can any good results follow.

A few remarks regarding our noble and charitable institutions. The first and foremost of these is the Charity Hospital, where a most marked improvement manifests itself in every department and where much more will be done as time and money permit; for all of which we are sincerely thankful and indebted to our honorable guest, the Governor of the State of Louisiana, assisted by the skill-

ful and untiring efforts of the superintendent, Dr. Wilkins, and of the visiting staff.

The Hotel Dieu has made vast improvements, as has also Touro Infirmary, Presbyterian Hospital, Senses Hospital and the Dispensary. While the Charity Hospital alone is intended entirely for the poor, all have free clinics, and it is of these especially that I wish to make mention. I know and you know of the great and unwarranted abuse of these clinics and I earnestly request of each member a closer scrutiny of the patients presenting themselves for free treatment, both for the welfare of the deserving poor and for the monetary consideration of the profession.

We anticipate a plague-free and well rat-proofed city by the end of this year, and though plague was one of the diseases most dreaded by us, its visitation may prove to have been a blessing in disguise; whether or not the hoped for better sanitary condition will be realized time alone will tell.

Thanks to the New Orleans Pure Milk Society, this great aid to the sick is now to be had in the best condition.

The incoming administration hopes and expects to enjoy the hearty co-operation of both journals, the old reliable *NEW ORLEANS MEDICAL AND SURGICAL* and likewise *The Pan-American Surgical and Medical Journal*, which I am informed is now an assured success and worthy of your every aid and assistance.

In conclusion I wish to congratulate my predecessor, Dr. Chavigny, upon his executive ability as evidenced by the retirement of two bonds, and my hope is that the new president will do as well.

Don't forget the needs of our worthy Librarian and the bond issue, therefore don't forget the *NEW MEMBERS*.

Again permit me to thank you for this high honor of which I am very proud, and hope to prove myself worthy.

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## Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

### MINUTES.

The regular meeting of the Touro Clinical Society was held the second Wednesday in December with Dr. J. N. Roussel presiding.

Cases were presented by Drs. C. A. M. Dorrestein, Lemann and Parham, L. H. Landry, Joseph Conn and C. L. Eshleman.

## PROCEEDINGS.

## Report of Cases.

Dr. Lucien H. Landry reported the following cases:

**Avulsion of the Scalp, or Industrial Scalping.**

R. S. White female, age 23. In attempting to comb her hair while on a motor boat, the right half became entangled in the propeller shaft, pulling the patient off her feet. Before the engine could be stopped, the right half of the scalp was completely pulled off, at the hair line in front, just over the ear on the side and following the hair line to the back of the neck, where the scalp pulled off leaving a V-shaped raw surface. She was hurried to the Hospital in an ambulance, bringing the avulsed scalp along, thinking possibly an attempt at suturing might be made. This, however, was not tried.

The wound bled profusely and was very painful, but the patient never lost consciousness. The wound became infected and was slow to granulate. One month after admission, Thiersch grafts were taken from the anterior aspect of the thigh and distributed over the denuded area of the scalp. The grafts did well for a while, but infection again set in, so much so that it looked as if the grafts would be lost, but with rigorous cleanliness followed by 10% silver nitrate solution applications and vaselin dressings, the scalp and grafts soon became healthy and the patient left the hospital three months after the accident, completely healed.

She later had a few small places to break down, but with ordinary cleanliness and care, they soon healed.

The periosteum was not destroyed, fortunately, in this case, which would have called for a greater undertaking to stimulate granulations before the surface could be grafted—the best of which is the procedure of James Robertson (1769), a frontier surgeon, who had experience with Indian scalping (quoted by Felix Robertson, *Phila. Med. & Surg. Jnl.*, 1806). He advised boring a number of holes through the outer tables of the skull with a shoemaker's awl, to let the granulations through the vascular diploe. This procedure was suggested to him by an unknown French surgeon, but it had been lost sight of until Sneve recorded its application in 1889.

Arthur A. Law, of Minneapolis (*Surg. Gyn. & Obstet*, Aug., 1914) has reported a very interesting case in which he succeeded in abbreviating the usual average ten months' period of cure in these cases to four and a half months, by using the above procedure.



**Intracranial Hemorrhage Due to Rupture of Middle Meningeal Artery;  
Report and Exhibition of Three Operated Cases with Recovery.**

*Case 1.* E. L. R. Factory superintendent; age 40. On January 20, 1913, at 1 p. m. was struck on the right side of the head with an iron ball, about the size of a lemon, weighing  $2\frac{1}{2}$  lbs., thrown from a distance of 50 feet. He was unconscious for 3 or 4 minutes. The first thing he noticed on regaining consciousness was that his entire left arm was weak, had no muscular control whatever,—sensation abolished, felt as though his hand was asleep. No difficulty with the left lower extremity. Was brought to the Hotel Dieu thirty minutes after the injury; complained of headache and vomited two or three times.

A small incision was made in the contused area of the scalp by the house officer to verify the diagnosis of depressed fracture.

At 4:00 p. m. was taken to the operating room; a liberal horse-shoe incision was made around the area of depression; the skull exposed and a depressed fracture found in the temporo-sphenoidal region, about the size of a silver dollar or possibly a little larger. Three trephine holes were made around the depressed and partially comminuted bone; on removing these buttons, nothing but clot could be seen. The depressed fracture was elevated and quite a large, firm, lens shaped clot was seen to lie over the lower Rolandic area spreading out and dissecting its way between the skull and dura, attaining an area of fully three inches in diameter. The clot was removed and the severed and bleeding posterior branch of the middle meningeal artery exposed.

A fine needle armed with linen was passed around either end of the severed artery, taking a bite in the dura. This stopped all further bleeding; all clot was cleared out and the skin flap sutured with silk worm. A small gauze drain was inserted through the original exploratory incision and the patient returned to bed at 5:00 o'clock. Between 7:00 and 8:00 o'clock (two hours after the operation) he noticed that he had a little control of the muscles in the arm. Sensation greatly disturbed; said the iron bed post felt like ice to his left hand. From 2:00 a. m. on, the muscular control and sensation became much improved.

At noon, January 21, muscular embarrassment limited to the fingers; his sensation in the palm and on dorsum of hand is perfectly natural. January 24, sensation returned in little finger up

to first phalangeal joint. January 25, sensation improved, particularly on dorsal surface of fingers; palmar surface still gives sensation of extreme cold. Muscular control in thumb and index finger improved. January 26, index finger muscular control greatly improved; slight improvement in thumb. Little finger sensation completely returned, rest of fingers slightly improved. January 27, thermic sense in thumb completely returned, but still has a sense of numbness. Improvement steady though gradual, but still has a sense of numbness. Improvement steady though gradual, until the 29th, when he left the hospital, scalp wound completely healed. Has been troubled for a long time and is still, at the present writing, with a disturbed stereognostic sense.

*Case 2.* W. R., age 14, at about 5:30 p. m. June 18, 1914, patient fell from a tree, a height of approximately 30 feet, to a brick pavement, striking on his head. The child was brought to the Touro Infirmary two hours after and when seen was in a deep stupor, which condition he had been in since the accident. Vomited frequently, bowels and bladder acted involuntarily; pupils equal and react to light; no bleeding from mouth, nose or ears, no ecchymosis about eyes. Slow and stertorous respiration; pulse 130, volume fair. On examination a bulging was seen filling the temporal fossa, which appeared to be a hematoma. No depression or fracture could be felt.

Horse shoe flap turned down in the left temporo-sphenoidal area; on peeling the periosteum back, a linear fracture was seen extending to the base of the skull. Blood oozing through fracture. A further incision was made from the apex of the horse shoe, extending well beyond the midline of the cranium to trace the fracture. A decompression was done in the temporal area. Epidural hemorrhage active. Clot wiped out and the posterior branch of the middle meningeal found ruptured. This was sutured. Dura found very tense; liberal incision made in the dura allowing the escape of a large amount of clot and fresh blood in addition to some brain matter. Bone plate removed and soft parts brought together with silk worm; gauze drainage.

Patient extremely restless though unconscious for five days following operation, had to be fed by nasal tube and rectum. Six days after operation able to take nourishment by mouth for the first time. Discharged cured, July 25, 1914.

*Case 3.* (Kindness of Dr. Matas). Mr. R. O., age 36 years.

On November 6, 1914, at 11:00 a. m., while alighting from a street car, patient was struck by an automobile and picked up unconscious; he became conscious in a few minutes. Was brought direct to the Touro Infirmary. He was acute as to the fact that he had been hurt, but did not know how it had happened. There was no visible sign of injury, patient had no pain, was put to bed for further examination and watching.

At 2:30 complained of severe pain in right side of head. At 4:00 p. m. patient semi-comatose, deepening rapidly into coma. A large hematoma was seen on right side of head, pulse 50 and strong; breathing deep and stertorous; right pupil enlarged, reacted to light sluggishly. At 5:00 p. m. patient was prepared for operation, being totally comatose; right pupil typical Hutchinson pupil, left pupil normal; face on right side showing paralysis. Pulse 40, respirations 16, blood pressure 140.

*Operation:* A large horse-shoe flap was made in right temporo-sphenoidal area; a linear incision was made from this, extending well toward the occiput, to include the entire hematomated area.

On reflecting the flap, it was found that the hemorrhage had already dissected out the entire pericranium from the skull, exposing a linear fracture which extended obliquely, from below upwards, beginning at the pterion and extending back in a line almost parallel with the fissure of Sylvius, terminating at a point about two inches from the occipital protuberance. Four perforations were made with the Hudson drill and burr, two on either side of the linear fissure, the two lower corresponding to the temporal end of the fracture; a large square piece of bone removed which at once released the underlying clot. The whole squamous shell of the temporal was now removed, to expose the origin of the middle meningeal, the main trunk of which was found to be severed and bleeding freely, about one-half inch above the pterion.

The severed ends were sutured with fine silk, taking a bite in the dura. Two large trephine holes were then made, one on either side of the fissure at its terminus, near the right occipito-parietal suture, to favor drainage. A rubber tube was inserted in each hole, running parallel to the fissure. Iodoform gauze pack was placed in the temporal fossa; scalp sutured with silk worm.

At close of operation, pulse 80, respirations 20, stertor and coma had subsided; right pupil became normal.

Patient was fed by nasal tube every 4 or 5 hours, and later by

stomach tube; voided and defecated involuntarily. On November 10 began to show signs of returning consciousness, but he did not utter a word until the 12th, six days after the operation.

The most encouraging and noteworthy features in studying these cases, particularly the 2nd and 3rd cases, is that, despite the long period of unconsciousness (5 and 6 days), when the patients had to be fed by nasal tube, they cleared up completely and exhibited as active and perfect cerebration as before the operation.

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DR. I. I. LEMANN: With permission of Dr. Parham, by whom I was called in consultation, I wish to report a case of

**Carcinoma of the lung apparently primary.**

The patient, a lumberman, 56 years old, was admitted to the service of Dr. Parham on October 28, 1914. His present illness began eight months previously after exposure to rain in a swampy country. He was then taken with a bad cold and had some fever. He was never confined to bed and kept on with his usual occupation, although losing some weight. Expectoration was free, especially at night; appetite always good; bowels costive. During the previous five or six months he had become very weak and could not attend to his duties. His temperature then began going up to 102-104 and expectoration became more profuse. The loss of weight had amounted to about ninety pounds during the eight months.

*Previous History:* The patient had always enjoyed good health except for malaria six years ago. The patient drank moderately until about five years ago, since then had totally abstained. He had never used tobacco. He denied all venereal diseases.

*Family History:* Father dead, carcinoma of rectum. Mother dead, cause unknown. Uncle, paternal, died of carcinoma of stomach. First cousin, paternal, died of carcinoma of neck. Nephew, operated on by Dr. Parham for carcinoma of rectum. No tuberculosis in family, excepting one second cousin, maternal.

*Physical Examination on Admission:* Patient is a man of large bony frame, poorly nourished and weak. The skin over his nose is thin, atrophic, rough, cracked and irregularly elevated, having the appearance of old healed lupus. There is dilation of the capillaries over both cheeks. The chest is flat, broad and rather long, larger at the bottom than the top. There is a hyperresonant note

over the left lung, and over the right lung anteriorly and posteriorly from the apex to about the level of the 6th rib in the paravertebral line. Below this point, there is marked dulness, especially between the 6th and 9th ribs where dulness amounts practically to flatness, most marked at the 8th rib. In the area from the 6th rib to the base of the lung, there are numerous crepitant and subcrepitant rales, the breathing being broncho vesicular, almost bronchial. The superficial heart dulness is obscured by the overlying lung. The heart sounds are normal. The liver is not made out to be increased in size. There is no adenopathy.

November 11, 1914. No increase in size of liver is made out, but there is some increased resistance in the muscles in the right hypochondrium.

*Fluoroscopic and Radiographic Examinations:* Made October 30, 1914, by Dr. Ernest C. Samuels who reports "area of density that extends from the seventh rib downward on the right side. Air does not seem to be entering the lung at this point. There is a fixation of the diaphragm on this side, also marked enlargement of the glands of the mediastinum of both sides. There is also considerable feathering of both lungs. The plates made at this sitting bear out what we found on the fluoroscope."

*Laboratory Findings:* On date of admission patient had 29,600 leucocytes, the differential count showing 82% neutrophiles, and 18% lymphocytes. On October 31, leucocytes 19,750, neutrophiles 80%. On November 6, leucocytes 21,150, neutrophiles, 85%. November 10, leucocytes 28,850, neutrophiles 84%. Repeated examination of the urine revealed only a few leucocytes. The sputum was greenish-yellow- thick, tenacious, very offensive. No tubercle bacilli were found, though ten to fifteen examinations were made. The sputum showed very few diplococci and streptococci, and goodly numbers of large, irregularly shaped cells having some ameboid motion and phagocytic action. These were identified by Drs. Lanford and Johns, as epithelial (endothelial) cells. The fluids obtained by exploration failed to show any organisms, but contained some of the above described epithelial cells.

*Subsequent course:* For first week after admission, patient's temperature ranged between 98.6 and 100.4, reaching this latter figure but once. His appetite was very good and he slept very well, but expectorated quite freely and coughed some at night. During

the second week, his temperature began going up every afternoon, at times reaching  $102.4^{\circ}$ , and he became very much depressed and morose, slept poorly and ate very little. His condition continued such until the date of operation.

*Operation:* On October 31, with exploring syringe, Dr. Parham made exploration in 7th and 8th interspaces in para vertebral line. A small quantity of grayish fluid was obtained. This fluid contained no organisms, but as above noted showed the same epithelial cells as were found in the sputum. Exploration was repeated on November 8 with the same results. As temperature had for several days been going up to  $101^{\circ}$ - $103^{\circ}$ , appetite poor and general condition not improving, it was concluded after explanation of attending risks to patient, to open the pleural cavity. This was done by Dr. Parham November 12, under novocain-adrenalin anesthesia, with preliminary hypodermic of morphia gr. 1/6, scopolamin gr. 1/200. About 3.5 cm. of the right eighth rib, in front of the angle, was removed. A thickened pleura was disclosed and incised, pneumothorax developing at once, and giving rise to extreme cyanosis and interference with respiration. The patient's condition became at once extremely grave. There were no adhesions and the lung could be seen markedly retracted towards the front. The lung was caught up and pulled into the wound and sutured to margin of pleural opening, thus obturating the opening. Gauze packs were put in and dressing fixed with adhesive strips. His blood pressure remained unaffected, pulse frequent but full and regular. He was sent back to room at 10:15, after having been given morphia gr. 1/6, atropine gr. 1/150 and camphorated oil 1 c.c. His blood pressure was then 140. He was put to bed and elevated on a back rest. He continued unconscious, with embarrassed respiration which after improved somewhat, auscultation revealing some expansion of lung at 11 a. m. At 11:45 a. m. his blood pressure was 130, pulse full and regular. At 12:15 Dr. Parham came in to see him and finding plaster loosened by perspiration and some air entering pleural cavity, he had patient raised in more erect posture in order to put on fresh strips of plaster and thus stop entrance of air. Patient struggled violently, but did not regain consciousness. Pulse failed rapidly and he died in fifteen minutes. The wife and brother permitted a partial autopsy.

*Partial Autopsy* by Dr. Robert A. Corbin: Body is that of a man fairly well developed and poorly nourished. The skin over the nose

is somewhat cracked. Pupils equal. Head and neck negative. Right side of chest shows evidence of previous operation. Genitals negative. Partial autopsy only was performed. Sternum removed. Left pleural cavity negative except for few adhesions at apex. Right lung collapsed and portion of lower lobe obturated through wound in chest wall. Pericardial cavity contains about 30 c. c. of straw-colored fluid. Heart shows more fat than normal. Heart is displaced downward to level of 7th rib and one inch outside of mid-clavicular line. Heart not opened. Liver smooth extends four fingers below costal margin. Gall bladder is in median line, about one-half inch above the umbilicus. Stomach and first part of duodenum negative to touch. Right kidney not movable. Left kidney freely movable. No tumor mass can be felt in abdominal cavity.

*Gross Description of Right Lung:* The right lung is emphysematous in the upper and middle lobes. The lower lobe is almost completely solidified. The outer surface is smooth, with the exception of several pinkish nodules about the size of pecans. On section, the lung offers more resistance to the knife than normal. The cut surface presents a mottled, pinkish-grey color. It is rather soft in consistency. Here and there are noted small areas of necrosis and a small cavity is noted near the lower end. Material comes off very rapidly when the knife is scraped over the surface. Throughout this lobe a few air vessels apparently unchanged are noted, but most of the lung tissue is replaced by new growths.

Histological sections show the neoplasm to be an adeno-carcinoma. Its point of origin cannot be determined.

The large epithelial cells with irregular shape, which I have described as found in the sputum, may have been the same cells which Lenhartz has described as associated with carcinoma of the lung and which Adler thinks may be pathognomonic.

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#### Abstract of Case Reports.

DR. C. L. ESHLEMAN: *Case I.* H. A., colored male, 33 years old, teamster. Family history negative. He remembers no serious illnesses during his life and has always been in good health until about one year ago when the present trouble began. "Chancre" 18 years ago. Gonorrhoea several times; several years ago during an attack the inguinal glands were incised on account of suppuration. About 3 years ago claims he had another chancre, lasting about

three weeks, which healed under local treatment. Took no internal treatment for longer than a few weeks at most.

His poor health began one year ago when he was laid up in bed for three weeks with what his physician said was LaGrippe. At this time he had fever, pain in his chest and back, especially between the shoulders; this pain in his thorax has recurred at various times during the past twelve months, but has never been severe enough to force him to stop work. He has coughed more or less during the past year. The sputum has not been profuse, sometimes yellowish in color, sometimes he has had none for weeks.

About three months ago, while in bed at 8:30 p. m. he had a severe paroxysmal coughing spell, was forced to sit up in bed and immediately began to spit up a quantity of bright red blood. Thinks he spit up at least a pint.

He has gradually lost weight during the past year, his former weight being 152-155 pounds. At present he weighs 124. He has had huskiness of his voice which has come on only during the last three weeks.

You will agree with me that the above history is strongly suggestive of a simple case of *Pulmonary Tuberculosis*. His physical examination might tend strongly to confirm such a diagnosis. For instance, he shows evidence of having lost weight and his muscles are quite flabby. There is dulness on percussion in the region of his left apex below the second rib in front and also to the inner side of the left scapula behind. On auscultation very distinct crepitation can be heard over the whole of the left apex anteriorly. After taking the history and making a physical examination one of my senior students very naturally made a diagnosis of tuberculosis.

On more careful examination, however, what do we find? I note pulsation seen and felt over an area about the size of a silver dollar in the second and third interspace two inches or more to the left of the sternum. This is at the point where dulness is so readily made out on percussion and corresponds to the level of the dulness posteriorly. His husky voice I am told by the laryngologist is due to a paralysis of his left vocal cord. The breath sounds are diminished throughout the entire left lung when compared with the right side. He has no thrill, no diastolic shock, no tracheal tug, no bruit although a systolic murmur can be well heard at the angle of the scapula behind.



Carefully weighing these physical signs, I diagnosed an

**Aneurism of the Aorta.**

Dr. Samuels confirmed it by fluoroscopic examination and he will show you a wonderful skiagram of it.

He is a truly remarkable case and I have shown him to you for three special reasons:

1. Because the case might very well be mistaken for one of pulmonary tuberculosis unless an unusually careful examination were made and unless the diagnosis of aneurism were kept in mind as a possibility. His husky voice might very well have been a tuberculous laryngitis. But a paralysis of the left cord is almost invariably due to aneurism for anatomical reasons. It is rarely due to mediastinal tumor for the same reasons. His diminished breathing and the crepitation heard at the left apex are due to pressure on the left bronchus and left lung. The pulsation is slight and would only be found if looked for very carefully. It is in a characteristic place and is a very strong point in the diagnosis. The dulness in front and to the inner side of the scapula behind is a very strong point also. On these three points, the diagnosis has been made.

2. Because he is remarkable in having such an enormous aneurism without more discomfort due to pressure. As you see him you cannot but note that he is breathing quietly and without any signs whatever of stridor or dyspnoea. His voice is husky but now he hardly coughs at all. No distension of the superficial veins or small venules can be seen on his chest or in his neck. He looks like a fairly healthy man except for the evidences of some loss in weight.

The reason he is so free from pressure symptoms is because the aneurism is sacular and has pointed toward the left. In other words it has gotten out of the median line into that part of the chest which is more roomy.

3. Because he is remarkable in that spontaneous cure is probably going on in the sac. The fluoroscope shows that the sac pulsates very slightly, in fact hardly at all except in one place. I believe that laminated clot exists in the sac and is probably undergoing organization. How complete this organization is, we of course cannot tell. Dr. Duval states that complete organization and the formation of fibrous tissue is very rare. This is, undoubtedly, the case but I recollect a sacular aneurism springing from the

ascending aorta which I saw several years ago. At autopsy the aneurism was as large as a grape-fruit. It was as perfectly organized into fibrous tissue as a uterine fibroid. What remained of the sac was insignificant but the wall of the sac was at least four inches thick and of pure fibrous tissue. There was no chance for it ever to rupture. The man died of pressure on his right lung.

I am unable to say what the course is going to be in the case I show you. Not knowing the condition of the vessel walls, I cannot say that rupture will not occur. I believe, however, that the danger lies in pressure on his left lung. This will probably result in retained secretions, infection with the usual pus organisms and the formation of areas of consolidation and subsequent breaking down. The whole lung will become riddled with small cavities, a condition which Osler has designated aneurismal phthisis.

Case II. Some of you will doubtless remember this case. I showed him at one of our meetings just two years ago. I shall review his history given at that time.

White male, 37 years old (when first seen in October, 1912); married; several children, all in good health. Since 1909 has been a laborer in a power house. For many years previous to this he was a builder of tanks and sheet metal worker, iron only, no lead.

*Family History:* Negative, no history of T. B. or cancer.

*Past Illnesses:* Had measles, whooping cough and mumps during childhood. Malaria ten or more years ago. No typhoid. G. U. history neg. Habits have always been good, smokes not over eight or ten cigarettes a day. About two years ago had an attack of what he called "Neuralgia" on the left side of his head, short duration, not serious.

The illness for which he consulted me at that time (October 19, 1912), started about four weeks before with pain in his left heel, quite severe for several days, but entirely subsided. A few days later, he began to have pain in the tip end of his three middle toes. This pain grew progressively worse and extended into the toes themselves and even into the whole lower half of the foot. Besides the pain, there was numbness and tingling and a hot burning sensation of the whole lower half of his left foot. Often the pain became sharp and lancinating in character and extended up the leg as high as the popliteal space. Sometimes the pain was so severe as to compel him to get up at night and walk around his room, which seemed to give him some relief.

Physical examination showed a fairly well nourished man, heart, lungs and all other organs negative. There was moderate thickening of the radial arteries. The temporals were quite prominent. Blood pressure 130 in each arm.

In the most dependent position, the whole foot became swollen and red and shiny. The superficial veins were much distended as high up as the middle of the leg. The middle toe was especially swollen, of a bluish pink color and very turgid. At the tip, it was hypersensitive to the touch. The second and fourth toes were also very red and swollen and painful but not quite to the same extent. The whole foot was very hot to the touch. When the foot was elevated the red congested appearance rapidly disappeared but with no relief of pain; in fact it rather aggravated his suffering. The dorsalis pedis artery in this foot could be felt pulsating very faintly, there was distinct thickening of the vessel. The internal plantar artery was felt normally. In the right foot both arteries could be felt pulsating normally and the foot was perfectly normal in appearance in very distinct contrast to the damaged one.

His weight had previously been 137 pounds. At that time he weighed 124, the loss he thought was due to lack of sleep and rest and suffering.

The urine was negative. Wassermann negative. The patient was seen frequently, as often as three times a week, from this date until February 25, 1913, a period of four months. Frequent examinations of the urine were made. Nothing abnormal was ever found. He developed a small ulcer, not larger than a penny, on the inner side of his left middle toe. The slough came away very slowly and granulation was unusually prolonged. He suffered greatly with pain in the whole foot as mentioned above. The swelling and redness and heat subsided gradually. At times during convalescence he had tight crampy pains beginning in the calf of his leg and extending down to the heel, feeling as he described it, like a painful lump in the calf of his leg. His weight gradually increased as he improved.

After he got well, I saw or heard no more from him until October 22, 1914, almost two years exactly from the time when I had first seen him. His complaint was exactly the same trouble except that it was the other foot which was now involved. He states that the latter part of September he began to have pain in the extreme tips of the second and third toes. The soreness and pain

were almost continuous, the only relief he experienced was by massaging the toes. Later, the pain spread to the ball of his foot and the toes began to swell and become red and hot just as the other foot had done.

His physical examination was as follows: The whole lower half of the right foot, including all the toes, was of a dusky red appearance. The superficial veins were fully distended and gave the appearance which would be produced if a constrictor had been applied at the middle third of the leg tight enough to interfere only with the return venous circulation. The middle toe was red and turgid looking like all the other toes except that its tip was dark blue. It was exquisitely sensitive to the touch. The right dorsalis pedis artery could be felt pulsating fairly well, the right internal plantar was full and throbbing intensely. In the left foot the dorsalis pedis was entirely absent, the internal plantar pulsated faintly.

As you see him to-night you will notice that he looks like a man who has undergone severe suffering. He is slightly emaciated, face pale and lines drawn. The red-swollen, hot, right foot is in striking contrast to the pale, cold and almost bloodless left one. Since I first saw him the tip of the middle toe has become gangrenous. You will see that it is perfectly black.

We are, of course, dealing with some severe circulatory disturbance. Three conditions come to mind: Raynaud's disease, erythromyelalgia and obliterative endarteritis. Some years ago, we were inclined to consider Raynaud's disease a tropho-neurosis and in some cases lesions in the spinal cord were described. I have never gotten its pathology well fixed in mind, and the same might be said of erythromyelalgia. In fact, both of these conditions are obscure and it is possible that the cases previously reported as Raynaud's or erythromyelalgia may be similar in nature to the one I am here showing.

This is unquestionably a case of what Burger of Mt. Sinai Hospital has termed *Thrombo-Angiitis Obliterans*. He has dissected out the vessels in more than thirty cases and has described very minutely the pathology. It has been seen rather frequently among the Russian Jews, although, of course, not entirely confined to that race. It is a disease of young adult life and according to Burger is an entirely different condition from senile obliterative endarteritis associated with arteriosclerosis. He has shown that the condition is essentially a thrombosis of the arteries and less frequently

the veins, and that it does not begin in the intima of the artery at all. While all the coats of the arteries and even the tissues adjacent to the arteries and veins may become involved in a fibrous thickening, this is merely a secondary or remote process. The condition is a thrombosis with organization and canalization of the vessels. Sometimes entire vessels, such as the anterior or posterior tibial, are completely obliterated and gangrene of the whole lower extremity may occur, necessitating amputation. In this case, fortunately, the dorsalis pedis seems to be the vessel involved and while there is considerable circulatory disturbance, the collateral vessels seem to be doing their part, and with the exception of the gangrene at the tip of the middle toe, he will probably get off without further damage.

So far as etiology is concerned, I do not think any distinct explanation has ever been given. The treatment I pursued when the left foot was affected was frequent use of hot air to the extremity. This was at Dr. Matas' suggestion. The patient, while at his work in the power house, contrived to keep his foot in a bucket into which he allowed steam to flow from one of the leader pipes. He did this several times daily for a hour or more at a time. It seemed to give him considerable relief and apparently promoted the circulation. With his present attack, however, he has been forced to give up his work and therefore cannot carry out the same process. I have tried baking this foot with dry heat in the Betz apparatus. It has aggravated his pain to such an extent that I have been forced to discontinue it. He is at present taking iodide of potash in medium doses, not because I think there is anything specific behind his trouble. The weight of evidence is all against Lues as a cause. This man's history is absolutely negative and his Wassermann was negative. I am using iodide of potash purely empirically. He is on the nitrites also for their vaso-dilator effect.

Arterio venous anastomosis has been advocated and tried chiefly by Willy Meyer in New York and Bernheim in Baltimore with remarkably good results, especially by the latter. In one case he records performing the operation on all four extremities with good results in each case.

Kato in Japan has advocated the use of subcutaneous injections of saline solution, or Ringer's solution, several times a week, 400 to 500 c. c. at a time, the idea being I presume to alter a supposed increased viscosity of the blood. I have not felt disposed to subject

this man yet to an arterio venous anastomosis. He has, however, had one injection of 400 c. c. of saline solution. I may continue it, depending on the future course of his ailment.

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DR. JOSEPH CONN :

**An unusual case.**

I was unable to find record of this case. Owing to the repairing of the Woman's Dispensary, the record was not available.

The patient was a woman about thirty-two years of age; well nourished. She complained of pain in her right side and felt a lump in her abdomen.

Vaginal examination showed the uterus normal and in good position.

Right side was felt a cystic ovary, about the size of a normal kidney. Left side tube could be felt between ovary.

Abdominal examination showed a fluctuating tumor the size of an ordinary normal kidney, smooth and symmetrical in character, and made wide excursions over the entire abdominal cavity when palpated.

The diagnosis was probably a floating kidney. The operation was performed; an incision was made in the middle line to remove the cystic ovaries and then to suspend the kidney. On opening the abdomen it was found the tumor was an ovary and not a kidney. On further investigation, I found that I was dealing with **Two Cystic Ovaries** pedicled about ten inches long from the base, entwined around each other about three inches from each other. They were tied off and she made an uneventful recovery. Twisted pedicle is not a rare condition, but both ovaries to be pedicled and twisted was quite an unusual condition.

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DR. C. A. M. DORRESTEIN :

**Clinical Report of a case of regeneration of part of Femur.**

This case is presented as one of interest, owing to the remarkable good functional result obtained after a mutilating operation on the hip joint, involving the resection of the articular head of the femur and over two inches of the shaft of that bone, including the greater and lesser trochanters.

The accompanying radiograph shows that this useful and most

unexpectedly satisfactory articulation is due to a regeneration of quite a large piece of the shaft of the femur, including even a miniature great trochanter.

This patient, Mr. C. F. G., aged 16 (at the time of his illness), complained in the middle of July, 1910, of pain in his leg, diffuse and not localized. When he presented himself at my office he had a papulo-pustular eruption over both legs, most marked on the left, which he attributed to cuts received while playing baseball in a lot with high grass. He had at that time some temperature ( $101^{\circ}$ ) and he was ordered home and to bed for observation.

His family history showed nothing of any bearing on his trouble, nor was his personal history of any special interest, excepting that perhaps the skin infection might have been the means of entrance for the suppuration which subsequently took place in his hip joint and upper part of the shaft of the femur.

His father and mother were both living and healthy, and he himself was a splendidly developed specimen, who, barring the usual diseases of childhood, had never been ill, or addicted to alcohol or tobacco.

On July 20 the focus of his trouble became evident as being seated in the hip joint. He began to suffer of pains in his hip, boring in character and intense in paroxysms and never entirely letting up. In a few days a swelling developed over great trochanter, extending halfway down the thigh. There was no tenderness upon pressure, however, unless very deep, but tapping was intensely painful.

His temperature gradually increased and became more septic in type, ranging from  $102^{\circ}$  to  $104^{\circ}$ , and accompanied with rigors and sweats. In these two weeks he also lost considerable weight. Urine examination was negative, leucocyte count 16,600. X-ray of hip and leg also negative.

On July 20, 1910, he was removed to the Touro Infirmary and with the assistance of Dr. Wm. Kohlmann an incision was made under general anesthesia, about eight inches long, beginning over the great trochanter and extending down the leg over the outer aspect of the thigh. The femur was exposed and the great trochanter removed and the medullary cavity of that bone laid open subperiostially. The medulla was curetted as far down the shaft as the disease appeared to extend. The head of the femur was

drilled through and the hip joint opened and a large quantity of pus evacuated. Wound was partially closed with free drainage, the operation lasting about an hour. Patient was returned from the operating room greatly shocked, pulse 180.

Notwithstanding the free discharge and the repeated irrigations and changes of dressings, the patient's general condition did not improve as hoped. Though occasionally his temperature would fall to normal, he would always have an evening temperature from 101° to 104°, with the pulse gradually creeping up daily and chills and sweats becoming again prominent. On August 17 pulse was 120 and temperature 102°.

It was then concluded that further effort to preserve the articular head of the femur was not safe and a clearing out of the joint cavity decided upon.

Under nitrous oxide anesthesia the head of the femur and two inches of its shaft were resected. Patient reacted after thirty hours from this and continued to improve till discharged from Touro, September 2, 1910. There remained a sinus which discharged for some time, but he was finally well about February, 1911. The problem confronting us then was to supply the deficiency in the hip joint in a young man seventeen years of age.

An elaborate orthopedic apparatus was devised which, with the aid of a crutch and a stick, permitted him to go about.

After a year or so the patient found the apparatus cumbersome and began to leave it off at times. This, however, for a while was followed by a purulent discharge from the site of the old sinus, but this ceased and he found that he could support a great portion of his weight on the leg. After three years he did finally discard apparatus and crutch and he walked without artificial assistance. He now walks as much as seven miles with nothing more than a stick and the shortening of the left leg,, which was directly after the operation more than three inches necessitating a shoe in the appliance to be raised that high, has been reduced to one-half inch, which is taken care of by a pad worn inside of an ordinary shoe.

Photograph No. 1 shows patient standing on the operated leg and supporting his whole weight (145 lbs.) thereon. Photograph No. 2 shows the perfect flexion of the renovated joint, while the accompanying radiograph clearly shows the saw line and the regenerated bone above it and the manner in which the articulation is accomplished on the upper edge of the acetabulum.





ILLUSTRATING CASE OF DR. DORRESTEIN.



# N. O. Medical and Surgical Journal

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### LOUISIANA STATE MEDICAL SOCIETY.

The next annual meeting will take place in Lake Charles on April 20, 21 and 22. Conditions are all favorable and there is every reason to expect a successful session.

Lake Charles is an attractive and progressive city, in a beautiful section of our State which our Society has not visited for a long term of years. Railroad facilities are good and we are sure that the local committee will do its utmost in order to ensure the comfort and pleasure of the visiting members of the Society.

We hope that the attendance will be large from all over the State, and shall do all in our power to stimulate the members from New Orleans. At the same time we extend to the Society, through its officers, the assurance of the JOURNAL'S desire to do all in its power to cooperate in every way possible.

## FACTORS IN INSANITY.

An interesting analysis of the sex factor in insanity is presented in a report emanating from the United States Census Bureau under date of January 25, 1915. The figures given relate to an intensive study of insanity in hospitals and asylums of the United States during 1910.

The incidence of insanity is shown as 408 to 200,000 population, 208 being males and 200 females; the annual increase for 1910 figured 132, with 72 males and 60 females. The number of male insane in institutions has increased faster than the number of females.

In the analysis of diseases producing insanity, 25 per cent. of the males had alcoholic psychoses or general paralysis, while only 8 per cent. of the females were so affected. It is declared that if these diseases are eliminated from consideration, the occurrence of insanity from other causes is about equal in males and females. The deduction is that the chief factors of insanity among males are alcohol and vice (i. e., syphilis).

In the table of admission for 1910 this is more clearly shown:

	Males.	Females.
Total number admitted . . . . .	34,116	26,653
Having general paralysis . . . . .	3,041	1,086
Having alcoholic psychoses . . . . .	5,220	902
Having both diseases . . . . .	147	54
All other cases . . . . .	25,708	24,611

Age as well as sex bears a direct relation to insanity, the analysis of the Bureau showing that "the ratio of admissions increases with advancing years, reaching its maximum in extreme old age, when senile dementia marks the weakening of the mental faculties."

The majority of the insane admitted are between twenty-four and fifty years of age; about 12 per cent. were over sixty-five; very few young people and practically no children were admitted.

The admission of males at all ages exceeded the admission of females and even excluding alcohol and vice as factors, the ratio for males is higher than for females before thirty years and after fifty-five years; in the intervening years (30-55) admissions of females were greater.

The conclusions to be drawn from this opus of the Census Bureau

are not surprising. We expect that the price of sin should be chiefly paid by the man who invites the results and it is not strange that in her middle life the woman should lose a balance, sustained to the breaking point during child bearing and home making.

The more interesting feature is really the side lines opened in the review of the subject.

The ratio to the population as shown in this study would be about two per cent. and insanity seems to be on the increase. This incidence does not cover insanity *outside* of institutions, but only those cases admitted to control and enumerated. How many insane are there not checked up?

In the opening chapter of his book on insanity, Savage enunciates the idea that every man or woman is born insane and the development is only a matter of circumstances. Mobs and masses of men often reflect the truth of Savage's thought in their acts under momentary excitement.

The obliquities which shadow great intellects at times break out and obscure the best achievements. How simple to understand, then, that insanity should evoke an easy way with a ground prepared, waiting for the fuel which alcohol, vice and the stress of modern civilization bring, sparked by circumstance into a destroying disease.

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### FEDERAL CONTROL OF MEDICAL PRACTICE.

The new law regulating the production and use of opium or coca and their derivatives shows the authority of the Federal Government in the control of medical practice; in these particular drugs the law is far-reaching, compelling the payment of a special tax before they may be used by the physician and then requiring a record of such use under penalty severe enough to enforce obedience to the terms of the law.

The objects aimed at more than justify the action of the central authorities, for the use of opium and its derivatives and of cocain, at the hands of the physician, of the druggist and of the victim of the influences of these poisons has already grown to such importance as to need stringent regulation. A recent news item alone would be enough, if true. In this we read that school children in New York were victimized by illicit vendors of cocain. In the South our own observations among the negro population would strongly argue the need of restraint.

The law becomes effective March 1. The conditions stipulate that

“Every person who produces, imports, manufactures, compounds, deals in, dispenses, sells, *distributes*, or gives away opium or coca leaves or any compound, manufacture, salt, derivative, or preparation thereof, shall register with the collector of internal revenue of the district his name or style, place of business, and place or places where such business is to be carried on.”

A tax of \$1 per annum is to be paid by such persons. Beginning with March 1 up to July 1, this will be assessed at 34 cents. It will be unlawful after the date stated for any such person to produce, etc., any of the named drugs, without proper registration and payment of tax.

The special application of the law to physicians, dentists, and veterinary surgeons is clearly stated in the following paragraph:

“Such physician, dentist or veterinary surgeon shall keep a record of all drugs dispensed or distributed, showing the amount dispensed or distributed, the date, name and address of the patient to whom such drugs are dispensed or distributed, *except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend*;\* and such record shall be kept for a period of two years from the date of dispensing or distributing such drugs, subject to inspection as provided in this act.”

Regarding prescriptions for the drugs in question the law provides that a dealer may dispense provided that

“Such prescription shall be dated as of the day on which signed and shall be signed, by the physician, dentist or veterinary surgeon who shall have issued the same, *and provided further*, that such dealer shall preserve such prescription for a period of two years from the day on which such prescription is filled in such a way as to be readily accessible to inspection \* \* \*.”

Employees, nurses, and persons administering these drugs under the direction of a physician, etc., are exempted from penalty, but all persons having possession of the drugs in question and not being registered under the provisions of the act will be held liable and the penalty applying to such possession, to failure to keep proper records, etc., is fixed at a maximum of \$2,000, or five years' imprisonment. or both, in the discretion of the court.

Digested, this act conveys the information to the medical pro-

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\* Italics ours.—[Eds.]

fession that any physician who expects to use in his office or practice, or to prescribe, opium and its derivatives or cocain and its combinations, should apply for a registration from the nearest revenue office; should pay the tax; should receive a pad of duplicate order blanks to use in securing his supplies from purveyors, keeping a copy subject to inspection for two years; should sign and date all ordinary prescriptions containing opium, etc., and inscribe the name of person for whom prescribed. He need not further consider these prescriptions, as the druggist keeps them for inspection and he need not keep account of what he administers to patients while in actual attendance upon same.

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## Miscellany.

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### BY THE WAY.

There is something stimulating about the month of March. About any March, and about this month of March, in particular. It is the turn of the season and its tides rise high. The trade-winds spring up.

“O the trade-winds, the trade-winds!

They come in March, and they come in May—

Sister Anne, on your island tower,

Do any trade-winds blow to-day?”

This is the song of those who look for more gain. Indeed, it is the predominant thought, in commerce and in science; for the problem of the unemployed invades every occupation. The vast numbers of dissatisfied and unoccupied have aroused, as long ago as last September, the Charity Organization Society of New York City to say that this winter promises to be one of the most severe in the history of the country.

This situation was aggravated by the fact that this suggestion was only in part considered, and it was the end of December which saw the formation of distinct working committees among the municipal, religious and other philanthropic bodies, although by the middle of January their activities had increased with the inertia of a falling body in a vacuum, accelerating moment by moment.

The distinction of the persons interested in the alleviation of sufferings among the poor to-day renders dignified what might have assumed the air of a *faute de mieux* expedient, or a locking of a horseless stable door. For no horseless vehicle (without a motor, too) could appear more ridiculous than a civilization which edu-

cates men to a stage in which they can find nothing to do, yet still retain their appetites.

The physician is the first one to render aid in this contingency. It is to him that the telephone appeals in injury, starvation, distress, or familial suffering. He, better than others, can say what is going on, for his bills are the last to be paid; and the most palatial dispensaries are erected for him to which to transfer his business (such as it is) whenever the patient wishes to be classified as an eleemosynary matriculate.

The problem of handling the unemployed is being treated, consequently, in the crudest fashion. It assumes, as all admit, the form of necessity. Men, women and children are to be fed. Work of any sort is to be seized on. The idea that exposed work, among conditions which will overtax already diseased kidneys, or severe strain which will overpower cardiac valves, or lungs possibly diseased, does not for a moment enter the minds of the financiers, or even the philanthropists, faced, affronted one might assert, with a problem of 200,000 idle, cold and hungry individuals.

But when the wards fill up, and the diseases appear, which ill-selection unquestionably will produce, or promote, when exposure has occurred, then the physician is asked to explain the unusual incidence of tuberculosis. He is asked to say why there is so much of it, and of pneumonia or cardiac disease, and arterio-sclerosis.

Furthermore, some are saying that the lack of wisdom shown in permitting tenements in the heart of New York City and allowing the filth, disease and contagion to breed and spread there, will cause an invasion of the ranks of those living in better surroundings, for the fires are too near to be isolated.

When all is said and done, the condition of economic metabolism is one to engage the cleverest minds. Judge Elbert N. Gary has addressed President Woodrow Wilson in a characteristic manner. But no one knows better than either of these men the need of a basic correlation of education and opportunity, which is just the thing for which no present effort is contending.

And a proper knowledge of every child's physical and mental capabilities is one of the last things that a school system, devoted to an ideal of unifying all, can ever attain. Then, when men become dissatisfied or unsuccessful, and ill, it is the physician with his medicine who is asked to correct such a wasteful and heedless process.



This is the suitation now recrudesing.

It renews the difficulty of Jereboam and Rehoboam (vide II, Kings, etc.) and what does it help if the Emperor of Japan gives fifteen hundred dollars to the Salvation Army, and Judge Gary a thousand dollars to the Salvation Army, saying that this is a "one hundred per cent." charity?

And even then it is a struggle to give a man enough to eat, let alone making him happy. We have resigned any such felicitous desideration.

Beauty, grandeur, nobility, and the supremacy of ideals have to concede all choice in the era that we are entering. For there is to be no thought of any glorious or magnifying attribute, if the mere cancerous and tuberculous destiny of the races, to which an idiotic leadership has consigned us, shall prevail. Not against principalities and powers, then, but the crass stupidity and the gross and inexplicable amblyopia of a set of men, whose lack of insight is matched only by their unfitness for law making, must we struggle.

Sometimes such ignorance naively exposes itself, as the hand of the stone-mason cutting a motto over the entrance to a hydro-pathic institution, which made the legend read:

"LASCIAE OGNI DOLLARE VOI CHI ENTRATE QUI."

The dollars and the dolors are not exchangeable. In seriousness, our philanthropy has this lesson to learn. Floods of gold cannot arrest asininity, or give curtailment to ill-educated and apish mentalities. This is just the contingency with which a generation of unhappy mortals is going to collide. Possibly some spiritual tide may sweep in over the lowlands. No criminal is more closely bound than the scientist in his cell. But what is the way out?

There was a time when philosophers taught the nature of individuals by analogy. Plato said that we had gold, silver and brazen men. The Mithras worshipper compared men to the planets and their astrologic influence. Can we escape from the provincialism which laughs at those ancient thinkers who compared the scales of men and stars?

I—gold: the sun.

II—silver: the moon.

III—mixed (alloy): Mars.

IV—brass: Mercury.

V—iron: Jupiter.

VI—tin: Venus.

VII—lead: Saturn.

Such a chart is radiographic and the emanation sinks almost to the Radium "D" of Mme. Curie. The "tin" and Venus has a *fin de siècle* suggestion, has it not? Those Mithridates were of the moderns, I fear.

So it was, when I attempted to give a histologic classification of men, into: epithelial, connective, muscle and nervous types, that a cynic said, Yes, there is quite a proportion of "skins" among humanity. All classifications fail, like the signs in dry weather. I suppose we shall have to await the Schleiden and Schwann of sociology. But how can we organize without them?

Even the Grecian sages would deplore, now as then, the popular tendency to head-on-ism. Indeed, the hedonist is still what he always was in impetuosity, whether in a chariot, or an automobile. The curious thing is that one examines by multifarious tests and annual commissions engineers who operate upon trackage and with safety signals, for eye-strain, Daltonism, deafness, and epilepsy. But the motor car may be seen running at large under the hand of any nineteen-year-old whose father can so supply him. Is he color-blind? Has he any of the stigmata of the rejected locomotive engineer? Who tries to find out? But the motor cars dart in and out of the city's avenues as a school of newts in the Avon.

Comparing the motor car with a Roman chariot reminds me that there is a typically Roman ruin in New York City, as you go eastward on Worth Street from Lafayette. Under the shadow of the "*Chinese Daily News*" there are rocky foundations walled in as the ruins of the forum, and the streets are filled in as they are on the Via where signs say, "*É vietato l'ingresso.*" The "Five Points" are now no more, and at last there is a reclamation of useful territory which will assure the metropolis a new lease of life. Here, as in the melting-pot, are sociologic changes of greater import than any one seems to realize. And the astute observer may see some astonishing things, if he is one to have "eyes to see." The dispensary situated here, in what was once a slum of the lowest character, now stands amid empty lots, the tenements torn down, while a city court is sitting in the rooms in which no more patients exist to attend. When you realize that this ground is as valuable as the gold fields of El Dorado of the Spanish fable, and that its

manipulation is the sport or conflict of princes only, some conception of New York activities may dawn upon you.

These things are on the lap of the gods, "in the pot," and, as the laboratory boy said, "tempus centrifuge it!" We shall see. Among all the things which go to increase the contentment of a civilization, the fine arts, great buildings, avenues, parks, music, festivals springing out of the conscience of the people, and the living together of a community of great and unified aims, there is such a conspicuous lack of homogeneity as to lead us to ask what our systems of education are consummating.

The elaboration of diagnosis as in the lectures of the elder Pepper, and in the text-books of the 1850-1870 period, in which long symptomatic descriptions of stages were done in very good English, have passed. A good modern text-book, gives a line to indicate the need of a white cell count, or of a quantitative albumin, and we are at once *in medias res*. There is no more the detail: *luctus comitatur euntem et Pavor et Terror trepidoque Insania vultu. Exululat passisque fugit male sana capillis*, (etc.). And while no age has taken a more vivid interest in the workings of the mind, by contrast everything mental (or symptomatic), must be resolved into terms of chemics. The quadratics of dolor, rubor, tumor and calor were taught us. Barclay (writing in 1858) devoted pages to the recognition of a febrile state. "The onset, the rigor," he continues:

"The next point for consideration is, whether these general symptoms make up the whole of the disease, or whether it accompanies inflammation of some particular organ; whether (to use the hard words of science) the pyrexia be idiopathic or symptomatic; and this can only be ascertained by the negative results obtained from a survey in detail of the leading phenomena connected with each of the various organs. A suspicion or guess may be formed from the circumstance already mentioned, that when the skin is hot and dry, and the pulse feeble and frequent, we are more likely to have fever to deal with; and that when the skin is moist, the pulse firm and less frequent, the chances are in favor of inflammation. The essential element of fever is so entirely beyond the reach of our present means of investigation...."

How he would have enjoyed a good differential! He continues, giving a chapter to the stools, the urine, the abdomen.

The writings of Traube, chapters devoted to careful diagnostic suggestions, are still good reading. Austie on Nervous Symptoms, and Johnson on Indigestion (1831) will give many a quarter hour of pleasure. It is a remarkable thing to see these men reach, by sheer intellect, what we require an Eliot "five-foot shelf" of test

tubes and reagents to disclose. They are quaint. As you see, Barclay leads up to a climax in the choice of the word "pyrexia." He endows this term with a rhetorical grip of the sinister, as Pepper used to do with every adjective in such a connection. The "lassitude" and "malaise" of typhoidal onset used to give one a relaxed and weary sensation as he unfolded the prodrome. In fact, so much so, as to remain always in the recollection.

One student dared Jove in asserting that typhoid must be endemic in Malaysia!

Not satisfied with the power of description, the lecturer on obetrics used to wear, on his watch-charm, a slender woven bag. It was just of the size to represent a capacity of one fluidounce. This he claimed to use in showing babies' caretakers the requisite amount of feeding for initial hours. I wonder if this lecturer still lives and illustrates with the little receptacle so classic? It served its purpose. For few men could forget the lesson. Those were the days when we hurried up and down the corridors repeating: Come, my pretty surgeon, and perforate my epigastrium! This was the cabalistic invocation to the internal mammary artery, and on the other side of the hall there was the solemn antiphony of: Some lords can't penetrate through their meatus urinarius! This would disarm the most carpal critic.

I wish I could return to a review of the curiosities in Austie. Some other time, perhaps. You may sing "of it": "*Psittacus, cois imitatrix ales ab Indis, occidit*"; and, "*plus ave docta loqui!*" So, for a month, "*sepulchro.*" [R]

PRIMARY CARCINOMA OF FALLOPIAN TUBE.—(C. W. West, *Johns Hopkins Bulletin*, October, 1914).—West has collected 132 cases of primary carcinoma of Fallopian tubes from the literature. Among 19,000 gynecologic cases treated at Johns Hopkins, there have been four cases of the condition. Fifty-three per cent. of all cases have occurred between forty and fifty years. The middle and outer thirds of the tube are most frequently involved. The disease is bilateral in a large number of cases (26 per cent. of cases).

Recurrence takes place soon after operation. Death occurs early, within the first twelve months forty-five cases are reported to have died. Only four cases have lived beyond a five-year limit.

*Symptoms:* The symptoms are variable. Most commonly there is a watery vaginal discharge, often it is bloody. Abdominal pain

and menstrual disturbances. There may be present an abdominal tumor or distention. Loss of weight, painful urination, and defecation appear late in the disease. It is a rapidly growing tumor and one which metastasizes early.

*Treatment:* Panhysterectomy.

COHN.

BOILING WATER INJECTIONS FOR HYPERTHYROIDISM.—(Porter, *Surgery, Gyn., Obst.*, January, 1914).—The author, Porter, advocates this method in the following class of cases:

(1) Patients with small thyroids with moderate symptoms of hyperthyroidism, as a substitute for medical treatment.

(2) In patients with large thyroids and marked hyperthyroidism who are not good surgical risks—later to be operated if symptoms improve.

(3) In substernal hyperactive glands (under the guidance of the eye).

The experience with the method is based on more than one hundred cases. C. H. Mayo says, regarding the method: "Extreme conditions, especially dilatation of the heart, may require medical preparation and the operative interference following in cases resistant to treatment should be confined to injection of boiling water into the gland after Porter's plan to hasten improvement." Porter believes that an injection will accomplish more than a double ligation, and in less time. The relief is usually manifest in twenty-four hours. Adhesions do not follow when the injections are properly done. Sloughing of tissue has never occurred. Injections may be made every two or three days, but it is best to wait ten days. From 5 to 20 c.c. ms. of boiling water are used at each injection, dependent on the size of the lobes.

COHN.

## Medical News Items.

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THE ANNUAL MEETING OF THE LOUISIANA STATE MEDICAL SOCIETY will be held at Lake Charles on April 20, 21, 22. The Calcasieu Parish Medical Society is bending every effort to make this the banner meeting of the State Society. The social part of the program, in the hands of our worthy component Society, will be thoroughly attended to and can already be acknowledged a success under the energetic management of Dr. J. D. Tuten, chairman of the Committee on Arrangement, and his co-workers. The scientific part of the program will be arranged by the chairmen appointed by the president, Dr. George S. Bel, from among the titles of papers submitted by the individual members of the Society. Every member of the Society should feel that anything of interest to the members of the Society, either in original work or clinical experience, should be submitted in a paper. That the scientific part of the program may be completed in the time allotted, it is necessary to limit the total number of papers to be read. The Committee on Scientific Work has, therefore, decided that forty-five papers will be presented. The names of the chairmen of the sections, to whom the titles of papers are to be submitted, and the numbers of papers allotted to each section, are as follows:

Section on Medicine and Therapeutics—Dr. S. L. White, Chairman, Ruston. Ten papers.

Section on Surgery and Anatomy—Dr. G. M. G. Stafford, Chairman, Alexandria. Eight papers.

Section on Gynecology and Obstetrics—Dr. A. O. Hoefeldt, Chairman, New Orleans. Five papers.

Section on Bacteriology and Pathology—Dr. Chas. W. Duval, Chairman, New Orleans. Four papers.

Section on Nervous and Mental Diseases—Dr. Chas. V. Unsworth, Chairman, New Orleans. Two papers.

Section on Eye, Ear, Nose and Throat—Dr. J. A. Caruthers, Chairman, East Baton Rouge. Four papers.

Section on Diseases of Children—Dr. S. M. Picard, Chairman, Shreveport, Four papers.

Section on Diseases of the Skin—Dr. H. E. Menage, Chairman, New Orleans. Two papers.

Section on Genito-Urinary and Rectal Diseases—Dr. R. G. Holcomb, Chairman, Lake Charles. Two papers.

Section on Radiology and Radiotherapy—Dr. E. C. Samuel, Chairman, New Orleans. Two papers.

Section on Tropical and Preventive Medicine—Dr. E. M. Dupaquier, Chairman, New Orleans. Two papers.

As the program must be completed so as to be in the hands of the members two weeks before the annual meeting, it is necessary that the titles of papers be presented to the respective chairmen in time to submit the program to the Committee on Scientific Work, not later than March 10, 1915, when all information regarding the meeting will go to press. In order that all the papers appearing on the program be read at the time scheduled, the president wishes it known that the program will be closely adhered to.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE will hold its twelfth annual meeting at San Francisco, June 14-16.

THE PACIFIC COAST COMMITTEE OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will hold a meeting in San Francisco, in the University of California and in Leland Stanford Junior University, on August 2-7, 1915.

BOARDS OF COMMISSIONED MEDICAL OFFICERS will be convened to meet at the Bureau of Public Health Service, 3 "B" Street, S.E., Washington, D. C., and at the Marine Hospitals of Boston, Mass.; New York, N. Y.; Chicago, Ill.; St. Louis, Mo.; Louisville, Ky.; New Orleans, La., and San Francisco, Cal., on Monday, March 8, 1915, for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. They must have had one year's hospital experience or two years' professional work. They must be not less than five feet, four inches, nor more than six feet, two inches, in height.

The following is the usual order of the examinations: First, physical; second, oral; third, written; fourth, clinical.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant

surgeon generals \$4,000 a year. The tenure of office is permanent.

For invitation to appear before the board of examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

**PHILIPPINE CIVIL SERVICE EXAMINATIONS.**—The United States Civil Service Commission announces the following open competitive examinations for men only, on March 2, 1915:

Bacteriologist and pathologist, \$2,000 to \$2,500; specialist in mental and nervous diseases, \$3,500; medical inspector and surgeon, \$3,000.

**THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS** announces that, beginning with June 1, 1915, candidates for licensure must show evidence that they have completed one full year, at an approved college or university, of work in the branches of biology, physics, chemistry, and in one modern language.

**JOURNALS CONSOLIDATE.**—**THE CRITIC AND GUIDE COMPANY** has purchased the *Dietetic and Hygienic Gazette*, which has just completed the thirtieth year of its existence. The combined journals are now under the editorship of Dr. William J. Robinson. The offices of the publication are at 12 Mt. Morris Park, W., New York City.

**THE GORGAS MEDAL.**—The Medical Reserve Corps Association, New York State Division, announces that the Gorgas medal, to be given yearly in honor of Surgeon-General Gorgas, is open to competition to members of the Medical Corps of the United States Army, the Medical Reserve Corps of the United States Army and to members of the Medical Corps of the organized militia. Papers on any subject of a medico-military nature may be submitted. Any further information on the subject may be obtained by addressing Col. Chas. Richard, Lieut. Col. Champe C. McCulloch, Jr., and Major Eugene R. Whitmore, of the Army Medical Corps.

**INTERNATIONAL HEALTH COMMISSION MOVES.**—The International Health Commission, one of the three divisions of the Rockefeller Foundation, has removed from Washington to New York City. To concentrate the work in one central field is the object of the removal.

**NATIONAL UNIVERSITY PLANNED.**—The House Education Committee on February 2 reported favorably a bill to establish a national university.



**MENINGITIS IN ARKANSAS.**—An epidemic of spinal meningitis broke out in Georgetown, Arkansas, during the latter part of January, which resulted in many deaths in a short time. It is reported that seven persons died in one day of the disease, and that there was only one doctor, who was obliged to work night and day.

**SMALL-POX IN LAKE CHARLES, LA.**—Due to a number of cases of small-pox which occurred during the past month in Lake Charles, the City Health Officer advised general vaccination that an epidemic might not ensue.

**SMALL-POX IN THE ARIZONA LEGISLATURE.**—A dispatch from Phoenix, Arizona, reports that an outbreak of small-pox in the Arizona Legislature forced both houses to adjourn for two days in order to fumigate the assembly chambers. The governor, most of the legislators and a number of other State officers were immediately vaccinated.

**PLAGUE IN HAVANA.**—Bubonic plague broke out again in Havana during the early part of February. This is the third time within the last two and a half years that the plague has shown itself. It is said that the reappearance of the plague in Havana is the natural outcome of the failure to eradicate the rat population of the city. Havana, unlike New Orleans, failed to take vigorous measures—such as the killing of rats and the rat-proofing—and as the result outbreaks of the plague should come as no surprise. Dr. Rucker, assistant surgeon-general of the United States Public Health Service, gave out the assurance that New Orleans and other American ports had nothing to fear from Havana; that there were officials guarding the outgoing quarantine at Havana and at the mouth of the Mississippi, and that any ship from Cuba will be met at the docks by the New Orleans force of the Public Health Service.

**WHISKER LEGISLATION.**—A bill, prohibiting anyone who performs or assists at an operation from wearing beard or mustache, has been introduced in the Massachusetts Legislature. The *Buffalo Medical Journal* says: "Ridiculous, but quite as defensive as most of the modern type of reform legislation."

**BEQUEST TO THE ROCKEFELLER INSTITUTE.**—By the will of the late Henry Rutherford, the Rockefeller Institute has received \$200,000 for cancer research.

PHYSICIANS' HEAVY TOLL IN DEATHS.—According to the *Journal of the American Medical Association*, 2,205 physicians died in the United States and Canada during 1914. This is equivalent to the annual death-rate of 14.41 per thousand, reckoning on the estimate of 153,000 physicians. The chief causes of the deaths were: senility, heart disease, cerebral hemorrhages, pneumonia, accident and nephritis. The age at death varied from 23 to 99, with 60 years, 11 months as an average. The number of years of practice varied from one to seventy-five, the average being thirty-three years.

BRADY UROLOGICAL INSTITUTE OPENED.—On January 21, 1915, the James Buchanan Brady Urological Institute, established through the benefaction of Mr. Brady, was informally opened. The new institute is an addition to the Johns Hopkins Hospital group of buildings. Mr. Brady, who is known throughout the country as "Diamond Jim" Brady, established the institution in appreciation of the services rendered him by Dr. Hugh H. Young.

PRIZES FOR MOTOR AMBULANCE DESIGNS.—The Henry S. Wellcome Bureau announces that £2,000 will be distributed in the form of prizes for the best plans and designs of a body for, and improvement in, field motor ambulances. The £2,000 will be divided into a first prize of £1,000, a second prize of £500, a third prize of £300, and the remaining £200 will be awarded in smaller sums. The competing designs must be received by the Commission not later than June 30, 1915, and the competition is open to citizens of all nations. All details of conditions may be obtained from the secretary of the Ambulance Construction Commission, 10 Henrietta Street, Cavendish Square, London, W.

CUTTER LECTURES.—The Cutter Lectures in Preventive Medicine for 1915 will be given at the Harvard Medical School by Dr. Victor C. Vaughan, professor of Hygiene and Physiological Chemistry and dean of the School of Medicine and Surgery of the University of Michigan, and Dr. Joseph Goldberger, surgeon, United States Public Health Service, Washington, D. C. These lectures are given annually under the terms of a bequest from John Clarence Cutter, whose will so provided that the lectures so given should be styled the Cutter Lectures on Preventive Medicine, and that they should be delivered in Boston and be free to the medical profession and the press.

**SALVARSAN FOR GANGRENE IN THE ARMY.**—According to a daily press dispatch, salvarsan is being used by Professor Ravant to cure gangrene in the French army hospitals, with remarkably successful results, even in cases in which the infection has spread.

**MEDICAL MAYORS.**—A charter has been adopted by Santa Monica, Cal., providing that all subsequent mayors shall be physicians of at least five years' experience, and that the mayor shall act as a Health Commissioner.

**TUBERCULOSIS CAMPAIGN.**—Twenty million dollars were spent in 1914 in organized attempts to control tuberculosis in the United States. Over a quarter of this amount was expended in the State of New York, and more than half in New York, Illinois, Pennsylvania, Massachusetts and Colorado.

**BAN ON SAMPLE PACKAGES OF MEDICINE.**—On December 8, 1914, the chief of police of the City of Chicago issued instructions for the arrest of any one distributing sample packages of medicine in that city.

**NEW ORLEANS PRESBYTERIAN HOSPITAL MEETING.**—The annual meeting of the Board of Managers of the Presbyterian Hospital was held on February 12, 1915. Plans for the new free clinic, which will cost about \$20,000, were adopted. The election of officers to serve on the Board of Managers until February, 1919, was as follows: A. L. Meyer, Walter G. Weiss and A. C. Carpenter. The officers elected for the next two years are: Dr. J. C. Barr, president; W. O. Hart, vice-president; Dr. A. O. Browne, secretary; W. Frank, Jr., treasurer. R. P. Hyams, Andrew Stewart and A. L. Meyer were elected members of the executive committee for two years.

**AMERICAN PHYSICIANS' AID TO BELGIAN PROFESSION.**—Dr. F. F. Simpson, treasurer of the Committee of American Physicians for the Aid of the Belgian Profession, reports the total disbursements of \$2,530 for the week ending February 6, 1915. Dr. Lewis S. McMurty, of Louisville, Ky., and Dr. Charles A. L. Reed, of Cincinnati, Ohio, have become members of this committee.

**PERSONALS.**—Drs. Mabel Palliser, of Brooklyn, and Edith Bertine have been appointed interns to Bellevue Hospital. There are now five women on the staff at Bellevue.

Dr. John Kimbrough, Jr., of Mobile, has been appointed First Lieutenant in the Alabama Medical Corps. He will be stationed with the First Sanitary Company at Mobile.

Dr. Sidney Porter was appointed medical inspector of the Louisiana State Board of Health.

Dr. Franklin P. Mall, professor of anatomy of Johns Hopkins Medical School, has been appointed head of the new department of embryology of the Carnegie Institute in Washington.

It is reported that Dr. Albert Calmette is a prisoner of war at Munster.

Dr. Paul F. Clark, associated with Dr. Simon Flexner, of the Rockefeller Institute of Medical Research, has been appointed to succeed Dr. M. P. Ravenel as associate professor of the medical bacteriological courses at the University of Wisconsin.

Dr. Charles Hedinger is the oldest doctor practicing medicine in the United States. Dr. Hedinger graduated from the Goettingen University in 1842 and has been practicing for seventy-two years.

Dr. Henry P. Walcott, of Boston, was elected president of the Harvard Alumni Association.

Dr. Geo. F. Sullivan, of Hoboken, N. J., has been appointed professor of ophthalmology at the New York Polyclinic Medical School and Hospital.

Dr. Isadore Dyer attended during the month the meetings of the Conference on Medical Education and the Association of American Medical Colleges, of which latter he was president.

Dr. E. F. Bashford, for eight years superintendent of the Imperial Cancer Research Fund, has resigned his position.

Dr. Robert Herring, formerly in charge of the Pellagra Hospital in Spartanburg, S. C., is now stationed at the Marine Hospital Service in New Orleans.

Assistant Surgeon Benedict J. Duffy has resigned his position in the United States Public Health Service.

REMOVALS.—The *American Practitioner*, from 80 Washington Square, to 12 Mt. Morris Park, W., New York City.

Dr. J. W. Pilcher, from Fields, La., to Jones, La.

Dr. G. A. Westfall, from Oklahoma City, Okla., to Supply, Okla.

*Boston Medical and Surgical Journal*, from 101 Tremont Street, to 126 Massachusetts Avenue, Boston, Mass.

Drs. Engman and Mook, to Wall Building, Vandeventer Avenue and Olive Street, St. Louis.

DIED.—On February 5, 1915, Dr. A. A. Carruth, of Wilson, La., aged 77 years.

On February 8, 1915, Dr. J. Boyd, of Laurel, Miss.

On February 8, 1915, Dr. Edward Harper, of New Orleans, aged 51 years.

On February 11, 1915, Dr. J. F. Simpson, of Athens, La.

On February 14, Dr. Pierre C. Tircuit, a prominent physician of Abbeville, La., aged 77 years.

Dr. O. R. Lanng, on February 20, a prominent retired oculist of New Orleans, at the age of 72.

## 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.*

**Essentials of Prescription Writing**, by Cary B. Eggleston, M. D. W. B. Saunders Company, Philadelphia and London.

The author has written this little book with the object of supplying to the student and the practitioner a concise presentation of the principles of Prescription Writing. While he presents little or nothing which is new, the reviewer has been particularly favorably impressed by the value of the last four chapters, which deal with such important matters as vehicles, incompatibility, modes of administration, and suggestions for prescribing official preparations. He believes that later editions would be improved if these sections were expanded and those dealing with Latin grammar, weights and measures, and dosage correspondingly contracted.

J. T. H.

**The Therapeutic Value of the Potato**, by Heaton C. Howard, L. R. C. P. (Lond.), M. R. C. S. (Eng.) Paul B. Hoeber, New York.

The author of this little brochure is convinced that the potato is a very much neglected and extremely valuable remedy in a variety of conditions in which pain is a prominent symptom; for example, in acute synovitis, gout, lumbago, rheumatism, bruises, and chilblains. He recommends its employment in the form of an extract, an ointment, a plaster and in a solution for hypodermic injections. His case reports have not convinced the reviewer of the correctness of his views and he (the reviewer) believes that few patients will welcome the injection of a substance which causes, for five minutes, pain characterized by the author as agonizing. Nor will most of us be favorably impressed by the

author's suggestion that a general anesthetic, such as gas, be administered for ten minutes in order to deaden this pain. Many important medical discoveries have been received with ridicule and scepticism at first. Perhaps this is also one of such, but the reviewer will take his chance of being a "doubting Thomas" once more. J. T. H.

**Diagnosis at the Office and at the Bedside**, by Hobart Amory Hare, D. M., B. Sc. Seventh edition. Lea & Febiger, Philadelphia and New York, 1914.

This work is devoted to a consideration of the diagnostic significance of symptoms and physical signs. In other words, it is written on the plan which is actually followed in practice; namely, the upbuilding of a diagnosis by the grouping of symptoms. It will be found in the future, as the earlier editions have been found in the past, to be of much practical assistance to many physicians. The author has omitted all consideration of laboratory methods in this work because, to use his own words, "it is now so highly developed that it requires special volumes for its description," and "there are several excellent books of this character." In view of the increasingly large proportion of physicians who are making daily use of some at least of these methods, this appears to us to decrease the value of Dr. Hare's otherwise valuable book.

While the various forms of cardiac irregularity are briefly mentioned in the appropriate sections, this subject, in our opinion, is of too great practical importance, both from diagnostic and prognostic points of view, as well as in its bearing on treatment to be so imperfectly discussed. We would have liked to see more insistence on the fact that chills are less often due to malaria than to other causes, and right here is one of the places where brief mention of the importance of the blood picture with a short statement as to the significance of the various findings would be of real value to both patient and doctor.

The book, however, is one which can be of much assistance to any of us, and the reviewer is glad to keep it where he can and does use it. J. T. H.

**Practical Therapeutics, Including Materia Medica and Prescription Writing**, With a Description of the Most Important New and Non-Official Remedies Passed Upon By the Council on Pharmacy and Chemistry of the A. M. A., by Daniel M. Hoyt, M. D. Second edition. C. V. Mosby Company, St. Louis, 1914.

Knowing as he does the large amount of work entailed in getting out any book, the reviewer dislikes to say disagreeable things about any work put in his hands for review, but this book cannot be recommended by him for the following reasons: The book work and paper are poor, one-quarter of it is a reprint from the new and non-official remedies (price, fifty cents), the pharmacology in it is not up-to-date, nor is it fully enough discussed, and the price is five dollars. J. T. H.

**A Manual of Practical Hygiene for Students, Physicians and Health Officials**, by Charles Harrington, M. D. Fifth edition, revised and enlarged by Mark Wyman Richardson, M. D., in collaboration with several officials of the Massachusetts State Board of Health. Lea & Febiger, Philadelphia and New York.

The several editors of this new edition of Harrington's Manual of

Hygiene have thoroughly revised the former editions and have brought the subject matter up to date. There are nearly one hundred and fifty illustrations which add to the value of the book. DYER.

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**Local Anesthesia**, by Arthur Schlesinger, M. D. Translated by F. S. Arnold, B. A., M. B., B. Ch. (Oxon.). Rebman Company, New York.

The author reviews the history and theories of local anesthesia, describing the several agents employed and gives considerable detail in the technic. Then regional application of these principles are given, in a practical and comprehensive manner. The illustrations are apt and of service. A large amount of material may be found between the covers of this little book of some 200 pages. DYER.

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**A Practical Medical Dictionary**, by Thomas Lathrop Stedman, A. M., M. D. Third revised edition. William Wood & Company, New York, 1914.

This new edition of an acceptable medical dictionary bears evidence of considerable revision and there are several illustrations added. The same method of letter press has been followed and the same system of pronunciation. The author of the dictionary states that the effort has been made to add all of the newer words which have entered medical terminology since the last edition. DYER.

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**A Medical Dictionary for Nurses**, by Amy E. Pope. G. P. Putnam's Sons, New York and London, 1914.

The compilation of terms in this handy book bears evidence of careful preparation, many words entering which may especially serve the nurse. In addition to the dictionary feature, a number of tables conclude the book, each of which should be of almost constant service to the nurse, as the abbreviations used in prescriptions, list of poisons and antidotes, tables of weights and measures, measuring of solutions, and the composition of common foods. Altogether a commendable book. DYER.

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**Chemistry and Toxicology for Nurses**, by Philip Asher, Ph. G., M. D. W. B. Saunders Company, Philadelphia and London, 1914.

Dr. Asher has undertaken a difficult task with a large degree of success, for it is much harder to present a complex subject simply than scientifically.

Following the system of standard texts, the author has taken the elements and simple compounds in order and with clear definitions has made a text which his intended readers can understand. There may be more chemistry in the book than the average nurse needs to know, but the author has arranged the information in a manner which will allow the average nurse to study it and profit accordingly. DYER.

**Progressive Medicine**, edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Vol. XVI, No. 4, December, 1914. Lea & Febiger, Philadelphia and New York.

This volume of this admirable digest carries a review of diseases of the digestive tract and adnexna (E. H. Goodman), diseases of the kidneys (J. R. Bradford), genito-urinary diseases (C. W. Bonney), surgery of the extremities, etc. (J. C. Bloodgood) and a therapeutic review (H. R. M. Landis), making a book of some 400 pages. The several chapters are replete with information, always new and carefully selected. The survey of progress in therapeutics is especially noteworthy for its completeness.

DYER.

**The Salvarsan Treatment of Syphilis in Private Practice**, by George Spofford Taylor, M. D., M. R. C. S., and Robert William MacKenna, M. A., M. D., B. Ch. Rebman Company, New York.

This book is made up of three parts: The first deals with the symptomatology and diagnosis of syphilis; the second reviews salvarsan and its chemistry and in a few pages dismisses the technic of its employment; the third section shows the application of the treatment and submits cases in point. The book is practical and the detail will appeal to the physician who wishes a guide derived from everyday practice.

DYER.

**The Pocket Formulary for the Treatment of Disease in Children**, by Ludwig Freyberger, J. P. M. D. (Vienna); M. R. C. P. (London), etc. Fourth edition. Rebman Company, New York.

This revised edition of Freyberger's book will meet the same requirements of the practitioner as its previous printings. It is a short cut to formulæ, containing drugs listed in alphabetic order and cross-indexed in a therapeutic guide in the back of the book, giving the list of diseases and under each the drugs indicated, each of which may, in turn, be found in its proper alphabetic place. It is excellently suited for ready reference.

DYER.

**Mechano-Therapeutics in General Practice**, by G. de Swietochowski, M. D., M. R. C. S. Paul B. Hoeber, New York.

"There is, unfortunately, still a barrier between a large number of men in general practice and the application of mechano-therapeutics." So writes the author in the preface, and he proceeds to submit the material with which he hopes to break down this barrier, with the argument that the chief reason is the ignorance of medical men, regarding the subject in question. The author is a real physician and he submits his subject as such, giving the simples of scientific massage and Swedish movements and their application to the various tissues and organs of the body in which they can be of service. There are few physicians who will take the time to learn the methods given, but they should be known so that their indication may be clear to the physician when such treatment is needed. The trained nurse, however, should learn these practices and to such for instruction we commend the book, and to the physician, also, that he may learn the detail of a valuable, though neglected, therapeutic agency.

DYER.



## Publications Received.

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**PAUL B. HOEBER COMPANY**, New York, 1915.

A Handbook of Fevers, by J. Campbell McClure, M. D.

Can Insurance Experience be Applied to Lengthen Life, by Arthur Hunter.

**LEA & FEBIGER**, Philadelphia and New York, 1915.

Manual of Gynecology, by John Osborn Polak, M. Sc., M. D., F.

A. C. S.

Obstetric Nursing, by Charles Sumner Bacon, Ph. B., M. D.

Diseases of the Bronchi, Lungs and Pleura, by Frederick T. Lord, M. D.

Modern Medicine, edited by Sir William Osler, M. D., F. R. S., and Thomas McCrae, M. D. Second edition, thoroughly revised.

**WILLIAM WOOD & COMPANY**, New York, 1915.

Urinary Analysis and Diagnosis, by Louis Heitzman, M. D. Thoroughly revised and enlarged edition.

**WASHINGTON GOVERNMENT PRINTING OFFICE**, Washington, D. C., 1914, 1915.

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Mental Deficiency, by E. H. Mullan.

The Economy of Ground Squirrel Destruction; Plague Eradication in California, by J. D. Long.

Physical Examination of Workers; Scarlet Fever, by J. W. Scherschewsky.

School Hygiene, by Charles A. Bailey.

Impound Water, by H. R. Carter.

Index Catalogue of the Library of the Surgeon-General's Office, U. S. Army. Second Series, Volume XIX.

### MISCELLANEOUS.

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Forty-Sixth Annual Report of the Secretary of State on the Registration of Births and Deaths, Marriages and Divorces in Michigan for the Year 1912. (Wynkoop Hallenbeck Crawford Co., Lansing, Mich., 1914.)

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## Reprints.

Infection with the *Cercomona Hominis*, by Elliott C. Prentiss, B. S., M. D.

Autogenous Serum in the Treatment of Psoriasis, by Howard Fox, M. D.

Human Plumbing—Amelioration and Cure of Chronic Intestinal Stasis, by William Seaman Bainbridge, M. D.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for January, 1915.

CAUSE.	White	Colored	Total
Typhoid Fever	4	2	6
Intermittent Fever (Malarial Cachexia)	1	1	2
Smallpox			
Measles			
Scarlet Fever	1		1
Whooping Cough		2	2
Diphtheria and Croup	10	2	12
Influenza	19	11	30
Cholera Nostras			
Plague			
Pyemia and Septicemia	1		1
Tuberculosis	53	52	105
Syphilis			
Cancer	16	7	23
Rheumatism and Gout			
Diabetes	3	2	5
Alcoholism			
Encephalitis and Meningitis	5	2	7
Locomotor Ataxia	3		3
Congestion, Hemorrhage and Softening of Brain	28	11	39
Paralysis	2	1	3
Convulsions of Infancy			
Other Diseases of Infancy	12	7	19
Tetanus	1	2	3
Other Nervous Diseases	3	1	4
Heart Diseases	91	44	135
Bronchitis	5	1	6
Pneumonia and Broncho Pneumonia	37	46	83
Other Respiratory Diseases	6	5	11
Ulcer of Stomach			
Other Diseases of the Stomach	1	1	2
Diarrhea, Dysentery and Enteritis	14	14	28
Hernia, Intestinal Obstruction			
Cirrhosis of Liver	11	9	20
Other Diseases of the Liver	1		1
Simple Peritonitis		1	1
Appendicitis	6		6
Bright's Disease	30	19	49
Other Genito-Urinary Diseases	10	8	18
Puerperal Diseases	2	1	3
Senile Debility	8	1	9
Suicide	6		6
Injuries	18	16	34
All Other Causes	23	8	31
<b>TOTAL</b>	<b>431</b>	<b>277</b>	<b>708</b>

Still-born Children—White, 22; colored, 19. Total, 41.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 19.01; colored, 32.91. Total, 22.78.

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

Mean atmospheric pressure. . . . . 30.08  
 Mean temperature. . . . . 52  
 Total precipitation. . . . . 8.42 inches  
 Prevailing direction of wind, northwest.

# New Orleans Medical and Surgical Journal.

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## Original Articles.

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

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### SOME OF THE MODERN PROBLEMS IN GRAVES' DISEASE.

By THOMAS E. SATTERTHWAITE, M. D., LL. D., Sc. D., New York.

Graves' disease is an entity whose clinical features are neither constant nor definite, though protrusion of the eyeballs, enlargement of the thyroid, a rapid pulse, tremor, and various nervous disturbances form a syndrome that we regard as sufficiently pronounced to justify a diagnosis in well developed cases. In others the grouping of symptoms is less characteristic, the more prominent among them being asthenia, with or without tuberculosis, alterations in the skin, and various disturbances chiefly of metabolism or nutrition. Accordingly, there are different types of the disease, and this fact we recognize from the standpoint of diagnosis as well as treatment, whether hygienic, medical, or surgical.

Rogers (*N. Y. State Jour. of Med.*, April 24, 1914) holds that all forms of acquired thyroid disease, with the exception of cancer,

are more or less closely related, and are apt to merge into one another. According to this view, in the development of exophthalmic goiter, there is at first a simple hypertrophy of the gland, then a hypothyroidism, followed in the third stage by a hyperthyroidism, out of which develops, in 25 per cent., the fourth stage, exophthalmic goiter.

One of the most conspicuous features of the disease is the goiter. Normally, the thyroid gland consists of two lateral lobes, connected by a band or isthmus of similar tissue. Occasionally there is a third lobe, the pyramidal, which may arise from the isthmus or one of the lateral lobes. There may also be accessory thyroids. The gland is covered with a connective tissue coating or capsule, from which septa pierce the interior, dividing its substance into masses of varying size. When the interior is exposed, the parenchyma is seen to consist of a stroma in which are closed vesicles containing a glairy brownish fluid. In early life these are straight or branched tubules, but later they become converted into spherical sacs, which are normally lined with a cubical epithelium. The glairy liquid is a colloid substance, in which are red blood cells in various states of degeneration. The hematin in these cells gives the colloid substance its brownish color. But there is no uniformity in the pathological conditions found in this form of goiter, or struma, as it is sometimes called. The anatomical differences in the constitution of the normal gland have suggested that it may have a dual function. The colloid substance may be excessive, and there may be hyaline or amyloid changes in the vessels, together with a hyperemia, due either to glandular hyperplasia or to the associated heart disturbance. This latter may be temporary or permanent. Subsequent to the development of the connective tissue stroma, fibroid, cystic, or calcific changes may occur. Pigmentation of the entire gland is also common. After a thyroidectomy the alveoli quite regularly change their adult character and take on the youthful type, becoming adenomatous.

Associated with the disease one may expect to find implication of the lymphatic system, as in the thymus, lymph nodes, and spleen, and similarly with this hyperplasia a relative or absolute increase in the lymph elements of the blood.

In the interior of the diseased gland the changes are multiform but inconstant. There may be an active hyperplasia of the epithe-

lium, with diminution of the colloid substance, or occasionally the latter may be in excess, from the internal administration of iodine previously used medicinally. The hyperplasia may include parenchyma, capsule, and interstitial substance. The most common condition found in Graves' disease is hyperplasia of the gland with cellular infiltration, the colloid substance being in reduced quantity.

Referring to what has already been said regarding glandular activity, there is a theory now prevailing that the thyroid is a central station for iodine metabolism. Under this conception, one of the tasks of the gland is to remove from the blood such iodine as is derived from the food, while another task is to manufacture an iodine compound, the normal thyroxine, which is liberated by it for use in the system. If, however, this thyroxine, or iodine substance, is thrown off in too large quantities, it may settle on the nervous, circulatory, and generative systems and overwhelm them, producing the thyroidism of Graves' disease, or, in other words, iodine intoxication. When, however, any considerable portion of the abnormal gland is removed by surgical methods, the size of the factory for the manufacture of the iodine compound is thereby reduced in size, and the output is correspondingly smaller. Ablation of the gland naturally causes both a diminution of the secretion and a more normal one, because the remaining portion of the gland then assumes the youthful type, while the secretion gradually loses its abnormal features.

Another theory is that the thyroid secretion may serve as an antidote for certain unknown substances, assumably waste products of metabolism occurring in the blood. On this supposition, if there is more thyroid secretion than is necessary to make suitable combinations with these substances, the result is exophthalmic goiter. If there is too little to effect such combinations myxedema results. A case illustrating this point of view has been reported by Elsner and Wiseman (*N. Y. State Journal of Medicine*, June, 1906). It is in line with other similar observations. But Graves' disease may not be so much of a hyperthyroidism as a dysthyroidism, or perversion of secretion, and a good deal of evidence has been brought forward by Klose (*Neue Deutsch. Chir.*, March, 1912) to support this theory. He claims, further, as the result of experimentation, that the condition is brought about by an antecedent dysthyrism. This theory has been of practical value, if, as he claims, ablation

of the thymus in whole or in part has removed one feature of the disease, viz.: lymphocytosis, which, some hold, is not remedied by operations limited to the thyroid gland.

An explanation of the inter-relation of these two glands is based on the supposition that hyper- or dysthyroidism induces hypogonitalism, and this in turn dysthymism, leading in the vicious circle to an intoxication causing lymphocytosis. Kocher claims that the latter is a very important symptom of the disease. However this may be, so long as it persists a cure can hardly be claimed. Doubt has, however, been expressed as to the causal relation of lymphocytosis to thymus disease. It is said that it may exist sometimes in Graves' disease without noteworthy disease of the thymus.

Kocher's view also, insofar as he maintains that lymphocytosis is the direct cause of hyperthyroidism, has been disputed by Borchartd, Falta and Maranon (Kaufmann, *Journal of the Ameri. Med. Assoc.*, September 26, 1914). For they have observed that lymphocytosis prevails in hypothyroidism and in disturbances of other ductless glands, such as the hypophysis, the adrenals, etc. They assert that the disorder of the ductless glands is the primary disturbance, which in turn produces status lymphaticus, the lymphocytosis being a manifestation of the latter. According to Kaufmann, however, we should carefully differentiate status lymphaticus from status hypoplasticus, the former being characterized by well-defined hypertrophy of the lymphatic tissues; the latter a condition of general constitutional inferiority with more or less hypoplasia of certain organs which show various other abnormalities. Under this status hypoplasticus may be classed lymphism, general congenital asthenia, and infantilism, in which lymphocytosis is a prevailing feature.

In this connection Matti's view is suggestive (*Berl. Klin. Woch.*, July 13 and 14, 1914). He claims that hyperplasia of the thymus is at times a compensatory phenomenon, the thymus acting vicariously for the thyroid. The spleen is a ductless gland that may certainly be implicated in Graves' disease. Eppinger and Hess also hold that thyroidism reacts on the adrenals, causing excessive activity in them, and further that it inhibits the pancreatic secretion. Salmon (*Funz. della Gland. Pituit.*, Firenze, 1905) has held that the enlargement of the thyroid is due to a perverted pituitary secretion, but without advancing much evidence to support his view.

Maurice, Eppinger and Hess, and Falta (*Lyon Médical*, October 20, 1912) believe that there is a close relation between the genital glands, pancreas, and central nerve system on the one hand, and the thyroid, adrenals, and sympathetic on the other. Deficient activity of the one group causes over activity of the other. In severe cases of Graves' disease Graupner (*Muench. Med. Woch.*, August 9, 1910) has found hyperplasia of neighboring lymphatic organs, including not only the thymus, but lymphatic glands, together with heteroplasic lymphomas in the thyroid, spleen, and medulla of bones. Sometimes symmetrical lipomas have been observed in Graves' disease. The relation of the parathyroids to the disorder is interesting, but not yet clear. Graves' disease may certainly be produced by iodine medication, in the lower animals by the injection of fluids derived from the thyroid, and in man by feeding with thyroid preparations. In fact, Forchheimer has recorded a death from thyroid feeding. Evidently there is so close a relation between the thyroid and other ductless glands that they act vicariously, the one for the other, and probably also act and react on one another.

The various efforts that have been made to connect the sympathetic system with the disease have been only partially successful. It is true that degeneration of sympathetic fibers, atrophy or ganglion cells, and pigmentation of both fibers and cells have been described by some observers, but others have failed to find them. However, as degenerative changes are going on more or less continuously in health, we should naturally expect to find them in a diseased condition also. However, on the assumption that the sympathetic is at fault, surgeons have performed sympathectomy, though of late this practice has fallen into disfavor. On the other hand, some have attempted to connect the disease with affections of the central nervous system. Kappis and others (*Mitth. aus d. Grenzgeb. der Med. und Chir.*, 22, 1910-11) have attributed it to disease of the medulla oblongata. Mœbius has stated (*Die Basedowsche Krankheit*, in Nothnagel's *Path.*, 22, 1896) that in some cases a lesion of the bulb has been found, but without demonstrating any etiological relation between the two. However, Sattler (*Die Basedowsche Krankheit*, 1909) has reported several instances of this inter-relation. Sajous, whose experiments on the internal secretions give his statements great weight, ascribes the morbid process

to excitation of the gland by bodily poisons or neurotic influences on the nerve centers, which superinduce hyperactivity of the thyroids and adrenals. J. J. Putnam suggests that various toxic influences may cause the disease.

S. P. Beebe, in a recent article (*Journal of the Amer. Med. Assoc.*, January 30, 1915), holds that the probable function of the thyroid gland is to prepare an active substance or hormone which is essential to the health of the organism. This substance is protein in character, contains iodine, and probably forms a considerable part of the colloid substance stored in the gland. The pathological activity of the gland is roughly proportionate to its iodine content. Under normal glandular activities this hormone is furnished to the general system in quantities suited to its needs, but whenever the gland becomes overactive, a condition brought about, in part at least, by the nervous system, the secreting cells multiply, its circulation becomes increased, and the store of reserve is called on. Hyperthyroidism results. It is in some measure a toxemia.

The following facts serve as a basis for these views: In hyperthyroidism the gland is enlarged, while its blood supply and secreting surfaces are increased. Such symptoms of the disease as loss of weight, increased heart action, and weakness can be imitated by feeding normal persons with thyroid preparations in large amount. Relief from the symptoms is obtained by removal of the gland or diminution of the blood supply by surgical means. And so if the gland is over active, and an increased quantity of the secretion, which is chemically an iodized protein, reaches the tissues through the blood, the result is exophthalmic goiter. The purpose of the Beebe serum is to produce in an alien species of animals a serum possessing special properties antagonistic to the human thyroid secretion. This, when injected into an exophthalmic goiter patient, provides him with a ready-made antagonist to the toxic substance in his blood. The Beebe serum is prepared as follows: A solution of human thyroid tissue is injected into a sheep at weekly intervals; then, after six injections, the animal is bled, the serum filtered, allowed to separate, and placed in sealed ampules, each containing 1 c.c. or about 16 minims. This is the full dose.

Now, while the underlying cause of Graves' disease appears most frequently to be some disorder of the nervous system or some glandular intoxication, the exciting cause may possibly be some acute or chronic disease, such as tonsillitis, appendicitis, gall-stones, or



syphilis, and there is good evidence in support of this claim. Or there may be a local cause, as Billings, of Chicago, has observed (*Jour. of the Amer. Med. Assoc.*, October 12, 1907). We may safely believe that the number of exciting causes is large. On the other hand, it is not at all uncommon to find that the disease has been produced by some physical or mental strain, usually the latter. In one of my own cases it occurred after the first parturition, and in another after enforced hardships and prolonged nervous strain. It may also be hereditary.

Epilepsy has been found associated with Graves' disease, although the connection may have been accidental. Practically any nervous affection may have a similar relation to the disorder. In one of my cases there was facial spasm; in another partial paralysis of the vocal cords and difficult deglutition, with protrusion of one eye. The fugitive diarrhea, sweats, and edema of the skin are explained by irregular or inadequate innervation. It is these minor signs, however, that are apt to be overlooked, so that the diagnosis is often delayed, to peril of the patient. Where there is any grouping of such symptoms as frequency of the pulse, persistent nervousness, emotional excitement, sweating, loss of flesh, diarrhea, epistaxis, or any of the signs of neurasthenia, we should in all cases have a blood examination made for lymphocytosis, a noteworthy if not a constant sign, and be prepared to find that the patient is entering on an early stage of Graves' disease. For, while pronounced cases of the disease are rare, many and perhaps most of us have, I feel sure, passed the slighter ones by, unnoticed. And this is one reason why I have notes of only fourteen cases, and why Austin Flint, the elder, with his extensive practice, only recognized five in ten years. In the absence of, or only a very moderate enlargement of the gland that easily escapes notice, we undoubtedly have often failed to appreciate the presence of the disease. Now, however, that attention has been called to our delinquencies, we may expect better diagnostic results. Of course, practically all patients with exophthalmos consult oculists sooner or later, reporting to them from time to time, and so many of them pass from our observation.

In one of Mayo's series of cases, 2,917 in number (*American Journal of the Medical Sciences*, December, 1913), the chronological order of symptoms is given as follows: (1) Cerebral stimulation; (2) vasomotor disturbance; (3) tremor; (4) mental irrita-

bility; (5) tachycardia; (6) loss of strength; (7) cardiac inefficiency (8) exophthalmos; (9) diarrhea; (10) vomiting; (11) mental depression (12) jaundice. This is very suggestive. These returns therefore indicate that the disease begins with a hyperactivity of the nervous system; perhaps there are hysteria, abnormal cravings, and the like, followed by vasomotor disturbances and mental irritability, succeeded in turn by mental depression. Abnormal cardiac action is one of the first subjective symptoms to which attention should be called; in fact, cardiac dilatation is one of the prominent signs of the disease, and has been held to be an index to the amount of thyroid intoxication. As I have intimated, however, the disease may occur without any of the three cardinal symptoms, but can be recognized by minor signs, such as the frequent pulse, lid symptoms that develop before there is any protrusion of the eyeball and tremor. The arteries, veins and capillaries gradually become soft and dilated, especially those of the neck; there may also be throbbing of the abdominal aorta. The cardiac murmurs, in the absence of valvular disease, are usually heard at the base, and the cause may be the prevailing anemia, but there will probably be irregularity of heart action as the disease advances. In severe cases, or in the final stage, there may even be delirium cordis. I have seen one patient whose pulse was so rapid that it could not be counted; but complete recovery took place. Naturally blood-pressure is apt to be high in these cases. According to Bigler (*Beitrag zur Klin. Chir.*, LXXXIX, No. 1), there was deranged cardiac action in seventy out of the hundred cases he recorded.

The thyroid may be uniformly enlarged, or only in one lobe; usually both are enlarged, but in varying degrees. In a small number of cases, which have been estimated at about 8 per cent., the gland is not involved at all. On this point there is a pretty general agreement. As a rule, enlargement of the thyroid follows the palpitation, but the swelling may come and go.

Often the disease does not pass the third stage, in which it will be marked by exacerbations of excessive followed by diminished secretory action. If recovery is to take place during this period, the exacerbations will decrease in intensity and frequency, all thyroid symptoms disappearing. But death may occur in either the third or the fourth stage from intensification of the morbid features. Certainly if the third stage is prolonged there will be increased arterial tension, attended with cardiac and nephritic complications.

When the disease has been prolonged for years, there will always be the danger of myxedema (Rogers, *loc. cit.*).

Latterly we have been much taken up with the curative methods introduced by Mœbius. He began by feeding his patients on the milk of goats whose thyroids had been removed. His theory was that these animals might develop in their systems an antibody that would neutralize the toxins in these patients. Some success followed this treatment.

Following out this idea, a Mœbius antithyroidin was manufactured, and Abrahams (*Medical Record*, June 2, 1914) has reported a complete cure by its use. The liquid was given by the mouth, and to the extent of ten to thirty drops, three times a day. Schultes (*Muench. Med. Woch.*, No. 20, 1902) had previously reported a cure from the use of a serum derived from the blood of a thyroidectomized sheep. Both of these sera were undoubtedly antitoxins. Merck's antithyroidin is also a serum; it is prepared from the blood of the sheep, obtained not less than six weeks after the ablation of the thyroid. Elsner and Wiseman have found it a valuable remedy, relieving in a large degree the pulse frequency, nervous distress, and tremor. Where it was finally successful, an improvement was seen in from three to seven days. The exophthalmos, however, never yielded entirely in their cases, nor did the gland return to its normal size. But in no instance was any unfavorable result noted from the use of the serum. Patients found it pleasant to take, and felt the loss of it when it was discontinued. The dose was fifteen to thirty minims, given by the mouth, morning and evening.

During the past year Beebe (*Post-Graduate*, February, 1914) has stated that of three thousand cases treated by the cytotoxic serum injections, sometimes known as the Rogers-Beebe method, 50 per cent. had been made well to the extent that they were able to do anything they wished to in the way of work, business, or pleasure, and had no sign of the disease except slight enlargement of the gland or some exophthalmos. Of the remainder, 30 per cent. were better than they had been previously, while the other 20 per cent. included those who had died, those who had finally been operated upon, and those who had not improved as much as the 30 per cent. The total mortality was 3 per cent. and the duration of treatment from two to eighteen months. Failure occurred in some cases. Sometimes the patients could not give the requisite

time for the treatment. Some did not respond to the serum. This was not from its quality, but because there was something antagonistic in the patient's blood.

According to Beebe, "It is best, as a rule, to begin with a small dose, not more than  $\frac{1}{3}$  c.c. (5 minims), and observe its reaction before increasing the dose." "The best site for the injection is a point midway between the elbow and shoulder on the outer aspect of the arm. The injection should be made into the subcutaneous areolar tissue. Immediately after the injection is made apply hot compresses at the site, and continue them for one hour. Following this treatment apply a wet dressing of 50 per cent. alcohol. There may be no local reaction whatever; in the majority of cases there is a localized area of tumefaction, the skin is slightly reddened, hot and sensitive. This reaction develops in from three to seven hours to its full height and then subsides to a normal condition within a few hours. If the local reaction is negative or very mild, a second injection may be made the following day in the other arm, giving a dose of from 7 to 8 minims. The site of injection should be treated as before. The local conditions being favorable, the third injection may be made on the third day of the treatment in the first arm injected, giving a dose of from 10 to 12 minims. With a favorable local reaction the following doses should be of a full tube of the serum every second day, using alternate arms for the site of injection. In the very unusual cases the first reaction is severe and does not subside promptly. In such a case one should wait until the primary reaction has entirely subsided and then begin with a smaller dose, from 2 to 3 minims of the serum. It is not wise to repeat the injection until the previous reaction is nearly, if not entirely, subsided. If this precaution is not observed, the reactions become progressively more severe, and not only is there a very troublesome reaction at the point of injection, but the previous reaction areas light up again and both arms become much swollen and intensely inflamed."

"In some instances the smaller doses of serum are well taken and no disturbing reaction occurs until four or five injections of a full tube have been given. Then each injection causes an increasing reaction, and if continued at the same interval as before, a condition of great discomfort to the patient follows. The arm may show a brawny, painful inflammation extending from the shoulder to the wrist. It may have much of the appearance of erysipelas, and

often the physician who first sees the reaction fears a severe infection. Wet dressings of ice water, the lotion of lead and opium, or 50 per cent. alcohol afford the most relief. The same rule is to be followed in such cases. Allow the local reaction to entirely subside and then begin by small doses. *It should be recognized, however, that in the majority of cases no disturbing reaction occurs; there is some local infiltration and a little heat which subside within a few hours.*"

The fatality is not high in cases treated medically. Jackson and Mead, in eighty-five cases had only three deaths, a fatality of about 3.5 per cent. (*Homeo. Eye, Ear and Throat Journal*, 14, 1908). Their favorite remedy was the neutral hydrobromate of quinin. Forchheimer has reported that in a series of seventy-six cases none died (*Therapeutics of Internal Diseases*, Vol. III).

Surgical treatment may be successful. Heydenreich (*Semaine Med.*, 269, 1895) reported some years ago on sixty-one cases of removal of the gland, where there were fifty cures, four deaths, and five failures. Tetanus developed twice. It has been claimed, however, that in most of Heydenreich's cases there were old goiters to which the other symptoms had attached themselves later. The entire gland is almost never removed in these days.

Later, Jonnesco, of Bucharest, claimed (*International Clinics*, Vol. I, 1903) that bilateral sympathectomy of the cervical sympathetic would relieve the symptoms in most cases. In a demonstration made by him at his clinic in Bucharest he showed three patients who had been operated on during the previous five years, and claimed that the relief was lasting. In all of them the size of the goiter had noticeably diminished, as also the pulse frequency, the exophthalmos, and the tremor. In his operation he extirpated the lowest ganglion of the cervical sympathetic. According to his own figures, however, the results were far from satisfactory. Though the symptoms had diminished in violence, they had not disappeared. Most surgeons of the present day prefer partial thyroidectomy to sympathectomy.

In viewing the surgical aspects of Graves' disease, we must also take into consideration both the thymus gland and the parathyroid bodies. Some years ago Kocher (*Jour. of the Amer. Med. Assoc.*, October 12, 1907) stated that in most forms of Graves' disease there is an abnormally high proportion of the mononuclear leucocytes, comprising from 50 to 60 per cent. of the white cells, with a 2 to 5

percentage of eosinophiles. Even after partial thyroidectomy the abnormal percentage of these corpuscular elements of the blood remain, according to his statement, unaltered. But where the thymus was removed, after ligation of the thyroid arteries, the abnormal elements of the blood disappeared, and with them the subjective symptoms. This statement has been disputed, as we have seen. It is important to remember that in 95 per cent. of the severe cases of Graves' disease there has been found a persistent thymus.

And in this connection it may be well to briefly consider what this gland is. Anatomically, the thymus is usually made up of two lobes, loosely attached by connective tissue. There is a central portion known as the medullary, and an external called the cortical. When gradual involution follows the period of lymphoid activity, the secreting substance is slowly and somewhat irregularly converted into fat tissue. But there is always some normal substance remaining, and if a portion of it is removed by an operation the remainder rejuvenates anatomically and functionally. Experimentally, however, total excision produces diseases of the bones, and also of the nervous system, caused, according to Klose, by an acid poisoning of the system; for, as the thyroid has to do with the formation of iodine in some form or other, so the thymus has to do with the production of phosphorus, while the intoxication it produces is acid—an acidosis. While these experiments have been confirmed by Pappenheimer, he has not found that excision produces the fatal symptoms alluded to by Klose. The status lymphaticus is also said to be closely allied to thymus hyperplasia, which may be cortical or medullary. When thymus hyperplasia is associated with Graves' disease, thymectomy has been so successful that it may be regarded as indicated in favorable cases. Von Haberer (*Wien. Klin. Woch.*, July 25, 1914) reported last year on twenty-one cases where resection of the thymus was followed by subsidence of the symptoms of Graves' disease, with durable improvement. But the X-ray will also reduce the lymphocytosis or cause it to disappear. Whether it will also arrest the cardiac irregularity, due, it is believed, to perversion of the thymus secretion, is not so well established. In any case, the X-ray must be used with intelligence. The requisite dosage we do not know as yet; and the gland may be so fatty that no good will result from this treatment.

Surgical tetanus has been one of the banes of all operations on the thyroid. It has followed ligation of only two thyroid arteries (Halsted, W. S., *American Journal of the Medical Sciences*, October 12, 1907). In ligating four at one sitting the danger is so great that the procedure is contraindicated. Tetanus may also be produced by the removal of a single parathyroid body, though apparently it is more often caused by an interference with its circulation.

Removal of parathyroid bodies causes hyperexcitability of the nerves, and is associated with convulsions, high temperature, rapid respiration, etc., together with a diminution in the soluble calcium components of the blood. This condition is relieved by the administration of a calcium compound, such as the lactate, and it is efficacious in controlling the tetany for a time, usually some days, but it produces no permanent cure. Parathyroid extract introduced intravenously is more effective than when given otherwise, but the transplantation of parathyroid tissue (MacCallum, *Post-Graduate*, February, 1914) offers the best prospect for a permanent cure. The value of the latter method has been established experimentally by Halsted. However, the tetanic complication is no longer the bugbear it once was, because its incidence is now only about half of one per cent. in thyroid surgery, while in tetanus antitoxin we have a remedy of established value.

Kocher now advocates either (1) a primary thymectomy, (2) a thymectomy secondary to a hemi-thyroidectomy, or (3) a thymectomy and hemi-thyroidectomy combined. The last, he believes, gives the maximum of benefit. Where there is a persistent thymus in Graves' disease and in severe cases of thyroid intoxication there will not be complete relief without partial thymectomy. Kocher\* (*loc. cit.*) operates by preference at successive sittings, but combines medical methods with the surgical. He never ties more than two arteries at one session, and never removed more than half the gland at one time. More than this, he holds (1) that where the heart action is bad an operation should be postponed; (2) that there should be no extensive operation if there is severe thyroid intoxication, as evidenced by sleeplessness, extreme nervousness, diarrhea, or vomiting; but (3) that an operation should be performed if there is relative increase in the lymphocytosis. He claims a cure in 73 per cent. Bainbridge (*Am. Med.*, April, 1914) claims

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\* Albert.

that in systemic goiter, a name he has given to it, surgery is more effectual in relieving the psychic symptoms than internal measures.

The fatality in Curtis' collection of 136 cases was seventeen, or about 12 per cent. (*Annals of Surgery*, March, 1906).

In Theodore Kocher's cases it was 22 per cent.

In Albert Kocher's 254 cases it was nine, or about 3.5 per cent.

In Halsted's 90 cases it was two, or 2.2 per cent.

In the Mayo's (C. H.) first series of sixteen cases it was four, or 25 per cent.

In W. J. Mayo's 176 cases it was nine, or 5 per cent. (*Jour. of the Amer. Med. Assoc.*, October 2, 1907).

In W. J. Mayo's last 75 cases it was one, or  $1\frac{1}{3}$  per cent.

In Albert Kocher's last 63 cases there were no deaths.

While the earlier results of operation were bad, it will be noted that in the hands of experts the mortality is small. However, this is true also under medical treatment. Therefore a fair comparison between the results of medical or hygienic measures versus surgical interference is not easy. The earlier surgical methods caused a much larger proportion of deaths than the medical, while we shall probably never know how complete the cures were. Nor was the medical or hygienic treatment nearly as effectual as now. So far as fatality is concerned, the experienced surgeon now operates with great success, as may be seen by comparing the percentage of none in Albert Kocher's last 63 cases with the 22 per cent. of his father; the little over one per cent. of W. J. Mayo in his last 75 cases with the five per cent. of his total of 176, and an even greater mortality in the first series; and the 2.2 per cent. of Halsted in 95 cases with the 12 per cent. of the 136 cases collected by B. F. Curtis. When we take up the medical side of the question we find a fatality of 3.5 per cent. in Jackson and Meade's 85 cases; of no deaths in Forchheimer's 76 cases. But the surgeon sees the worst cases; the milder ones come into his hands less frequently. The physician, on the other hand, sees all classes of cases, and is able to institute remedial measures at the outset.

Forchheimer, in his *Therapeutics*, Vol. III, p. 905, says: "When medical and surgical statistics are compared, it will be immediately seen that the mortality is ever smaller in the former than in the latter." This is doubtless true when large groups of medical statistics are set against equally large groups of surgical statistics. Sur-



gical results differ widely, however, but where men like the Mayos, Halsted, and Albert Kocher operate there is a very low death rate. The physician, therefore, who recommends the operation must have these facts in view. It may be that relapses are not so common under surgical as under medical treatment, but, on the other hand, the average mortality has been large, while the resulting scars are deterring factors.

The late Musser (*American Journal of the Medical Sciences*, Vol. 143, 1912) claimed that endemic (exophthalmic) goiter should not be treated surgically until proper general treatment had been employed. Medical treatment might, he said, be continued from six to twenty months. If these means failed, surgery should be invoked. But to secure good results the operation should be followed by prolonged medical after treatment.

C. H. Mayo (*Jour. of the Amer. Med. Assoc.*, July 5, 1913), after an experience with 5,000 cases of thyroid disease of various kinds, says: "In severe cases of hyperthyroidism, in acute attacks and relapses or exacerbations, the condition should be considered medical until improvement has taken place." Dr. Mayo is a surgeon of vast experience, so that this statement, coming from him, accentuates the value of medical treatment. And yet, as we have seen, his brother and associate, Dr. W. J. Mayo, is one of the most successful operators on record at the present day. C. H. Mayo puts the causes of death as hyperthyroidism, embolism, pneumonia, hemorrhage and sepsis.

Rogers (*loc. cit.*) claims that while rest and good hygiene are essential for the cure of any thyroid disease, the antithyroid serum is often the most efficacious of conservative methods in the early stages of hyperthyroidism and sometimes in those of the exophthalmic group. In dosage of  $\frac{1}{2}$  to 1 c.c. (8 to 16 minims) it is harmless, but if its exhibition intensifies the symptoms it should be discontinued. When conservative methods fail after a month's trial, the ligation of one or more thyroid vessels should be practiced, or, in selected cases, the excision of half the gland. Local anesthesia is preferable to general narcosis. Ligation of one or more of the chief thyroid vessels will cure a large proportion of all types of hyperthyroidism. It is safer, but much slower in its effects than hemithyroidectomy. For exophthalmic goiter, or the most advanced and serious form of hyperthyroidism, ligation of all four thyroid vessels seems to offer better hopes of cure than the more radical

operation. Hemithyroidectomy seems to be indicated especially in the third or hyperthyroid stage of the disease rather than in the fourth or that of exophthalmic goiter, and in patients over twenty-five years of age who possess symmetrical goiters of considerable and not small size. Only about 25 per cent. of all cases of hyperthyroidism are improved by hemithyroidectomy, while some 10 per cent. of them are not benefited at all or are made worse.

Prophylaxis is a matter that has not as yet received the attention due it, and it is really very important. Abrahams (*Medical Record*, June 20, 1914) has brought this matter to our attention. In women, at least, he traces the disease to the turbulent days of beginning puberty. The thyroid, which at the menstrual epoch swells, to return subsequently to its normal size, is apt to increase in size at each successive period, and may become permanently enlarged. And it is then that the heart action becomes more rapid, and tremor begins, and with it the other signs of the disease, such as polyuria and night sweats, without any apparent organic heart lesion. Now, prophylaxis calls for absolute rest of mind and body at such times. As a matter of fact, in any case of beginning Graves' disease, which physicians usually have an opportunity to recognize earlier than either surgeon or ophthalmologists, we should bear in mind that as a first step in checking the disease an ideal measure is absolute rest and complete isolation from all disturbing features in the environment. This should be a preliminary to any medical or surgical treatment.

Cures may be partial or complete. Few physicians, surgeons, or oculists are willing to claim that their successful cases are all entirely cured; most admit that some symptoms of the disease may remain. In fact, nothing short of a scientific commission could decide which of the three has had the largest measure of success; and even then it is by no means certain that the report of such a commission would be satisfactory to the profession at large. However, the majority of physicians, general surgeons and oculists are in agreement that hygienic or medical measures are appropriate in any case, even when it is found necessary to use the knife or any mechanical method of treatment.

I will summarize as follows:

1. The diagnosis should be made at an early stage of the disease, before it has become well pronounced. Appropriate hygienic or medical treatment should then be promptly instituted.

2. If this is done, there is reason to believe that the disease may be arrested and that all outward evidence of it may ultimately disappear. Such cases are on record. What the percentage is we do not know, but it is probably large.

3. Even in the advanced stages, hygienic and medical measures are required independent of an operation; i. e., both before and after it. Even in these cases, the results, according to Forchheimer and Beebe, may be good. The treatment may have to be protracted, however.

4. Some cases will require surgical treatment, and the results in selected cases may also be very good, judging from the statistics of such experienced operators as the Mayos, Halsted, and Albert Kocher. When the mortality does not exceed 1 or 2 per cent. it may be regarded as a fairly safe operation.

5. In the hands of less experienced and skillful surgeons, one must anticipate a larger mortality.

6. The operation of choice is partial thyroidectomy, together with partial thymectomy, all parathyroid bodies being carefully avoided.

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## THE IMPORTANCE OF THE DIAGNOSIS OF EARLY SYPHILIS.\*

By WM. H. HARRIS, M. D., New Orleans, La.

I have been prompted to bring forward the points herein considered only because of sufficient experience during the past few years to warrant emphasizing the importance of the absolute diagnosis of syphilis when the stage of primary sore is presented to the general practitioner.

It is evident that the failure of the physician to ascertain absolutely the character of penile sores presented to him is an evidence of gross injustice to the patient. In the light of the simple laboratory methods available for this purpose there is no reason why faulty diagnosis should occur or the true nature of the disease be clouded in obscurity. The consequences of an incorrect diagnosis in determining that the lesion is syphilitic, or that it is not, are too serious to be considered lightly. In the instance of where syphilis

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is assumed, and in reality the lesion is not due to the *Treponema pallida*, the patient is subjected to the unnecessary treatment of probably years' duration, the outlay of much money and much mental anxiety, and perhaps social and domestic distress. On the other hand, where the patient is assured that the sore is, indeed, not syphilitic, when a slight scraping would reveal numerous organisms specific of lues, the injustice committed is probably none the less.

The clinical diagnosis, as a rule, is based entirely upon the pathology in the gross of the lesion presented. It is true that a chancre presents in microscopical sections a characteristic picture as represented by the proliferation of epithelioid cells and the presence of lymphoid cells, gathered especially in areas about the vessels. The frequently superimposed acute inflammation, however, with the simulation of a proliferative nodule, by closely confined cellular and fluid exudate, allows the clinician but small basis for security in his diagnosis. Again, the necrosis and secondary ulceration of the syphilitic nodule, occasioning a jagged undermined ulcer, may obscure the clinical picture and lead to a diagnosis of chancre. Other lesions, such as trauma or herpes, with infection, may give rise to pathological pictures not capable of being positively differentiated from chancre. The clinical history cannot be considered safe enough to rely upon; a patient may attribute a lesion to a recent coitus two or three days previous, when the infection may have occurred on some prior occasion.

It is clear, therefore, that the great liability to confusion in diagnosis should necessitate a microscopic examination to ascertain the true nature of such conditions. The omissions of such examinations for the purpose of saving expenditures for the patient is indeed faulty direction and false economy.

When the sore is of recent acquisition, and extending up to about four weeks' duration, scrapings and examinations for the specific organism are in order. This procedure is simple, but must be carefully performed, as I know of many instances where inaccurate examinations, consisting of scrapings of the surface, have failed to find the spirochetes, whereas cocainization and deep incision into the lesion proper showed many present. The method of smear and stain is one of personal preference, such as dark field, Grohneyb, Giemsa, India ink, etc., and we shall not dwell upon these various methods. The *Treponema calligyrum* described by Noguchi prom-

ised some liability to confusion, but fortunately, from the practical standpoint, seems to occasion little worry.

Two practices of the physician in the treatment of this type of case are to be condemned. One, the drastic cauterization of the lesion before microscopic examinations have been made; the other, the flooding of the circulation with salvarsans. The first procedure destroys or greatly hampers the examination for spirochetes; the other causes blood examination, made after three or four weeks, for the Wassermann reaction, to be unreliable where negative results are obtained. This thoughtless obscuring of the diagnosis not infrequently reacts upon the physician when the patient insists upon knowing absolutely whether or not he has syphilis. He has learned that there are methods for its absolute diagnosis, and he realizes that these have not been applied in his instance. This is particularly brought forward where the patient contemplates matrimony and has learned to realize the consequences that may follow such a union if he is a victim of the disease. I have had many such patients, whose anxiety is something overwhelming, almost bordering on mania, and no laboratory diagnostic method could be of avail for several months because of the peremptory action of their physician.

Hartwell has shown definitely that the blood of patients in the chancre stage of two to five weeks' standing contained the *Treponema pallida*. One can obtain definite nodule formation in the rabbit's testicle, with numerous spirochetes present, by the inoculation of blood from the veins of such patients. If, therefore, a positive diagnosis is obtained in this stage, the circulation can be frequently flooded with salvarsans, destroying innumerable organisms. By pushing this and other forms of treatment the disease can be checked in its incipiency, while still a spirochetemia, and probably interfere with their implantation into the various tissues. Thus the course of the disease is cut short and the likelihood of late tertiary development reduced almost to *nil*.

In conclusion, then, it is evidently the duty of the physician to procure an absolute diagnosis of all penile lesions presented to him in practice, and to avoid confusion of such a diagnosis by too precipitate local and systemic treatment.

#### DISCUSSION.

DR. E. D. FENNER: I recall a case which was rather unique—a man, forty years old, with a typical hard, unmistakable chancre.

He was given no treatment at first, and a few weeks later developed general symptoms, such as typical eruption, mucous patches, etc. The unusual feature was that, after diagnosis was made, the patient stated that he had had a chancre, followed by an eruption, fifteen years ago. At that time he was thoroughly treated for three years, the treatment including a visit to Hot Springs, and had been free of symptoms for about ten years. Apparently, this man had two distinct attacks.

DR. E. S. HATCH: This is a very timely paper. I often see patients with bone and joint syphilis (tertiary manifestations), who have no history of infection; to the best of their belief they have never had syphilis. These patients, as a rule, have had a suspicious lesion years before, which was pronounced not specific by their physician, and that without laboratory tests. These same patients are often treated as having tubercular lesions for the above reasons, when they are really suffering from syphilitic bone or joint disease, and, as it is easy to make the diagnosis with help of the X-ray and laboratory tests, these methods should always be used.

DR. H. W. E. WALTHER: At the Charity Hospital Out-Patient Department we see many patients who have not syphilis and who have never had it, but who have been told by physicians that they are syphilitic, and have been treated long and expensively. Dr. Harris is right in stating that we must first make an absolutely positive diagnosis of syphilis before subjecting our patients to a long and useless course of three or more years of treatment.

DR. T. J. DIMITRY: I recently had a case of chancre of the conjunctiva, and also a case of chancre of the lid; both were primary lesions. Similar cases have been reported by others. I also saw a case of chancre of the penis and multiple chancre of the lids. This later case was so diagnosed by a syphilologist. These cases showed the necessity of careful investigation of suspicious sores, with microscopic examination of the scrapings.

DR. C. C. BASS: The paper of Dr. Harris is very timely and important, especially so in view of our present knowledge and the ease and certainty of the laboratory diagnosis of primary syphilis. I think that when a patient presents himself with a suspected sore it is the duty of the physician either to make the proper examination for *Treponema pallida* himself, or, if he is not prepared, to have it done by some one else who is prepared to make the examination.

DR. JOHN F. OECHSNER: I would like to ask if the laboratory examination for chancre or for spirochetæ is not rather difficult? Also, if one negative examination is sufficient?

DR. W. H. HARRIS (in closing): The point I wish to lay stress upon is this: If a patient has had a sore which is not properly diagnosed at the time it is presented, the uncertainty ensuing therefrom may occasion great distress and other unjust consequences. If the early diagnosis is not properly made and the patient peremptorily treated, it is extremely difficult to answer this question: Have I syphilis? In answer to Dr. Oechsner, I will say that one negative examination is not conclusive if the clinical evidence is suspicious. In some cases the spirochetes are scarce and hard to find. Often the pathologist who is used to scraping chancres will get to the seat of the lesions and obtain the spirochete in cases where the clinician has failed to secure the proper specimen. The spirochete is not difficult of recognition when present.

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## EXPERIENCES WITH THE SWIFT-ELLIS TREATMENT.

By S. CHAILLE JAMISON, M. D.,

Demonstrator and Instructor in the Laboratories of Clinical and Tropical Medicine, Demonstrator and Instructor in the Laboratory of Pharmacology, Assistant in Clinical Medicine in the College of Medicine, Tulane University; Visiting Physician to the Charity Hospital, New Orleans, La.

My experience with the Swift-Ellis Treatment is limited to the intradural administration of neosalvarsanized serum twenty-five times to seven patients. Although this is entirely too small a number from which to draw definite conclusions, certain points may be of interest.

The following procedure for preparing and administering the serum has been observed: Within one-half hour after injecting 0.9 grams of neosalvarsan (dissolved in freshly distilled water) into the veins, from 25 to 50 c.c. of blood were withdrawn, allowed to coagulate, and the supernatant serum collected. Usually this serum was not inactivated, and it was injected always within twenty-four hours from the time of its withdrawal. No difference in therapeutic value was evident between active and inactive serum, and it would appear, in my experience and from theoretical considerations, that the claimed increased spirocheticidal action of inactivated serum is open to some question.

I wish to state that I have never seen any alarming symptoms from the intradural injection of neosalvarsanized serum; this is probably due to the fact that my experience has been too limited, but I do not believe that the injections of weak medicated homologous serums into the spinal meninges are any more dangerous than injecting sterile water or salt solutions, or, for that matter, mere spinal puncture. It is quite certain, in my opinion, that any interference with the spinal meninges is fraught with danger, especially when any quantities of the cerebro-spinal fluid are withdrawn, or of other fluids injected. This inevitable danger is greatly increased when larger amounts of fluid are injected than are withdrawn.

My cases comprise three tabetics, one each of paresis, disseminated sclerosis, hemiplegia, following syphilitic endarteritis, and syphilitic meningo-myelitis.

Of these cases only one can possibly be spoken of as cured. This was the case of a negro, twenty years of age, whose history would indicate that he had syphilis for about one year and a half, and had been paralyzed for about six months, when he came under my treatment. This case was diagnosed syphilitic meningo-myelitis of the Erb type; his blood serum gave a positive Wassermann, the cerebro-spinal fluid a negative Wassermann, but showed a moderate increase in the cell count and a marked increase in the globulin content. He had received little or no antisiphilitic treatment. He was given three Swift-Ellis treatments at ten day intervals, 12 c.c. of the active serum being given each time. In this case the recovery was rapid and striking, and before the second injection he was able to walk the length of the ward unaided, while before the injection he was confined to bed, due to the spastic paralysis of the lower extremities. Only searching neurological examination can discover abnormalities at the present time. The result in this case is open to criticism on the ground that such cases make practical cures under the older methods of treatment.

In my cases of tabes the symptomatic relief was quite gratifying to anyone who has struggled with the treatment of such cases by the older methods. Rombergism was markedly relieved, and in one of the cases in which this phenomenon was most marked, it was entirely relieved. One of the cases had constant incontinence, which was promptly relieved after the first injection of the neosalvarsanized serum, and had not returned when seen three months later.



Girdle pains were relieved; the relief beginning three or four days after the injection. These pains are always increased just after the treatments, in my experience. The Argyll-Robinson pupil phenomenon disappeared in one case. *In none of these cases have I ever seen the slightest return of the patella tendon reflex.* Two of these cases, one while under treatment, the other three weeks after his fourth treatment, developed severe pulmonary diseases; one dying, and the other still is confined to bed therefrom. There is no reason, so far as I can see, for connecting this in any way with the Swift-Ellis treatment.

One case of paresis was treated. This case was typical, from a clinical standpoint, and the diagnosis was made by a competent neurologist and by several practitioners; his serum, however, was persistently negative to the Wassermann reaction, as was also his spinal fluid, and the latter showed no increase in the cell count or the globulin content. He made absolutely no improvement under treatment; four injections were given, varying in quantity from 15 c.c. to 25 c.c. of pure neosalvarsanized serum. Three weeks after the last injection he had an apoplectic stroke and died in a few hours.

It will be noted that a case of disseminated sclerosis is mentioned among my cases. This is not generally considered to be due to syphilis, and I am, and always was, convinced that my case was not syphilitic. His serum has always been negative to the Wassermann reaction, as well as his spinal fluid, which showed no increase in the globulin content or the cell count. There was, however, a vague history of syphilis, and at the insistent request of the patient, his family, and the family physician, he was given four treatments. This patient's condition has not altered in the least, in my opinion, either for better or worse, although he and his family consider him improved.

The case of syphilitic endarteritis was in fairly good condition when called to my attention. His condition, I am reliably informed, followed a complete hemiplegia one year previous. In this case the blood-pressure ranged from 180 mm. to 240 mm., while the urine contained many hyalin, granular, and epithelial casts, and the excretion of the phthalein, at the end of two hours and ten minutes, was around 30 per cent. on numerous examinations, extending over many months. The prominent defects of the nervous system were permanently contracted pupil, increased patella reflexes, typical

hemiplegic gait of moderate degree, and difficulty in speech. Treatment consisted of eight intravenous injections of neosalvarsan and four intradural injections of neosalvarsanized serum. The first four injections of the neosalvarsan consisted of minute doses of the drug, because of the severe disease of the kidneys. The intradural injections of the serum were given following full doses of neosalvarsan, at ten day intervals and varied in quantity from 12 c.c. to 25 c.c. No alarming symptoms developed during or after treatment. Seven months after the first treatment, this patient's pupils are equal and react to light and distance in the normal manner. The speech is markedly improved. Walking is considerably improved. The reflexes are unchanged. The patient states that he feels much better. The spinal fluid cell count has dropped from 50 cells per c. mm. before treatment to normal; the spinal fluid and serum Wassermann reaction have been negative throughout. The condition of the kidneys and the blood-pressure are unchanged. This case is of interest, not only from the standpoint of the Swift-Ellis treatment, but also because the patient underwent treatment in an excellent manner, despite bad kidneys and blood-pressure.

At the present time it is my belief that (1) improvement is likely to follow the Swift-Ellis treatment, if the patient's spinal fluid shows pathological changes; (2) this treatment is hopeless unless the fluid does show such changes; (3) the danger of this treatment is not great, and has been exaggerated in certain reports.

My thanks are due to Dr. John Smyth and Dr. J. B. Guthrie, with one or the other of whom I saw the majority of these cases.

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## OBSERVATIONS ON HEADACHES.

By L. SEXTON, B. S., M. D.,

School of Medicine, Tulane University of Louisiana, New Orleans.

The common causes of headaches are toxemia, uremia, ocular, uterine, neurasthenic, syphilitic, migrain, diabetic, congestive. Some are reflex, organic; others functional; syphilis, malaria, acute and infectious diseases and chemical poisons, uremia and toxemia of pregnancy and in rheumatic and gouty conditions are notable. Meningeal conditions, tubercular or syphilis, cause constant headaches. Evening temperature with physical signs would incline one

to consider tuberculosis as the cause of the headaches. Intra-cranial tumor headaches cause vertigo, vomiting and later, paralysis or softening of the brain. Headaches caused from ear diseases are associated with running, earache or tenderness upon pressure of the mastoid cells. Frontal sinus infection following catarrh produces continuous pains, also tenderness upon pressure over the sinus. Supra-orbital headache is due to irritation of the trigeminal, or fifth pair of nerves. The nerves seem to be pressed upon at the exit through the orbital foramen. Chronic interstitial nephritis with only a trace of albumin, specific gravity of urine low, frequent passage of large quantities of urine at night, is often accompanied by headache. There is high blood-pressure, showing that the vascular as well as the nervous system plays a part in chronic headaches. Lithemic or bilious headaches come from hepatic derangements, or choked flues so to speak, and are relieved by brisk purgation and change and cut in the amount of food ingested. Headaches, due to fever, are best relieved by sponging and by giving some of the coal tar group of remedies, which relieve headaches and reduce fever at the same time. Mental exhaustion, bad air, ill ventilated rooms, crowded picture shows, all predispose to headaches, which should be relieved by avoidance of such places and conditions. Carbohydrates and nitrogenous diet should be almost excluded in sufferers from all chronic headache.

Differential diagnosis, emetics and purgatives relieve the toxemic variety of headaches. There is albumin with the uremic variety. Alcoholic headache follows debauch. Reflex or uterine headaches follow female trouble and history of case. Malarial headache is intermittent. Plasmodia malarie should be determined by examination of the blood. Blood should be examined by Wassermann reaction, and history should be studied in syphilitic cases.

Headaches of arterial or nephritic origin usually occur in high livers and low thinkers, in patients past the age of fifty, who keep their stomachs full and seminal vesicles empty; in cabaret and saloon frequenters, who may clean the sewers at their houses, but neglect the twenty-nine feet within their own persons, men who acquire a camel's thirt, but have a natural aversion to water. They occur mostly in the morning after a half, or all night carousal. "A man is as old as his arteries," these being prematurely hardened by sedentary habits, overeating or drinking and underworking; day laborers rarely have headaches. Such headaches are relieved by brisk

purgation and diuretic alkaline mineral waters, reclining one to two hours midday to take off the heart load and a reversal of all previous habits of overeating and drinking.

Neurasthenic headaches are often due to insomnia and the anemia accompanying the run down, unbalanced condition of the patient, and the strain upon the central nervous system. Post-operative neurasthenia, due to nervous changes incident to the removal of certain glands, or organs, whose secretions are necessary for proper equilibrium of the nervous system, usually have low blood-pressure, as neurasthenia is mostly confined to younger subjects, whose arteries are not hardened.

Periodic headaches and the migrains are usually due to syphilis, malaria, menstrual epochs, congestic, rheumatic and gouty diathesis and climatic changes; these occur among students and young adults, from the ages of ten to thirty-five.

Astigmatism, myopia, hypermetropia, eye strain of students and school children and persons doing work requiring constant eye strain in a bad light is a frequent cause of headaches.

Intestinal stasis or autotoxemia is a common cause of headaches. Nausea, vomiting, purging or constipation, sallow skin, puffed under the eye, coated tongue, gastroptosis and enteroptosis, unusual prominent abdomen are the most common symptoms of this type of headache.

**Treatment and Prevention.** As headache is a symptom and not a disease, we should first ascertain and remove the cause of the trouble. As for example, in the headache of toxemia of pregnancy, we should open up all the avenues of elimination, thus reducing the blood-pressure and the toxemia caused by the conditions. Diet should be restricted to easily digestible liquid foods, such as butter milk or skimmed milk, vegetable soups, sea foods, cereals, green vegetables, stewed and ripe fruits and drinking freely of alkaline mineral waters. Subjects of such headaches should avoid red meats, fried foods, all condiments and alcoholic beverages. Free purgation with compound jalap powder, or other mild laxatives, followed by five-grain doses of phenacetin or acetanilid, or twenty-grain doses of sodium bromid, repeated an hour of two apart, as required. The patient should retire to a dark, well ventilated room, where absolute rest and quiet can be secured.

The cephalalgia of syphilis can only be permanently cured by prolonged use of constitutional treatment with mercury, iodids, or

salvarsan (in the early stages of the disease), coupled with proper living and hygienic surroundings. Five grains of acetanilid with half a grain of caffein and one grain of monobromate of camphor act splendidly in relieving the head and leg pains of syphilis. Five grains of aspirin and bromid of sodium may be used as a change from the first named prescription.

The blood should be examined for plasmodium malarix in remitting types of cephalalgia. If plasmodia are found, five grains each of quinin, salol and phenacetin, three or four times daily, after a calomel and soda purge, should relieve the patient.

In gouty and rheumatic types, free elimination by alkaline purgatives and diuretics are essential to a cure. Iodids with wine of colchicum in the gouty and any of the salicylates may be freely given for the rheumatic types. The drinking of hot water, and bathing in hot water, or steam baths or with hot packs, are as efficacious at home as at hot springs and should be stressed in all cases with rheumatic tendencies. For the immediate relief of pain anyone of the coal tar group, in five-grain doses, with caffein or strychnia, if the heart is weak, has been most useful.

Headaches from acute indigestion should be relieved by alkaline emetics and purgatives, rather than by hypodermics of morphia, so much in vogue. Mentholated alkaline drinks, lime water, or soda are grateful after the stomach has been emptied of its soured contents.

Ocular headaches are best relieved by the proper fitting of suitable glasses, which relieves the eye strain. The prevention of all headaches is accomplished by removing the cause of the trouble; for example, children or students with eye strain headaches should not only have proper glasses fitted, but they should do their studying in the day time, if possible, and if any night work is required, they should have the best light suspended over the left shoulder, with the eyes protected by a green shade.

Constipation headaches should be relieved by a vegetable diet, fruits, hot water upon arising, abdominal massage or any of the simple laxatives, which should be changed before the bowels require larger doses.

Headaches from any of the neuroses should be relieved by the proper treatment of that particular nervous condition. Nervous cases are often benefited by active exercise in the open, changes of

associates and environments. Living among strangers rather than with too sympathetic relatives, eating substantial home cooked food and earning the price of the food by some agreeable occupation will relieve many of the headaches of the idle, luxurious class, who exercise so little that they do not eliminate the poisons generated within themselves. People taking plenty of exercise are very rarely troubled with headaches.

Congestive headaches at menstrual periods are prevented by free purgation, hot hip baths, hot water bags, confinement to dark and well ventilated rooms, the first day of the period, with hot drinks and applications until the flow is freely established.

Diabetic headaches are prevented by taking plenty of alkaline mineral waters and the avoidance of all sweet and sugar forming diets.

In the treatment of headaches the same remedies should not be used in successive attacks; the patient should not know what drugs are being given as drug habits are frequently formed by the use of many of the patent medicines and headache mixtures. Headache is the cause of more unreasonable self-drugging through proprietary and patent medicines than any other condition. We have seen the headache of heart disease and edema of the lungs cyanosed from acetanilide (the prominent ingredient of nearly all headache remedies, on account of the cheapness of the drug). The story of the damage and deaths from such treatment is partially told in the numerous sudden deaths reported as heart disease and apoplexy. The government should force all preparations to carry in plain print, "acetanilid, a heart depressant and poison," in a prominent place and in large letter on every package and bottle offered for sale to the public.

Hyperacidity of the stomach is a frequent cause of headache. In such cases all food producing acidity (usually sweets and starches) should be excluded, and lime water, soda or some alkali, should be freely administered, to neutralize the acidity. This often relieves the headache without the use of other drugs. Many neurotic women suffering from constipation, lack of nourishment and worry have what might be called nerve or brain storm headaches. This type often drifts into drug addiction, for which they blame the doctor; hypodermic of morphin should be used only as a last resort in all such cases.

## Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

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### MINUTES.

At the regular monthly meeting of the Touro Infirmary Clinic Society, held January 6, 1915, Drs. Stone, Newman, Maes, Shlenker, Kohlmann and Gessner presented cases.

### PROCEEDINGS.

DR. SHLENKER remarked: I wish to make a preliminary report of a

#### **New Method of Sterilizing the Vagina for Operation.**

So far as I know, not having thoroughly investigated the literature, the same procedure has never been suggested. I first thoroughly cleanse the external genitals with absolute alcohol, after which I apply one-half strength tincture of iodine; then the same routine is followed within the vagina. Cultures are made both before and after this process; the first culture invariably shows the presence of bacteria, while the second one (which is taken after the excess of iodine is cleansed from the vaginal cavity) is uniformly negative. When I have used this method on a sufficiently large number of cases I hope to report my results in detail.

Case I. **Adeno-carcinoma of the ovary.** Mrs. C., age 61.

Family history negative. Previous health always good, with the exception of now and then chills and fever. She presents an emaciated appearance.

Menstruation began at fourteen, of the twenty-eight-day type, and, as a rule, was always regular. Menopause began at forty-five and followed the usual course.

She has been married forty years and had eight children, the youngest being now twenty-one. All her confinements were normal in character.

Present illness was first observed a year ago last July. She felt a lump in her left side, as she described it, and which produced symptoms of hard pressure and pain in that region. Aside from this, she had no other disturbance.

Her weight has varied but little. Her bowels are regular, and she has no urinary disturbance.

As you will observe, the patient is very much emaciated and looks much older than she really is. On abdominal palpation you will note this large mass, which is somewhat lenticular in shape and extends from the crest of the ilium to the lower border of the ribs, and is very hard in consistency.

In December, 1915, I performed an exploratory laparotomy at

the Touro Infirmary. Ether anesthesia. Median incision. On opening the abdomen the contents presented one mass of adhesions, the omentum being adherent over the mass and uterus. There was free fluid within the cavity. The most striking condition of affairs which presented itself were the innumerable papillomatous growths that studded the entire parietal peritoneum, looking not unlike an acute milliary tuberculosis of the peritoneum. I removed the omentum covering the mass, which proved to be an ovary, and removed a section from the same for a rush microscopical diagnosis. Dr. Lanford reported the case as one of adeno-carcinoma.

Owing to the extensive involvement of the entire abdominal contents, the abdomen was closed without any further procedure.

The recuperation was uneventful, and she says that since her operation she feels better, her appetite is good and she has no pains whatever.

**Case II. Tubercular salpingitis. Specimens of both tubes.**

This specimen I present to you because I think this is a condition that is entirely too frequently overlooked. The diagnosis of tuberculosis of the fallopian tubes is comparatively rare. This condition is almost invariably a secondary infection, most frequently from the peritoneum, or from a tubercular intestinal ulcer, and not infrequently hematogenous in origin. Statistics vary a bit. Kronig reports that this disease occurred in about 16 per cent. of his cases, while Clark, in this country, finds it in only 5 per cent. of his cases. As you are aware, we have the condition occurring in three different types:

I. Catarrhal, in which the diagnosis is only made microscopically.

II. Fibroid (Salpingitis. Isthmicá. Nodosa). Multiple nodules.

III. Purulent type, in which the outer end of the tube becomes closed by adhesions and results in a pus sack (caseous material).

As regards the diagnosis, this is extremely difficult to make prior to an abdominal section. Tuberculin has been suggested, and is of some value as a diagnostic agent.

The specimen which I present here is of the second type, and shows very beautifully the multiple nodules, which are very hard on palpation, almost stone-like.

This patient, Mrs. N., age 27, family history negative.



Her general health always good. She is thin, but has always enjoyed excellent health. Menses began at eighteen, and of the twenty-eight-day type, three days' duration, and was always regular until the past three months.

She is married five years and has had two children; the youngest is two years old. Her last menses, this month, was rather profuse and lasted five days.

She applied to us at the Touro Infirmary on account of pains in the pelvis and profuse bleeding for the past two months. A laparotomy was performed (Pfannensteil incision).

Both tubes, as you will observe in the specimen presented, contain multiple nodules, and the tubes show many convolutions. They are hard to the touch. Bilateral salpingectomy was performed and the patient's recuperation was without any special interest.

As regards the termination of this condition, there may result a general tubercular peritonitis, or a tubercular pyosalpinx, or a general tubercular infection. Spontaneous cure is rarely heard of. The treatment should invariably be surgical.

#### **Specimen of Cast of Uterine Endometrium.**

R. S., age 28, widow. Was married seven years; two children, the youngest four years.

About one year ago she said she had a profuse flow of blood, while up in the mountains, with no great amount of pain.

About eight months ago she was curetted for an endometritis, and since then has been fairly well up to the past month, when she complained of irregular menses—flowing for a day or so at a time and passing large fleshy-like pieces. I was called about midnight; the patient was suffering with excruciating pains in her abdomen, and her temperature was 105°.

On vaginal examination I found the pelvic organs extremely sensitive, and on the left side a fluctuating mass, the size of a fetal head. On removing the examining finger I found this cast—which you will observe is that of the uterine cavity. I at once grew suspicious of a possibility of an extra-uterine pregnancy, but, as I thought that the woman's character was above suspicion, concluded that it was an ovarian cyst with a twisted pedicle, and advised an immediate operation. This she refused. I kept her under observation for two days, when she concluded that she would submit to an operation.

I performed a curettage, removing a large amount of material which suggested the possibility of an extra-uterine gestation. Following this, I performed a laparotomy (Pfannensteil incision), and on opening the abdomen found the omentum adherent to the bowels and adnexa on the left side. Releasing the adhesions, a large tube, the size of a lemon, presented itself. Salpingectomy was done for the pyosalpinx. The uterus, which was retroverted, was suspended by the Barrett-Gilliam method, and the appendix,

which showed evidence of a chronic inflammatory nature, was removed.

The microscopical report shows decidual tissue and evidence of a pregnancy. My final conclusion was that the young woman was pregnant and had had an abortion performed, and which no doubt resulted in an infection of her adnexa.

Her recovery was uneventful.

DR. GESSNER presented a young woman of 32, whose calcaneum he had removed four years before for a chronic osteomyelitis. In this the X-ray showed the reproduction of a moderate quantity of new bone by the periosteum. The case was presented to show what excellent function followed the

#### **Excision of the Calcaneum,**

in spite of the fact that only a thin layer of new bone was reproduced. The patient wears only a steel flat-foot arch and walks normally. No one who did not know that she had lost her calcaneum would be likely to suspect this.

The second case presented was that of an elderly man in whom an

#### **Extensive Excision of the Lip for Carcinoma**

had been done eighteen months previous. In this case, the epithelioma had been removed by a rectangular incision and the edges of the wound had been brought together by Grant's method of making two horizontal incisions, so as to liberate a rectangular flap on each side. In this case, the cosmetic result was such that it was difficult to see what operation the patient had been subjected to. At the same time, both submaxillary fossæ had been cleared out; these also presented a good appearance, and fortunately there has been, up to this time, no recurrence of the original disease.

DR. KOHLMANN:

#### **Demonstration of Pathological Specimens.**

##### **I. Ovarian Cyst,**

Containing three gallons of mucous fluid. This case was interesting from the fact that the cyst was aspirated three months ago; we very rarely meet this procedure any more.

My reason for demonstrating this specimen to you is to show what extensive adhesions can be formed after aspiration, which makes the operation after such a procedure very difficult.

## II. Specimen of Missed Abortion.

Patient menstruated last time seven months ago. Complains of headache. Examination of urine shows 12 per cent. albumin and casts. Vaginal examination reveals uterus the size of a three months' pregnancy. Vagina does not show any discoloration. Cervix small and pale.

Diagnosis was missed abortion.

Operation: Vaginal hysterectomy and removal of specimen, which is before you. There was a very small quantity of amniotic fluid present, no doubt due to absorption.

## Miscellany.

### BY THE WAY.

**An Old Rule—Derivation of Present Characteristics—Language, Marriage, Science, Politics, Medicine—The Poet Spenser as a Contrast to the Era of Paracelsus.**

At this time the physician enjoys a sense of relaxation. The hard winter has elapsed, leaving us a vista of many ills encountered and an avenue down which, as we gaze, in retrospect, the stones of December, January and February stand along the side, tomb-like with a certain solemnity of deeds gone by. But the sun ascends. And, as three centuries ago, Thomalin and Willie loitered in the vale,

“It was upon a holiday,  
When shepheardes groomes han leave to playe,  
I cast to goe a shooting.  
Long wandring up and downe the land,  
With bowe and bolts in either hand,  
For birds in bushes tooting,”

and so I looked for what I could find. From the magic and the mystery of the era of a Paracelsus, and the interpretation of his mirror, now cracked and dusted with vanishing réclame, we may wonder ahead into the memory of the time of Ireland, in 1600, steeped with the sense of allegory and poetry. And it was yesterday that I found an ancient rule, by which I attempted some measurings. Only a mind of the time of the mingling of Spanish and Irish, of the drama of Cervantes and of *Le Cid*, could inter-

pret, as races run, the evolution of characteristics which, nevertheless, physicians cannot fail to perceive in the variations about us.

As I said, the rule is ancient. It is, of course, not applicable to the ameteoric bar guarded in Paris. And it is grooved and worn, as any well-used article would be. But I went out into the world with it to look with other eyes, and *other* wise, upon our mental pólity. Neither S. Brinton, nor the Smithsonians, nor Professor Huxley with his races of red, white, and black (Teutonic color scheme!), satisfy us entirely. The mentalities of race, with a kaleidoscopic humanistic, dazzle the investigator. The essential of *our* modernity is a belief in the miraculous advancement of knowledge regarding natural relations to the being of man. Possession by demons, witchcraft, spiritism, and alchemy are (only a hundred years older but) unthinkably removed. Yet the constitution of an intellect of to-day will present a score of derivatives which relate it to stages passed over in Persian, Oriental or Grecian development, childish as their science grades itself to the judgment of our 12th A. school boy.

It is notable that in Japan the manufacture of arrowheads developed *pari passu* but unconscious of the North American Indians' efforts to shape and model flint. With the same inattention to obstacle and the employment of as rigorous a technic, both peoples progressed towards their object. And in an able review in a recent issue of the American Historical Magazine, the rise of Feudalism in Japan has been traced to needs of land tenure which parallel the conditions of France in and after the changes under Clovis. It would not suffice to call our feudalism Japanese, nor the arrow-facture of Japan, Indian. These evidence the stress of race working out, in parallel lines, certain common problems.

What Avignon and Poitiers experienced, Yeddo also came to know. But, *quae sum ita sint*, why not run the rule along some other institutions? There are a many customs which I do perceive, good John (I cannot get rid of Pütter), that are well received by us, and yet have a strangely wrought face. I am fain to call them heathen, pagan, classic—what you will—but least of all the sort of stuff your modern dreams are made of!

Common sense and reasonableness are our perfect works. It is taken for granted that we shall commit no folly. No legislative, solemn, and public folly, I mean. The out-landishness, the "Zanzibaric" act of cutting off a rabbit's foot in the dim vapor of a

rising moon, while the wind sighs in the cypresses along the river, we would not accept. Tying a necklace of twisted horse-hair, or of amber around a child's neck to prevent tracheal inflammation we question. A man may rob, or murder. But he is scarcely modern if he is openly fallacious, and the saving grace of a Billy Sunday lies in the feeling that at least there is a methodist in his madness!

Now the physician comes very close to all this in his daily affairs, for it is to him that so many interests look for an explanation of the difficulties of their pursuits. And in the racial atavism of many characters, unchallenged by to-day's perception, our allegoric rule finds answer. When Spenser wrote of Willie and Thomalin, the allegory of his calendar was matched by the grim and "gory" misalliance of Irishman and Spaniard. To-day the commercialism of the hour seizes hope, love and art for its advance, and it needs not a manufacturer to tear Robin's Thinker from his destiny to call attention to our acid and peptic glands with their fundamental exigencies! I left the train with its insistent placards, "blafard" and querulous of the rudeness of a dominating passion, and found myself in the sun and light of a boulevard of April.

Gently, as I might, with the Spenserian rule, I essayed to measure the attributes of one strolling upon the way.

Your penchant, let me say it, as you smoke, is North American—Indian and aboriginal. You (probably) feel as he did. Your effort is to feel as he did.

Your language, by the same rule, is pure Chinese in its idiom. The student becomes aghast on hearing that Chinese is spoken one way, and written with a radically different set of words. English is so facilely constructed as to make us ridiculous (pompous and unbearable) if we should attempt to exchange spoken greetings in the form of a letter. The Chinese mind has been born among us with Secretary Hay's open door, and the price of a soul has certainly been successfully negotiated to achieve this transmigration. For what assistant would meet his chief with, "It is a radiant dawn, and the gloom of last night's miasm is passed, so your operation, saved from the possibility of any enzymotic infection, will, according to the laws of rigid asepsis" (by the mercy of Apollo were it 400 B.C.) "be successfully prosecuted." Nor would his chief respond, "And we should felicitate ourselves, my brother in surgery, upon the egregious blunder we will escape in operating at

once, rather than in deferring our incision; for pus even now aggregates at the distal extremity of our patient's nearly gangrenous appendix." To such sentiments we may say *amen*, but the expression is literary to a fault. Chinese, then, in its "plastique." But twice again, with the rule applied, we discover our orientalizing.

If the Chinese places together a series of word-symbols to form entirely new meanings, how much more do we find our words collocated in that Eastern fashion; for example, the word *allotment* separates into "a lot meant" which has nothing to do with the former. And as for the "tones" of Chinese dialects, our language is possessed of such examples, too. Take the phrase: *morning dress*, and *mourning dress*. Upon the latter a drawing out or deeper, longer tone emphasizes a distinction which no word marks. We may say: *a word to men*, or *the words two men*. Here the second *two* receives a lengthening, which no one can lose. *We needed men* and *we need dead men*, also, show the same method of accentuating English radicals in a phrase. Were each sound to have a simple form of scripture, then upon these the "tones" would superimpose as in Chinese. It is in "tones," indeed that all recognition of English exists, so frequent are its homoi- and homophonies.

Marriage, to accept the evidence of our clinics, since it ceased as a sacrament, has become a thing of contract—often contracting of an infection. No one can assert that our present civilization is anything but monogamous in name. Montegazza has cleverly written of the Singalese, the Bornese, or any sufficiently foreign tribe, to allow plain language, when he described the modern physiology of love. Honor, shame, passion, jealousy, these are the four stings of the vibrating instrument upon whose cadences our present players strike weird harmonies.

Were one to chart the various forms of *La vie à deux* historically, it would be interesting to place ourselves. We are not Semitic (not Hebraic or, at least, Abrahamic). We are not Persian. They took over wholesale the harem on inheriting the kingdom. We are not Arabian, as we do not raise up children for our brothers (although the State does have a good many "orphans" to care for). We are not Turkish. We are not finding the modes of Circassia, or Kurdistan quite consentient, nor does actual pursuit and capture appeal, on account of the possibility of side-chain theories of wreck-

age. We may follow, as Willie and Thomalin, "peeping close into the thicke,

"With that sprong forth a naked swayne  
With spotted winges, like Peacocks trayne,  
And laughing lope to a tree;  
His gylden quiver at his backe,  
And silver bowe,"

so in 1500. But in 1600 we find a quicker note, as Herrick sings,

"Her eyes the glow-worm lend thee,  
The shooting stars attend thee;  
And the elves also,  
Whose little eyes glow  
Like the sparks of fire, befriend thee!"

Yet by 1700,

"I see her in the dewy flowers—  
I see her sweet and fair,  
I hear her in the tunefu' birds—  
I hear her charm the air."

Then the heavy woe descends, and our vision becomes gloomy and gloomier, so that 1800 finds us called to listen to lines addressed to a young lady (who had been alarmed by a bullet fired by the author while discharging his pistols in a garden).

In a double parenthesis let us observe the course followed by customary comment as the passion of love has unwound its evolving form.

"Doubtless, sweet girl! the hissing lead,  
Wafting destruction o'er thy charms,  
And hurtling o'er thy lovely head,  
Has filled that breast with fond alarms."

Misgivings enter. The lover is less sure. There are other factors than those born of mere impulse to be reckoned with, and other claims to become "justiciable." Fear is not to speak unchallenged. Civilization demands the voice of the party of the second part. And with these accents the earth feels stronger beneath our feet. It matters not that a few decades bring on,

"Requiescat.

"Strew on her roses, roses,  
And never a spray of yew!  
In quiet she reposes;  
Ah, would that I did, too!"

and the later,

“And so all the night-tide  
I lie down by the side  
Of my darling, my darling  
My life and my bride  
In her sepuchre there by the sea,  
In her tomb by the sounding sea.”

Again, aside, we must notice that these expressions lack verisimilitude to the modern ear, and era. The “doubtless, sweet girl,” had a familiar ring. But only exceptional times produce the preceding tones. Yet, all eras persist chiefly in their poetry, which longest of all retains the vital characteristic. To-day, we read (and with rapid recognition accept as a true poem of the times),

**“LOVE-CRAZED MAN KILLS TWO WOMEN.**

**Then Shoots Himself, But May live.—Was Infatuated  
With Stenographer.—Had Wife and Son.”**

This is evidently blank verse. Still every man, including every physician, will observe the symptoms. Modernity out-moderning itself. Within a day, also.

**“YOUTH SHOOTS GIRL-COMPANION IN SUBWAY.**

**Friends Are At a Loss to Know Why He Did It. Bullet  
Entered Brain, Struck the Roof of the Palate  
and Dropped Down in her Throat.”**

The future student, collecting our records from newspapers (as he will) will, of course, run across such accounts. The passionate daring of our populace will rival the chronicles of Moor and Castilian. “Two on a Tower” and “Il Trionfo della Morte” must effect their purpose on his mind.

While all this is apparent, to the physicians nothing of the sort is true. As a matter of fact, we are as stolid as North American Indians. We are as emotionless as an English lord. As a matter of fact, more than this.

There is only one parallel. Our pattern in passion, or marriage, is best discovered in the Japanese. We have our demi-monde and our institution of the Yoshiwara. There are steps of ascent and descent. Caste is not fixed, and rank depends upon final marriage. Honor is, like a design of Ruskin, highly conventionalized (not conventionalized!).

If thus we trace a slow approximation to ancient civilization in



our language and our marriage customs—to the Orient of China and Japan, long established while our ancestors kicked about in Saxon coats of bear-skin, or tippetts of minks, there are other evolutionary sign-posts. Education is slowly striving to attain the stamp of China at its deadliest, in memory tests and memory stunts. I need not elaborate at this point. Think about it. As though China were the common stock of the world's connective tissue, ready at notice to form and reform elements, and the reservoir of less differentiated functions, to its primitive constitution of matriarchy our own destinies are tending. What China was in some 5500 B.C., in the time of Hindu, U-dapa, the fisherman practitioner of the healing art, in China's earliest history, we find the mother, as in Teuton hegemony, the familial center and social authority. Turning the ancient wheel, we perceive that, Karma-like, progression is not only in circles, for these, as a spiral, in revolving, advance. So we are returned to the polity of the sunrise of the Orient, as its shores are approached by our adventurers. But China, in its "mütterlicher Muth" became more receptive than adversative, and the Tatar and the Syth, the Mongol and the Manchu made her over in their own image so often that we are only now awaking to know that the earth has been under Tatar domination longer and more effectually than under any empire of Indo-European source. In fact, the world is Tatar. Pekin and Stamboul are the capitals of the world in real influence. Their ideals, their linguistics, their conventions are highest and most complicated. The brilliancy of inflection of the Turkish is unrivalled, even by the Greek verb, showing person, accusative and nominative, in participle and infinitive.

The unbiased student will learn that history, as Edmunds (and others) insist, is not Mesopotamian.

It is characteristic, nevertheless, to see minor vices carried with a race as it develops wider gifts. In our own case, special virtues have been attained. But we must compare the entire scale of qualities before striking a balance in the ledger.

The Turkish people, like nomads, have carried along some primitive faults. They have no alphabet. They have no religion. Each they have adopted, on conquering any territory, with other real and personal estate. It is characteristic of pastoral races that they name the units of time after the beasts of their usage: the hour of the dog, the month or the hour of the ox. Agricultural peoples, as the

Carthaginians, according to Mommsen, pre-eminently were, tend to reckon more by the plants or flora of the season. Spring and fall are very emphatic. The refinement of life verges to pity of the beast, and the highly elaborated tree is less piteous. When the stage of hill-town, as the Ionian *astu* connotes, developed an urban ideal, the Latin and the Assyrian, the Babylonian and the Londoner, alike, turns to a secondary substance. Still the old matter is raked up and thrashed over. But in a transcendent significance. The allegory is diverted. And the theme is relevant to a modernism of anthropocentric analysis.

The wooden walls, the Teutonic "gesellschaft" looked out on a world in which in transition a man was as cunning as a fox, as wise as an owl, as faithful as a dog, as keen as a ferret. To the Tatar notion of time-succession in a Noah's Ark, we find the pre-Adamic, or (really) Lamarckian, conception of qualities of mind in us atavistically compared.

Then we advanced again. The harmony appeared in the Grecian thought of a soul in the liver, in the bowels, or in the heart. The human body, to a trained and sensitive intellect was instinct with the plenitude of spirit.

Symbolism, the allegory sees, finds in the knees is humility; in the face, affront. "How could he have the face to do it!" some one asks. In the back is neglect. In the breast is confession and secret. In the elbow is competition. We elbow out of the way. The breath is boastful. To have nothing but mind. The finger is a guide. The lip is impudence. The toe is a kick. To take to one's legs is cowardice. The heart is kindness. The nose signifies intrusion. The chin is talkative. The hip is annoyance. The skull is never to be too thick, or intelligence (which must come in *via* the veins of Brescheti) can never accelerate. This represents our ideal conversion to to-day.

Allegory it is. There is no other comprehension. Instead of a Yellow Peril, or a Tatar upheaval, we are now upon one of its tidal waves, although not one the highest, or longest, perhaps. The civilization of Europe never attained any stability, or uniformity, except to the isolated students in its own territory. For a brief period, from 700 to 1200, it seemed likely to accomplish it, but it passed with the Crusades, as visionary.

When we approach science, as it is to-day, U-dapa is less distant

(were his name U-dub-a) than might be expected. In all reverence to science; and it is truly too recent and too young, as well as too sensible, to be revered, as yet; we find less violent advances to compare with others in our allegory, than could be supposed. The trephining of the ancient Peruvians and our decompression may have more in common in rationale than appears on the surface.

There is something mightily elusive about the basis of "matter."

"O chuse, O chuse, lady Marg'ret," he said,  
 O whether will ye gang or bide?"  
 "I'll gang, I'll gang, Lord William," she said,  
 "For you have left me, no other guide."—

What is a student to do? The era of angelic powers is over. The gods and the god-like are not within our universe, except to decorate teacups. There is something strange and woeful in the degradation of a saint to the designation of a railroad station. And yet who among the officials, let alone the travelers, looks upon St. Asaph's as anything but an approach to London, glad to pass it! St. Albans is just so much nearer New York. And St. Denis used to protect Paris. Of course, there will never again be a cult of Diana at Ephesus. Never again? Well, the world seems to exercise a fondness for the rotation of crops. As Chaucer and Prince Lionel left the wool-house on the way to Flanders, the world seemed very ancient and they were elegant, cultured, and of the time blasé.

"A young squyér  
 A lovyer, and a lusty bachelor  
 With lokkés crulle, as they were leyd in pressé,"  
 "A shipman was ther, woning fer by westé  
 For aught I woot, he was of Dertemouthé,"  
 "A good man was ther of religioun  
 And was a povré persoun of a toun";

Edward III was some king, and his realm contained these and many more types of great civilization. But their "matter" and ours differed considerably.

Perhaps only in great antiquity can any parallel of human self-sufficiency be found. When man withdraws into the territory of mechanical control, he at once enters a domain in which he attains supremacy. Here there is no room for any *demiurge*—there would ensue only intolerable confusion. We have put aside the fairy tale. We want "facts." Hear the old gentleman pound on the directors' table as he demands full returns of pounds of metal and units of

steam! There is no preliminary libation to the "gods." Even an old Roman did not disdain a cup of Falernian to Jupiter (or at least to Neptune). But we have ordained an empire of magnetos, and Jupiter lost his thunderbolt when Franklin organized the American Academy of Sciences. Hard luck, old fellow! but as Napoleon's astronomer informed him, we cannot introduce any such factors to our *mécanique céleste*.

I may pause. Our social body seems again to attain the situation of the normal who seized the city of Constantine.

A physician, riding home from his fight in some fatal case, muses on the object of the universe. He watches the shadows of the trees under the revolving stars. The drugs grew out of the silence of the forest, and, in the body of his patient, they return once more to the insensible mould. Are we upon the wrong side of the curtain? What drama passes in the fastness of the heart of the world. The instinct of Pierre de Coulevain fashioned a title of *Au Cœur de la Vie*, although her view was more *Au Corium de la Vie*. Maeterlinck in his *Temple Enseveli* made a better "stab," but his culture has grown out in the thinnest sort of colony. And now, I suppose, he is like all the Belgians, a man without a country.

April gives up variations. And who can analyze her many moods, or those of the era? We shall continue for a while to electrify, scarify, and vibrate our patients. Mechanics (or makin' nix), what wonders are in your efforts.

If anyone wishes, let him compare the wine, oil, and honey, of the Syrian financial system to our sugar, oil, and liquor interests, and he will perceive the stability of undercurrents. Syrian is our stomach and our commerce at its base, and so the rule of allegory shows us in language to be Chinese; in family, of Japan; in commerce, syrian; in psychology nearly, if not quite, nomadic; in religion, ultra modern, ever so much so; in science, occasionalist; in politics—oh, yes, that we forgot to say. Why, intensely Japanese. How? Do not our great interests govern under a careful guise of legislators? No Mikado ever hid so well behind a Shogun as our commercial princes in the toga of some electorate.

It may sound strangely to hear the usual form reversed, and instead of the sententious Milman saying that our habits have been filched by the roving nomad, in reality, it is they who have contributed to the salient types of our own socializing. Our complacency allowed us to take the model of Gibbon, and the inferences

of Sallust, because, as we said earlier, civilization for us centered in the Mediterranean. No binocular could be focused as far as the Ural, and the Dacian and the Thracian to us spelt eastern!

We would not disparage Edward III. As for his squire,

“Wel coude he sitte on hors, and fairé rydé.  
He coude songés make, and wel endyté,  
Iuste and eek daunce,”

yet of the splendor of Bagdad and of its science and medicine, and the solidity of China even Charles I heard, and endeavored to enlist aid from Persia during the difficulties of his realm.

As medical men we shall need to enlarge our general horizon. To-day, as the Panama Canal draws us to the Pacific we must remember that in sailing westward through its passage, the direction is easterly, and in tracing our evolution, a similarly reversed channel is closer to the truth.

Question of heredity, race, nationality and eugenics can be assailed only in a correct appreciation of true relations, wider than Europe, broader than the fortieth parallel, and deeper than the quaternary epoch.

“But wander too and fro in wayes unknowne,  
Furthest from end then, when they neerest weene,  
That makes them doubt their wits be not their owne:  
So many pathes, so many turnings seene,  
That which of them to take in diverse doubt they been.”

It does us good to reconnoiter. Next month a view of a nearer problem, one of therapeutics, on which my table now has gathered these hours a many books, newer than Paracelsus, later than. . . .  
But of these, anon. [R.]

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## Communications.

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### THE ENFORCEMENT OF THE MEDICAL PRACTICE ACT.

[COPY.]

NEW ORLEANS, March 10, 1915.

E. L. LECKERT, M. D.,\*

*Secretary State Board of Medical Examiners, New Orleans, La.*

DEAR DOCTOR—Inasmuch as local physicians throughout the State seem inclined to criticise the Board for not more effectively

\* Published at the request of Dr. Leckert, Secretary State Board of Medical Examiners.—[EDS.]

prosecuting violators of the Medical Law, and inasmuch as most of the District Attorneys decline to file informations, except upon affidavits, it would be well, whenever any complaint is sent in by a physician, to inform that physician that it will be necessary for him, or for some other person in the locality, to make the necessary affidavit upon which the District Attorney can act, and that, unless the physician is willing to do one, or is able to have the other done, it is useless to ask the assistance of the Board in the premises.

While, of course, it is within the power of the respective District Attorneys to proceed by information *ex proprio motu*, and in some of the parishes of this State the District Attorneys are willing to file informations at the request of officers of the State submitting to them the names of witnesses and the evidentiary documents, yet the District Attorneys are under no compulsion to accept this request in lieu of an affidavit.

The Board of Medical Examiners finds itself frequently between two classes of persons who do not show any particular anxiety to assist the Board in its work of checking violators of the Medical Act. One class is that of such District Attorneys who insist upon having the affidavit made as a condition precedent; the other class is the persons who know of the violations, and yet, from reasons of delicacy or policy, do not desire to have their names used in connection with the prosecution, and who, therefore, are unwilling to make the affidavit required by the District Attorneys above mentioned.

Between the two, the Board is practically powerless.

In those parishes where the District Attorneys act upon the request of the Board, and in such parishes as the physicians are willing to make the affidavit where the District Attorney will not act upon his own motion, we have been able to obtain gratifying results; but in parishes where the District Attorneys will not act without the affidavit and there is no one in interest who is willing to make the affidavit, the hands of the Board are paralyzed. Of course, it is preposterous to expect the members of the Board to be peregrinating affidavit-makers, traveling through the whole State for the purpose of doing the thing which should be done by the local parties in interest.

I feel sure that if the President of the Parish Board of Health will call upon the District Attorney and offer to have made for him affidavits upon which he could base informations, the District At-

torney will act, and if they show their readiness to obtain for him the necessary evidence, in all probability the cases will be set for trial and tried; but, unless the local physicians will assist the Board in some such manner, there is very little expectation that the community will be protected, when it does not particularly desire protection, from illegal practitioners.

I do not recognize the sense of delicacy as being sufficient to shoulder upon some one else the performance of a duty, particularly where that performance of duty is to redound to the practical benefit of the one who feels too great a delicacy to give the necessary assistance.

I need not assure you that I will do all in my power, but that power is limited. Yours very truly,

(Signed) ERNEST T. FLORANCE.

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### WARNING TO DOCTORS.

A fraudulent concern which has been operating in New Orleans, with headquarters at the Maison Blanche Building, under the title of "The American Medical Index Company," or "Association," has already victimized many members of the profession through its agents in various parts of the country, especially the South and West. The fictitious company masqueraded in New Orleans as a medical reference or bibliographic bureau, which, for the small subscription of \$5.00 or \$10.00 per annum, would supply all subscribers, upon request, not only with abstracts, but entire reprints, of original articles, etc., of the medical literature of the world, in a very short time after publication. The pretensions of the company were preposterous and impossible, on their face, but by quoting the names of well-known and respectable members of the profession as their endorsers and sponsors, and by other sundry misrepresentations, they succeeded in giving their scheme a *bona fide* appearance and in obtaining many subscriptions. The chief crook in the company, who styles himself Dr. A. C. Beck, absconded from New Orleans sometime in February, after defrauding several medical men, leaving his office-rent and furniture unpaid. Since his departure, letters have been received from Mobile, Ala.; Nashville, Tenn.; Cincinnati, Columbus, Youngstown, Ohio; Louisville, Ky., and other places, showing that the operations of Beck and his gang have been rapid and widespread.

The last letter received from Youngstown, Ohio, shows that Beck was last seen in that town on March 3, where he succeeded in cashing a fictitious draft on New Orleans, on the strength of a bogus letter of credit purporting to have been signed by me, as one of the chief stockholders of the so-called American Medical Index Association. As a matter of fact, I have never seen Beck and know nothing of him except through his nefarious transactions.

A letter from Dr. W. S. Thorning, editor of the *South Texas Medical Record*, of Houston, Texas, published in the *Southern Medical Journal* of March, 1915, warns the readers of the *Journal* against the wiles of a certain "Jules Hanaford," who represented himself as the agent of the so-called "American Institute of Medical Research," of Indianapolis, Indiana. This party was either Beck himself, or a bird of the same feather. It is evident that, in soliciting subscriptions, the same tactics have been adopted by the gang in various localities under different names. Not satisfied with defrauding these medical subscribers, they have robbed several innocent canvassers, chiefly young women, whom they engaged to solicit for them in different cities, far away from their homes. In some instances this Beck left these unfortunate victims stranded and penniless to shift for themselves, after absconding with their subscriptions, commissions, and even their personal funds, which Beck obtained by confidence methods, etc.

My interest in this matter has been roused chiefly through the numerous letters that I have received and from the unfortunate persons victimized by Beck and his gang, who have utilized my name to further their confidence game. I am, therefore, especially anxious that the editors of medical journals who may read this communication give timely warning to their readers of the dangers in the so-called "American Medical Index Association" and other concerns of the same ilk, which pretend to be domiciled in New Orleans, claiming my endorsement, approval, or association in any way, as this is not only a fraudulent concern, but a criminal organization, fit only for the consideration of the police.

(Original signed) R. MATAS,  
2255 St. Charles Avenue,  
New Orleans, La.



# N. O. Medical and Surgical Journal

## Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

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### THE MORTALITY IN THE UNITED STATES.

In advance notes on the 1913 annual report on mortality, the Census Bureau offers some interesting information.

The death rate in the registration area was 14.1 per 1,000 and the total number of deaths was 890,848. This record is based on statistics from twenty-four States, the District of Columbia, and forty-one cities in non-registration States. The population in the registration area was 63,298,718.

The lowest State death rate was for Washington (8.5 per 1,000); the highest was New Hampshire's (17.).

In tabulating the death rates for the cities, a difference is made in those cities with 10 per cent. or more of colored populations, where the white and colored statistics are separately shown. This

projects a proper basis for estimating white mortality in Southern cities, while at the same time it shows the influence of the negro mortality, and even morbidity, upon the death rate. In these cities the average white mortality was 15.3 per 1,000, and the colored, 26.8. The highest rate for colored was 37.2 in Charleston, South Carolina, and the lowest was 8.5 in Coatesville, Pennsylvania.

The average age at death for both sexes from all causes was 39.8; for males, 39.2; for females, 40.6. Nearly 18 per cent. of all deaths was of infants under one year and more than 25 per cent. was of children under five years of age. The next highest period for mortality was between the ages of 70 and 74. One interesting feature in the report is the declining ratio in mortality from tuberculosis, which has been steadily decreasing since 1904.

Suicides registered 15.8 per 100,000 and deaths from violence 92.5 per 100,000, the latter showing a considerable increase. Railway accidents accounted for 8,212 deaths in 1913, approximately the same as for the previous year.

The deductions to be made upon this advance report emphasize the preventability of many deaths, especially among children. The gradual improvement in public health methods, child welfare and the establishment of safety first principles in public utilities will in time show the natural reflex. Already the death rate among cities has grown lower and lower, due to the influence of better sanitary measures; further improvements, city and domestic, must bring results.

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### THE LICENSE TO PRACTISE MEDICINE.

We have been much interested in the agitation among the physicians in some States and in some cities which has fermented into activity directed at the abolition of the tax which physicians pay to practise medicine. We confess to a lack of entire concurrence in the movement and we have reasoned with the subject.

The physician does not belong to a privileged class. He really owes the State a debt. The fact that he practises medicine does not deprive him of citizenship. He has the right to vote, he is protected by the police and his property is safeguarded by a fire department. He is supplied with the light which is distributed throughout the streets of the city and he enjoys a certain convenience in travel. He is under the care of State and municipal health guardians and

in practically all States legislative provisions have been made to restrict the practise of medicine to qualified individuals. If he is needy the State cares for him in its hospitals and if he cannot collect his bills the State provides a court to do this for him.

The argument that the physician does a certain amount of practise for nothing should have no weight for he does this voluntarily and because his business methods are bad in the matter of collections he should not hold the State responsible. Most physicians charge for their services and expect to be paid for them, just as does the lawyer and the tradesman, both of whom indulge in charity, as they may please.

The average physician may or may not be a property owner. If he is he pays no more in taxes than any other property holder and if he is not, then he has not the right to enjoy the privileges of a citizen without paying for them.

In Louisiana, a certain exemption is allowed professional men because of their calling in that one-half of the tax on the income is remitted, but the basis of taxation is the same as for any other income earned in livelihood and embraced in the list of taxable incomes. Unreasonable taxation should, of course, be combatted, but that all tax on the practise of medicine should be relegated has no basis for argument. If all physicians were employed by the State, the position might be different and an argument could be deduced that the State should not tax its own servants, but otherwise the income of physicians is as open to tithe as any other.

There is an ethical as well as a logical element involved and the physician ought not to sacrifice the benefits of his calling—already allowing him relief of jury duty, special privileges as a witness and as arbiter in matters of health.

If the practise of medicine is beset with abuses which let the State as such, the city as such, and the individuals of both as members of communities as such, prey upon the physician, then the remedy should be within the hands of the physicians, but the license to practise medicine should not be free; if not free it must be paid for by a reasonable tax.

## LEPROSY BILL LAPSES IN CONGRESS.

The adjournment of Congress left the bill providing for the care of leprosy in the Committee of the Senate, notwithstanding it passed the House of Representatives. There is every reason to believe that the bill will go through at the next session of Congress.

The provisions of the bill are such as to appeal to any thinking legislator. These contemplate the purchase of a site, erection of buildings, equipment and maintenance of a leper asylum or home, under the authority of the Treasury Department, but under the direction of the Public Health Service. The sum of \$250,000 is asked to begin the work.

Patients voluntarily seeking admission are to be received as well as those sent under quarantine regulations or under consignment by proper State health authorities.

It is a matter of regret that the last Congress did not further the bill to a conclusion, for it means just so much more delay in meeting a necessitous situation. The United States has been slow to fall in line with other civilized countries in provisions for lepers and against the spread of the disease and it is now time to do something.

The establishment of a proper national leprosarium will soon settle the question of the ubiquitous cases and may open the way to more precise methods in treatment.

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## AS TO OUR ADVERTISING POLICY.

At the instigation of the Orleans Parish Medical Society, whose official organ the *JOURNAL* has the honor to be, we shall in the future not only refuse to accept for our advertisement department all preparations condemned by the Council on Pharmacy of the American Medical Association, but we shall eliminate all such as we now carry as soon as existing contracts will permit or the advertisers will consent to a cancellation.

Any article not definitely passed upon or not yet considered by the American Medical Association will be accepted by us according to our discretion after the approval of our decision in conference between the editors of the *JOURNAL* and a committee appointed for such purpose by the Orleans Parish Medical Society.

We have not consented, however, to await the good pleasure of

the Council in all matters, nor necessarily to abide by all the rules it may see fit to make.

All this is an evolution of the policy inaugurated by us more than a year ago. We had been refusing for some time all new ads of preparations condemned by the A. M. A., as well as all other matter which to us seemed objectionable. The weeding-out process also had been started, but we confess that, upon the initiative of the Orleans Parish Medical Society, this will be materially stimulated and accelerated.

In this manner it will not be long before everything objected to by the A. M. A. will have been eliminated from our advertising columns.

Our consent to the arrangement with the Parish Society, notwithstanding the rapid reduction of revenue it will entail, should be sufficient evidence of our desire to play fair and to yield to the wishes of our friends, while upholding our dignity to the extent of retaining some latitude in the management of our business and some judgment as to what is right.

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## Miscellany.

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ONE HUNDRED AND FORTY-ONE CASES OF RECURRENT VOMITING IN PRIVATE PRACTICE.—(Charles Gilmore Kerley, *Amer. Jour. Dis. Child*).—Among the most interesting points brought out in the report was that in a large percentage of cases a gouty or rheumatic ancestry was notoriously frequent. The history of recurrent colds, bronchitis, eczema, spasmodic laryngitis and asthma also occurred frequently in families with history of gouty or rheumatic ancestry. While two or more of these so-called pathologic functions were not ordinarily observed in the same child, not a few children suffered from a number of these conditions in alternation over a period of years. In other words, the processes seem to be mutually compensatory.

Every one of the conditions mentioned was intensified in the winter months.

Dr. Kerley's cases were about equally divided between boys and girls—70 boys, 71 girls.

While the greater number of patients had been difficult feeding cases on cow's milk, not a few had received a good start on the breast.

The presence of acetone in attacks was noted with very few exceptions, but there were exceptions. A child in an attack may show acetone and in the next attack the urine may be free. Acetone was not present in those cases free from gastric symptoms.

Onset of the vomiting seizures: 37 occurred in the first year, 24 during the second; 21 during the third. The youngest case was six months. In three the onset was in the eighth year.

The duration of interval between attacks varied from six weeks to six months in the majority of cases.

There was always an elevation of temperature, occasionally going to 104 or 105 degrees.

*Results:* Of cases in which there were no attacks after beginning treatment, 125 were markedly improved or apparently cured and were followed over a period of from several months to eight years. In sixteen cases there was no apparent improvement. One fatal case, not included in the above statistics, occurred in a girl seven years old, who died rather suddenly after a favorable prognosis had been given only five hours previously. Death, apparently, was due to respiratory paralysis.

*Treatment:* During the interval of attacks treatment consisted of a rather strict diet in which whole milk, cream, butter and sugar were omitted, while eggs and red meat were allowed only occasionally. Further treatment consisted of the internal use of sodium bicarbonate and sodium salicylate, independently or in combination, with intervals of rest from all medication. Regulated exercise, baths and daily evacuation of the bowels were essential.

During an attack the treatment consisted of sodium bicarbonate, five grains to eight ounces of hot water, given freely. Later, colonic flushings with sodium bicarbonate solution, two drams to eight ounces of water at eight-hour intervals. Feeding never forced. When the child was ready for food he was given barley or rice gruel with dried bread crusts or unsweetened zweiback. Calomel, when used, often increased the vomiting.

"Judging from the results obtained through the withdrawal of highly energized foods and in the use of active and passive exercise, it would seem that the chief error in most cases rests in a defective

oxidation, or in the giving of food substances of high carbon content in excess beyond the powers of normal oxidation."

D. P. WEST.

REPORT OF A CASE OF OTITIC MENINGITIS, DUE TO THE STREPTOCOCCUS CAPSULATUS.—(C. Johnstone Imperatori, *Archives of Pediatrics*, October, 1914)—The history of the case, age seven years, dates back to its ninth month of life. At this time the left ear began discharging which cleared up under syringing within four weeks. At the age of three and a half years the left ear again began to discharge. Adenoidectomy and tonsillotomy were done. The ear continued to discharge on and off until eight months later, when adenoidectomy was again performed and tonsils resected, after which he was free from aural symptoms for three years. Then for two months patient began to complain of headache, occasional vomiting and to show a slight watery discharge from the left ear.

At this time the patient came under the care of Dr. Imperatori. Double myringotomy was done, the resulting discharge showing streptococcus capulatus. Suspicious signs of meningitis were present, but no mastoid tenderness. Lumbar puncture was not done. Mastoidectomy was performed three days later, and the following day, on account of the return of meningitic symptoms, lumbar puncture was performed. Laboratory report of this fluid not given.

Symptoms of meningitis became more marked, and on the following day Hayne's operation was performed. Twenty-four hours later the patient died with signs of meningitis, pulmonary edema and coma. Autopsy refused.

The report of this case may well remind us of the importance of early diagnosis being made of otitis media in infancy and the immediate treatment by free drainage. While meningitis is rather infrequent following middle ear disease, especially during infancy, it is the most dreaded of all complications that might occur.

Dr. Imperatori, through his case report, appeals for the examination of all ear discharges and especial attention paid to capsulatus cocci. The main indication for doing the mastoid operation was that the streptococcus capsulatus was present. WEST.

SCOLIOSIS.—(*Am. Jour. Orth. Surg.*, 1914, Vol. 12, No. 1).—The new methods for the treatment of scoliosis, which have arisen in the past few years, have been investigated by a committee com-

posed of Drs. Freiberg, Silver and Osgood. This committee reports very completely as follows, after personally witnessing the work of four capable operators:

1. By Dr. J. W. Sever, of Boston: A demonstration of the method of Lovett-Sever, as being intermediate between the older procedures by corrective jackets and the newer ones involving other theories of correction.

2. By Dr. Z. B. Adams: After the theory of treatment by A. McKenzie Forbes, of Montreal, Dr. Forbes was willing to use Dr. Adams' cases for purposes of demonstration and was present.

3. Dr. S. Kleinberg: After the method of Abbott.

4. Dr. E. G. Abbott: After the method known by his name.

Six cases treated under each method was used.

The committee first examined the photographs and radiographs made before and during the progress of treatment of each case and then examining the patient. Consultation during the examination was forbidden.

1. Dr. Sever: Jackets applied in extension. No case corrected and relapse followed after removal of retentive jackets. No ill effects from treatment. A percentage of 29.7 was given by the committee.

2. Method of Forbes by Dr. Adams: Corrective jackets applied in flexion and rotation. No overcorrection obtained. No complete correction of the lateral bend; there was a very marked effect upon the rotation. Patients in good condition. Stenoscopic photographs, made under uniform condition, very satisfactory. X-ray negatives not entirely complete. A percentage of 41 was given.

3. Method of Abbot by Dr. Kleinberg: Corrective jackets applied in flexion and rotation. Method exactly as that used by Dr. Abbott. Over correction in none of the cases. After removal of retentive jackets, relapse had taken place in some instances. The corrective effect was confined principally to the lateral curvature, the rotation being very much less affected. In certain cases the chest space had been narrowed. Cases not in best condition, pressure sores. Photographic evidence not quite complete. Thirty-one per cent. given.

4. Dr. Abbot: Very little change in his original technic. Radiographic showed over correction during the corrective stage and subsequent correction. Both lateral curvature and rotation effected.



Patients all in good condition, chest expansion good. Records well kept, but photographic evidences not complete. Sixty-one per cent. was given.

#### SUMMARY.

1. Over correction is possible by Abbott's method in moderately severe and occasionally in severe cases.

2. If sufficient over correction is not secured or is not maintained long enough, partial or complete relapse usually occurs when released from the corrected position.

3. The period of over correction is longer than before thought. No period determined upon.

4. Abbott's method has given better results in his own hands.

5. Forbes' method is best for rotation cases. The effect in the lateral bend has not been determined, nor has it been shown that corrected rotation can be maintained.

6. The method of Sever and Lovett show no gain over older methods.

7. A larger period of study is desired by the committee.

J. T. O'FERRALL.

PANCREATIC CYSTS.—(John Speese, *Annals of Surgery*, December, 1914).—Four varieties of pancreatic cysts adenocystoma: (1) Proliferation cysts, (2) Degeneration cysts, (3) Pseudo-cysts, and (4) Retention cysts. Proliferation cysts are rare—twenty-one cases collected by Kleinshmidt in 1907. Most writers consider traumatic pseudo-cysts the most common type.

*Pathology:* The epithelial proliferation in the adenocystoma results in the formation of papillary projections into the cyst. Pressure sometimes causes atrophy of papillary projections, thus rendering differentiation from other cysts impossible. Adenocystoma occurs most frequently in the tail of the pancreas. The tumor has a broad base, rarely pedunculated, covered by a fibrous capsule. Chronic inflammatory conditions of the pancreas occur sometimes. It is rarely general, and is limited to the parenchyma about the tumor, usually in the tail of the pancreas. The function of the remaining portion of the pancreas is undisturbed.

Chronic pancreatitis, associated with retention cysts, is diffuse, involves much pancreatic tissue, interferes with function, and leads to disturbances of secretion and metabolism.

## Differential Diagnosis.

*Adenocystoma.*

More frequently affects females.  
 Slow to develop.  
 No traumatism.  
 Produces no symptoms of wasting or weakness.  
 Subjective symptoms are slight or absent.

*Retention Cysts.*

Sexes equally affected.  
 Rapid course.  
 Traumatism 30 per cent. of cases.  
 Produces symptoms of wasting and weakness.  
 There may be intermittent enlargement or actual temporary disappearance of the tumor.  
 Severe pain, loss of appetite, vertigo, constipation or diarrhea characterize this form.

The prognosis is always grave, malignancy is always to be feared. Degeneration cysts are always secondary to inflammatory and neoplastic processes. Toxic processes and infectious diseases are also capable of producing this type of cyst. Autodigestion of effusions are responsible for the production of degeneration cysts of traumatic origin. Pseudocysts are formed from hemorrhagic effusions into the tissues surrounding the pancreas and almost always follow traumatism and inflammation of the gland. Rupture of peritoneal covering of the pancreas permits blood and pancreatic ferments to escape into the omental bursa; the reactive inflammation causes connective tissue proliferation—a cyst wall is thus formed. These cysts do not contain an epithelial lining. The contents are variable—blood, or clear fluid may be found. Repeated hemorrhages are responsible for enlargements. Traumatism has been elicited in 25 per cent. of cases. Symptoms appear soon after the injury—severe pain and other symptoms of disturbed digestion.

Retention cysts are due to obstruction by calculi or structure of the ducts of Wirsung or the smaller ducts. When the obstruction begins in the smaller ducts, histologic researches have shown it to be due to a chronic pancreatitis.

ISIDORE COHN.

## TROPIC DISTURBANCES OF EXTREMITIES.

*Erythromyelalgia* (Mitchell, 1872).

*Symptoms:* Initial symptom is pain in certain areas, persists for several hours, rests and recurs, burning in character. Warmth increases pain, covering increases pain. Cold application soothes pain. The limb becomes red when pendant, color subsides on elevation. Limb swells, no edema.

*Treatment:* Cold applications. Vaso-constrictors are of no avail. Treatment is unsatisfactory.

*Pathology:* Not a disease per se, but a manifestation of neuralgia and neuritis, etc.

**Intermittent Claudication** (Charcot, 1859).

Characteristic symptom is intermittent limping—cramp in muscles. During the attack the limb becomes waxy, congested or mottled in color, cold to the touch. Between attacks there are no subjective symptoms, but there may be a diminished or absent dorsalis pedis or post tibial pulse.

*Pathology:* Some form of angiosclerosis, either endarteritis, arteriosclerosis, etc., with or without similar condition in veins. Nerves may degenerate from occlusion of the vessels. We may have gangrene from complete obliteration.

#### Differential Diagnosis.

##### *Erythromyelalgia.*

Pain on walking.  
No interference with pulse.  
Redness and heat with increased pulsation of extremity.

##### *Intermittent Claudication.*

Pain on walking.  
Absence of pulse.  
Pallor and coldness of limb.

#### **Endarteritis Obliterans or Thromboangitis Obliterans**

of Burger: Attacks men more frequently than women—more common among Russian Jews. It is usually confined to legs.

*Symptoms:* (1) Pain may or may not be present, varies in severity. (2) Cyanosis when limb is pendant. (3) Absence of pulsation in the dorsalis pedis and post tibials. Disease is progressive until gangrene appears in one or more toes, and is ascending in character. The gangrene only stops when the level of the healthy vessel is reached.

Burger has shown that the obliteration is due to a distinct thrombosis and not a proliferation of the intima or media. Thrombosis begins distally and works up.

#### Differentiation.

##### *Thromboangitis Obliterans.*

Pathology: Thrombosis.  
Limb: Colored.  
Pain not so amenable to rest and elevation. Gangrene is the usual outcome.

##### *Intermittent Claudication.*

Pathology: Proliferation of the media and intima.  
Limb: Cold, waxy.  
Pain amenable to rest and elevation.

#### **Raynaud's Disease** (1862).

Pathology is speculative. There is no organic disease of the vessels producing permanent diminution of caliber. "The cause of the

symptoms is a vice of the capillary vessels." The cause is a spasm of the arterioles or venules, or both. It may involve all extremities, the nose, ears and cheeks. Fingers and toes are most frequently attacked. Apt to be symmetrical.

First Stage Symptoms: Regional ischemia for variable periods, after which the part returns to normal. May have regional cyanosis. There may be regional engorgement with heat and pain. Gangrene may supervene in any of the forms—superficial gangrene, dry, and apt to be symmetrical. Pain is trivial or absent in the ischemic and syncopic stages, but may be severe just before gangrene appears. The disease may be intermittent or continuous. It is more common to young women.

#### Differentiation.

*Raynaud's Disease.*

*Thrombo-angietis Obliterans.*

Transitory character of attacks.

Diminished arterial pulsations and progressive gangrene.

Women.

Men.

—(Collins, *Annals of Surgery*, December, 1914.)

COHN.

## Medical News Items.

THE SEVENTH PAN-AMERICAN CONGRESS.—Immediately before the meeting of the American Medical Association, the Seventh Pan-American Congress will be held in San Francisco from June 17-19.

SOCIOLOGICAL CONGRESS.—The fourth session of the Southern Sociological Congress will be held in Houston, Texas, May 11. Conservation of health will be the general theme of the program and will be divided in the following six departments: (1) The prevention of communicable diseases; (2) moral health; (3) the health of children; (4) mental health; (5) health and race relations, and (6) the church as a conserver of social health.

ELECTIONS AT MEDICAL COLLEGE ASSOCIATION.—The following officers were elected at the twenty-fifth annual meeting of the Association of American Medical Colleges, held in Chicago, February 17, 1915: Dr. Charles R. Bardeen, Madison, Wis., president; Dr. Reuben Peterson, Ann Harbor, Mich., vice-president; Dr. Fred C.

Zapffe, Chicago, secretary-treasurer, and Drs. C. F. Waite, Cleveland, and Samuel W. Lambert, New York, councilors.

NEW YORK STATE MEDICAL SOCIETY MEETING.—The one hundred and ninth annual meeting of the Medical Society of the State of New York will be held in Buffalo, April 27-29. The meeting will be held in the Sixty-fifth Regiment Armory, through the cooperation of the military authorities. As this armory is one of the largest in the country, accommodations for all activities of the meeting, except the annual banquet, will be afforded. On the last night of the meeting a regiment parade and review by General Gorgas will be held.

AMERICAN AMBULANCE HOSPITAL IN PARIS.—Eleven hundred dollars have been contributed by the students in Princeton University to the American Ambulance Hospital in Paris. This money is to be used to purchase an ambulance for wounded soldiers in France, and it is expected that Princeton volunteers will be assigned to drive the car at the front. Fifty-seven American men, twenty-four of whom are from Harvard, have already been sent to France to drive ambulances.

MEETING OF DENTAL SOCIETIES.—The First and Second District Dental Societies of New Orleans held their annual meeting at the Grunewald Hotel, February 27, 1915. Dr. Paul de Verges was elected president; Dr. A. L. Ducasse, vice-president; Dr. Stewart Dean, secretary, and Dr. George Mire, treasurer. Drs. Milton Miller, Wallace Woods and C. V. Vignes were elected members of the new executive committee. A banquet was enjoyed at the conclusion of the meeting.

INTERSTATE ASSOCIATION OF ANESTHETISTS.—This Association will hold its organization meeting in conjunction with the Ohio State Medical Association in Cincinnati, Ohio, May 4 and 5, 1915, at which time an elaborate program devoted exclusively to recent advances in anesthesia and analgesia will be presented, including such titles as "Nitrous Oxid in Obstetrics," "Blood-Pressure Under General Anesthesia," "Conductive Analgesia for Intraoral Operations," "Alkaloidal Medication in Relation to Anesthesia and Analgesia," "Anesthesia for Brain Surgery," "Use of Music During Local Analgesia," "Magnesium Sulphate Narcosis," "Intravenous Anesthesia," "Preparatory, Operative and Postoperative Precautions for Hazardous Anesthetic Risks," "Vapor Anesthesia for

Intraoral Surgery," etc. Headquarters, assembly-room and exhibits will be in the New Hotel Gibson, in which all the sections of the Ohio State Medical Association will also meet. An informal organization dinner will be served on the evening of May 4, after which the visiting anesthetists will be entertained at a smoker by the local entertainment committee of the Academy of Medicine. Visiting ladies will also be entertained. Anesthetists, surgical and dental, as well as interested surgeons, research workers and general practitioners, who wish to participate in the proceedings, are cordially invited to attend. Further information may be had from Dr. F. H. McMechin, secretary, 1044 Wesley avenue, Cincinnati, Ohio.

EXAMINATION FOR INTERNSHIPS IN CHARITY HOSPITAL AND TOURO INFIRMARY, New Orleans, will be held by a joint examining board at the Hutchinson Memorial Building, Canal and Villeré streets, and is open to all graduates of Class A and Class A plus colleges. The first examination commences at 3 p. m., April 10, 1915, and will be written. The forty most successful candidates in this examination, provided their individual scores are not less than 75 per cent., will be eligible for the oral examination on April 17, 1915. The successful candidates must attain 75 points out of a possible 100 at each examination. The number of vacancies to be filled is usually eighteen at Charity Hospital and five at Touro Infirmary, and the term of service is for two years. Graduates who desire to enter for this examination are required to fill in an application blank, which may be obtained from the dean of the college, and forward it without delay to the Secretary, Board of Examiners (interns), Charity Hospital, New Orleans, La.

UNITED STATES CIVIL SERVICE EXAMINATIONS.—An open competitive examination for mine surgeon, for men only, has been announced by the United States Civil Service Commission for April 20, 1915. The salary ranges from \$2,400 to \$2,700 a year. Persons who meet the requirements and desire this examination should at once apply for Forms 304 and 2095, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C. No application will be accepted unless properly executed, including a medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on April 20, 1915.

DEPARTMENT OF RÖENTGENOLOGY, CHARITY HOSPITAL OF LOUISIANA.—The Board of Administrators of the Charity Hospital of Louisiana, New Orleans, has appointed Dr. James B. Harney as salaried Röntgenologist. He is to assume charge of all the work done in the department and report on all examinations made. His hours will be from 8:30 A. M. to 3:30 P. M. daily, *except Sundays*. Drs. Granger and Henriques will act as consultants in the X-ray-plate and fluoroscopic departments, and Dr. Samuels will assume supervision of all treatment work for the department. A room for treatment has been provided, and in this room there will also be a view-box.

U. S. DEATH REPORT SHOWS CANCER INCREASE.—The death rate, according to the United States Census Report for 1913, shows 14.1 per 1,000 of the estimated population in the registration area of the United States, as compared with 13.9 per 1,000 in 1912. Washington showed the lowest State rate and New Hampshire the highest. Among the fifty registration cities, with population of 100,000 or over, Seattle had the lowest rate and Memphis the highest. The average death-age for both sexes, from all causes, was 39.8; for males alone, 39.2; for females, 40.6. Infants under one year of age formed nearly 18 per cent. of all deaths, and more than 25 per cent were of children under five. The death rate from tuberculosis declined from 149.5 per 100,000 population in 1912 to 147.6 in 1913. The rate from cancer rose from 63 per 100,000 in 1900 to 78.9 in 1913. The number of suicides was 9,988, a rate of 15.8 per 100,000.

CHICAGO OPENS DRUG USERS' CLUB.—The new Federal law, which will make it impossible to obtain habit-forming drugs, has occasioned the opening of a clubroom in the City Hall of Chicago. It is stated that the club is under the joint direction of the police and the health department, and is intended to aid victims of the drug habit to overcome their use.

FUND FROM RED CROSS XMAS SEALS.—Nearly \$520,000 was raised to finance the crusade against tuberculosis in the United States by the sale of the Red Cross seals last Xmas. More than 52,000,000 seals were sold, or 7,000,000 more than were sold in 1913.

HOSPITAL JOURNALS CONSOLIDATE.—The *International Hospital Record*, of Detroit, will be merged with the *Modern Hospital*, of St. Louis and Chicago, beginning with the March issue.

FRANCE BANS ABSINTHE.—The manufacture, sale or export of absinthe has been forbidden by law in France. It was suggested by the defenders of the use of absinthe, in the Chamber of Deputies, that the export of the liquor be permitted and that the suppression of its sale in France be limited to the continuance of the war. This was, however, voted down promptly and by a large majority.

PHYSICIAN'S LICENSE REVOKED.—The license of a Cincinnati practitioner was recently revoked by the Ohio State Board of Medical Registration, because he inserted an advertisement in the newspapers guaranteeing to cure cases of tuberculosis inside of thirty-six days, at a charge of \$150 for those who could afford it, or a dollar a day for the poor.

SALVARSAN MANUFACTURED IN CANADA.—Due to the embargo placed by the German Government last August on the exportation of a number of medical and surgical preparations, including salvarsan, for fear they might reach the countries at war with Germany and Austria, salvarsan is now being manufactured in Canada, under the name of "Diarsenol." The Commissioner for Patents in Ottawa recently granted the license for the manufacture of the preparation, which was formerly covered by patents issued to Germans, but, owing to the war between England and Germany, the patent was declared in abeyance in Canada.

RADIUM GIVEN FOR CANCER TREATMENT.—Dr. Howard Kelly, of Baltimore, received from the Government on January 27 radium bromide at an estimated value of \$11,000, for the use of the National Radium Institute in the treatment of cancer. The Denver laboratory of the United States Bureau of Mines refined this radium from Colorado ore by a simplified process, which is hoped to reduce the price of radium.

DIPHTHERIA ANTITOXIN FURNISHED FREE.—A bill has recently been passed by the Ohio Legislature which will require the State Board of Health to furnish free diphtheria antitoxin to the indigent sick.

BIRTH RATE DECLINE IN FRANCE.—At a recent meeting of the Academy of Moral and Political Science, Paris, it was reported that births in France for the past twenty years had fallen annually from 860,000 to 750,000. This is causing much concern to the scientists of that country, and it was suggested that the Government should



take the matter in hand and offer a recompense to fathers of large families.

**DOGS BARRED FROM SHOPS.**—The Health Department of New York City has put into effect an ordinance forbidding the bringing of dogs into all stores where groceries, meat, fruit and other foods are displayed for sale. Signs to this effect have been displayed in all shops.

**STOP CROWDING CARS IN NEW YORK CITY.**—The Health Department of New York City having failed to convince the Public Service Commission that the overcrowding of cars was a menace to health and decency, and the Commission having failed to remedy conditions, the department has issued mandatory orders on the New York Railway Company and the Belt Line Railway Corporation on the Fifty-ninth and Eighty-sixth cross-town lines. The order limits the number of passengers which it is permissible to carry to one and one-half the seating capacity of the car. The order will be enforced by the police, and it is the intention of the department to take up one line of transit after another until safe and sanitary conditions shall be assured.

**STATUE OF FLORENCE NIGHTINGALE.**—A statue of Florence Nightingale was unveiled at London on February 24. It is the first time that a statue of a woman, aside from royalty, has been erected publicly in London. The figure bears a lamp in the right hand and forms a part of the Crimean memorial group in Waterloo Place.

**THE FIFTH DISTRICT MEDICAL SOCIETY** will meet at Ruston, La., on Tuesday, April 6, with an excellent program provided.

**INSPECTED MILK.**—The Milk Commission of New Orleans has announced that the use of inspected milk under its supervision is increasing. Several of the most prominent clubs and two of the hotels are taking milk from the Commission, and one line of railroad is also using it on the dining-car service. Parties traveling with children are no longer inconvenienced in getting clean raw milk as food for those who are dependent upon it, and are no longer compelled to supply themselves with this milk, or telegraph ahead to other communities to get a supply en route. The milk produced under the supervision of the Milk Commission of the New Orleans Pure Milk Society is from herds of cows all of which have been

tested for tuberculosis. There has been a marked improvement in the milk supply since the advent of the Milk Commission in New Orleans, and the death rate among infants has been materially reduced.

**TOUR OF HEALTH CARS.**—The extensive tour of the health cars of the Louisiana State Board of Health, which started on March 8 over the Texas & Pacific Railroad, included the following itinerary: Ferriday, Vidalia, Winnsboro, Rayville, Tallulah, Lake Providence, Monroe, Ruston and Sibley. The exhibitions throughout the State were for white persons and negroes, the races being instructed at separate places. While the purpose of the tour was to furnish education for both races, a special effort was made to reach the negroes of the different communities visited, because of the fact that the negroes are more in need of health instruction than the whites. The trip was made over the Texas & Pacific, the Iron Mountain, and the Vicksburg, Shreveport & Pacific Railroads.

**THE AMERICAN SOCIAL HYGIENE ASSOCIATION** has been offered a prize of \$1,000 by the Metropolitan Life Insurance Company for the best new social hygiene pamphlet for adolescents between the ages of twelve and sixteen. Further information may be had from the American Social Hygiene Association, 105 West Fortieth street, New York City.

**THE *Charlotte Medical Journal***, Charlotte, N. C., has issued a little brochure entitled "A Few Facts About the *Charlotte Medical Journal*." It contains some interesting information and also gives some very good illustrations of the business and editorial offices of the *Journal*.

**EPSOM SALTS TO FIGHT TETANUS.**—The Rockefeller Institute has announced a new method of treatment for tetanus, and patents to the invention of a special apparatus used in the treatment have been thrown open. Most of the deaths among wounded soldiers are due to the tetanus germ, which thrives in the highly cultivated soil of Europe, and the disease is almost invariably fatal. Dr. F. J. Meltzer, who has been given the credit of the new method, found that an injection of a solution of Epsom salts into the membrane of the spinal cord produces a relaxation of the muscles for several hours, and gives time for other medicines to take effect.

**A WOMAN'S NUMBER.**—The May issue of the *Medical Review of Reviews* is to be a Woman's Number, all the articles contributed

coming from the pens of women physicians whose work has achieved national importance. The May number of the *Medical Review of Reviews* will be dedicated to the women physicians of America as a tribute to their earnestness, enthusiasm, modesty, energy, perseverance and scientific acumen.

FUND FOR THE BELGIAN PROFESSION.—The report of the treasurer, Dr. F. F. Simpson, of the Committee of American Physicians for the Aid of the Belgian Profession, for the week ending March 6, 1915, gives the total disbursements of \$4,614.60. In a letter sent out by the committee, the following is worthy of notice: "Of course, it is conceivable that some of the vessels carrying supplies for the American Commission for Relief in Belgium might strike mines or might otherwise be interfered with, but that in no wise diminishes the urgent need for persistent effort to supply the necessities of life for the destitute civilians of Belgium. The greater difficulties confronting us must be met by renewed energy and increased effort. The American Commission for Relief of Belgium is undertaking to deliver the supplies we furnish without cost to our committee."

DR. WALLEY EXONERATED.—At a meeting of the Mississippi State Board of Health, held in Jackson, March 8, Dr. Willis Walley, chief sanitary inspector, was freed from the charges preferred against him. Dr. Walley was accused of trying to influence Mrs. Ada Russell in granting a temporary license to Dr. W. N. Moore, of Cybur, after the latter had failed in his examination some years ago. The vote to exonerate Dr. Walley was 5 to 3. The Board unanimously held the position that Dr. Moore was not entitled to temporary license.

PERSONALS.—Surgeon C. H. Lavinder was authorized by the service, early in February, to deliver a course of lectures at the New York Postgraduate Medical School.

Dr. S. H. Chuan, a graduate of Harvard Medical School, 1899, and a specialist on sanitary and preventive medicine, has been appointed surgeon-general of the Chinese army and president of the American Medical School, Tien-tsin.

Dr. Paul J. Gelpi, of New Orleans, was one of a delegation of citizens who recently called on the Mayor and Commisisoner of Public Safety to protest against the establishment of a branch sanitarium at 1707 Esplanade avenue by the Keeley Institute of Florida.

Dr. Charles Chassaingnac paid a visit to New York during the month.

Mrs. Charles Muriel Kipling, a nurse in the American Hospital in Paris, has been awarded the gold "Médaille d'Honneur des Epidemies."

Dr. M. W. Swords, of New Orleans, is no longer connected with the *Pan-American Surgical and Medical Journal*, and has not been for the past three months. Dr. Swords was formerly associate editor of that Journal.

The many friends of Dr. M. P. Lane (Tulane, 1914), who is now serving with the American Red Cross unit assigned to duty in Serbia, will be interested to learn that he has reached his destination and is hard at work with his American associates relieving the distress with which they are surrounded. His last communication, dated January 28, tells of the great number of cases of relapsing fever (spirillosis Obermeyerei), typhus fever, typhoid, smallpox and tuberculosis, which, together with a great mass of gunshot wounds, comminuted fractures and other traumatisms peculiar to war surgery, are furnishing unusually varied and abundant opportunities for medical and surgical observation and experience.

REMOVALS.—Dr. C. K. Olivier, from 2715 Baronne street to 2922 Louisiana avenue.

Dr. V. P. Randolph, from Temple Sanitarium, Temple, Texas, to Walburg, Texas.

Reynolds Library, Rochester, New York, to Rochester Academy of Medicine, 33 Chestnut street, New York.

Dr. J. R. DeVelling, from Ridgeland, Miss., to Arbo, Miss.

The *Canadian Medical Association Journal*, from 216 Peel street, Montreal, to Editor, 836 University street, Montreal.

The *Journal of the South Carolina Medical Association*, from Seneca, S. C., to Anderson, S. C.

MARRIED.—On March 16, 1915, Dr. Oscar Dowling, President of the State Board of Health of Louisiana, to Mrs. Lula Tendel George, of Monroe, La. Dr. Dowling, in his campaign throughout the State for better health conditions and a purer and cleaner food supply for the people of Louisiana, has made himself well known throughout the country.

DIED.—On March 5, 1915, Dr. Charles J. Eames, of New York, a noted chemist, aged 84 years.

## Book Reviews and Notices.

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*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.*

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**Urgent Surgery**, by Felix Lejars, Paris. Translated from the seventh French edition by Wm. S. Dickie, F. C. R. S. William Wood & Co., New York.

Whereas the previous editions of this work have established its value to the profession, the present edition is an improvement; in its revision it has been brought fully up to date. Urgent surgery is a subject of much greater importance to the practitioner and internist than either seems to realize. In our present-day knowledge of medicine it is a well-established fact that many of the cases so long supposed to belong to the realm of the internist, if not surgical, can to-day in many instances be relieved by surgical interference. Every general practitioner living beyond the reach of a surgeon should be prepared to act in an emergency. In this volume the subject of urgent surgery is thoroughly and most interestingly treated. Every phase is discussed, cases cited, conditions described, and the procedure of operative technic minutely detailed.

The first chapter opens with a description of equipment, not an elaborate outlay of useless paraphernalia so often provided by the inexperienced practitioner, but with a description of the essentials. Each chapter proceeds in like manner, narrating in simple language the cause, diagnosis and treatment, and so thorough as to detail that even the untrained mind cannot fail to understand. The first volume treats of the head, neck, thorax, spine and abdomen. To analyze these separately would be a long, tedious and unnecessary task. It is not only fit, but most essential, that the practitioner have a knowledge of urgent surgery. Whereas he may not be called upon to operate, he cannot practice his profession intelligently, nor can he do justice to his patients, without such knowledge, and there is no book published to-day which deals more intelligently with the subject. The author is brief, yet thorough; the illustrations are numerous and most comprehensive.

E. DENEGRE MARTIN.

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**Dietetics for Nurses**, by Julius Friedenwald, M. D., and John Ruhrah, M. D. W. B. Saunders Company, Philadelphia and London.

While the authors have had as their object the preparation of a book "to meet the need of a handbook for nurses and laymen who are interested in the subject of feeding the sick," they have done more than this. In the reviewer's opinion, this booklet contains most of the facts about diet and food which the general practitioner wants for his every-day practice, and this in much smaller compass than is the case with most books on this subject.

It should also be useful to the under-graduate student, who rarely has sufficient available time to study the larger works on food and feeding. We would like to see later editions contain tables giving the eminently practical and useful "Fisher's Units." J. T. H.

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**Immunity, Methods of Diagnosis and Therapy, and Their practical Application**, by Julius Citron. Translated from the German and edited by A. L. Garbat. P. Blakiston's Son & Co., Philadelphia.

The necessity for a second English edition within a year after the first one appeared indicates the popularity of this book. It also shows that the very important subject of immunity is being appreciated and studied.

The second edition is even more practical, in several particulars, than the first one was. Several subjects are discussed more in detail and made more practical for beginners. The technic of all the immunity reactions or tests is given, in addition to their practical application.

Anaphylaxis, serum sickness, serum therapy, and chemotherapy are also taken up in the last part of the book, which is sure to serve a useful purpose. C. C. BASS.

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**Clinical Hematology**, by Gordon R. Ward. W. B. Saunders Company, Philadelphia and London.

The volume contains 495 pages and takes up chiefly the clinical side of hematology. In the preface it is correctly stated that this phase of the subject has been much overshadowed by exclusively pathological investigation.

A working classification of the diseases of the blood-forming organs is proposed. This appears to be good, but, of course, it remains to be seen whether this classification will be adopted generally.

This book will be thoroughly appreciated by the many clinicians who need and require more information on the blood diseases (more correctly called in this work diseases of the blood-forming tissue) than is to be found in general text-books. It is not intended as a laboratory guide in any sense. C. C. B.

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**A Laboratory Manual of Qualitative Chemical Analysis for Student of Medicine, Dentistry and Pharmacy**, by A. R. Bliss, Jr., Ph. G., Ph. C., M. A., Phm. D. W. B. Saunders Company, Philadelphia and London, 1914.

In the introduction the author explains very clearly vapor tension, "electrolytic dissociation," mass action, etc. In addition, hydrolytic dissociation should have been dealt with.

In paragraph 8, in speaking of vapor tension, a short statement as to how such vapor tension is obtained would also have been useful. In paragraph 18, when speaking of hydrochloric, sulphuric and acetic acids, etc., the actual degree of ion dissociation should have been given in

figures, which holds also for the various basic substances, such as sodium, potassium, calcium and the hydroxides.

This new book is very logically arranged and it is easy to find any of the usual tests for inorganic compounds. Perhaps it would have been well to have included more than the few organic acids given.

F. P. CHILLINGWORTH.

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**A Manual of Physiology, With Practical Exercises**, by G. N. Stewart, M. S., D. Sc., M. D. (Edin.), D. P. H. (Camb.). Seventh edition. Wm. Wood & Co., New York.

In the first chapter, under discussion of a typical cell, it would have been better to say that the cell starts with a nucleus instead of "a piece of protoplasm." The chapter on metabolism has been enlarged, due to the recent advances made in this branch of physiology.

The growing importance of the blood gases has necessitated additional space; also more detail is given in regard to the phenomena of enzyme action.

Great stress is laid by Stewart on practical exercises for laboratory use. These experiments are most important, and are very clearly explained. If these had been arranged together at the end of the book, instead of being inserted separately with each chapter, it would have simplified matters for the student.

Notwithstanding these minor faults, this last edition of Stewart's is one of the very few good books on this difficult subject. F. P. C.

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**Kirke's Handbook of Physiology**, by Charles Greene, A. M., Ph. D. Eighth American revision. William Wood & Co., New York, 1914.

The last edition of Kirke's Handbook of Physiology lives up to the high standard of the previous editions, and is up-to-date. Many of the illustrations are new, and much time has been spent in the arrangement of the subjects.

The chapter on internal secretion includes the recent advances made in this important field; likewise that portion of the book dealing with the special senses has been revised.

Endocardiac pressure is very thoroughly and clearly dealt with, and Greene well shows the growing importance of clinical physiology, under the discussion of resuscitation from electric shock and drowning. Kirke's Physiology will continue to be held in high esteem both by the student and practitioner who keeps up with medical advance. F. P. C.

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**A Textbook of Pathology, With a Final Section on Post-Mortem Examinations and the Methods of Preserving and Examining Diseased Tissues**, by Francis Delafield, M. D., LL.D., and T. Michell Prudden, M. D., LL.D. Tenth edition. Revised with the co-operation of Francis Carter Wood, M. D. William Wood & Co., New York.

A textbook which has reached its tenth edition is too familiar to require a long essay on its general characteristics. This recent edition is largely a counterpart of its predecessor, having the same general physical appearance, number of pages and same illustrations. It covers all the recent advances in pathology and retains the information which made it a valuable textbook for students and a reference-book without which the specialist's library would be incomplete.

The authors take up the subject in a systematic manner, and by

means of clear descriptions and illustrations have rendered it so that it can be easily grasped by the beginner.

Since our knowledge of protozoan affections and immunity has increased, we find that the chapters dealing with these subjects have been largely rewritten and rendered clearer.

Two special features of this book, not found in most of the other books on pathology, are the chapters dealing with the lesions produced by the various poisons (exogenous and endogenous), and the lesions in certain forms of death from violence and sudden death. Altogether, the book is a valuable addition to recent medical literature.

JNO. A. LANFORD.

**Pathogenic Microorganisms.** A Practical Manual for Students, Physicians and Health Officers, by William Hallock Park, M. D., and Anna W. Williams, M. D. Fifth edition, enlarged and thoroughly revised. Lea & Febiger, New York and Philadelphia.

This book, in its new edition, is most pleasing in its binding, printing and general physical appearance. The authors have rewritten a great many parts of the book in order to cover the many advances which have taken place in recent years in our knowledge of microbiology, and have, therefore, added somewhat to the size, but not sufficient to render it unwieldy.

The subject has been arranged in three parts. Part I takes up the principles of microbiology, including general characteristics and methods of study. Part II deals with the pathogenic micro-organisms individually, giving in detail the bio-chemical properties, pathogenesis, etc. Part III presents many of the practical phases of bacteriology under the heading, "Applied Microbiology." In this part are considered methods of bacterial examinations of water, milk and air, together with means of purification. Another interesting and instructive chapter in this part is one dealing with soil bacteria and their functions.

The book is written in a clear and interesting manner, and is quite profusely illustrated with drawings, actual photographs and plates. The colored plates are particularly instructive. In many places the authors have magnified the work of their own associates to the detriment of other well-known workers, with the result that the bibliography is not very complete, and, therefore, as a reference book, it has but small value.

J. A. L.

## *Publications Received.*

**J. B. LIPPINCOTT COMPANY**, Philadelphia and London, 1915.

**International Clinics.** Volume 1. Twenty-first series, 1915.

**Diabetes Mellitus**, by Nellis B. Foster, M. D.

**Nursing and Care of the Nervous and Insane**, by Chas. K. Mills, M. D. Third edition, revised by the author, assisted by N. S. Yawger, M. D.

**The Commoner Diseases—Their Causes and Effects**, by Dr. Leonard Jores. Authorized English translation, by Wm. H. Woglom, M. D.

**W. B. SAUNDERS COMPANY**, Philadelphia and London, 1915.

**Differential Diagnosis**, by Richard C. Cabot, M. D.

**Text-Book of Embryology**, by Chas. Wm. Prentiss, A. M., Ph. D.

**Diseases of the Nose and Throat**, by D. Braden Kyle, A. M., M. D. Fifth edition, thoroughly revised and enlarged.



**Infection, Immunity and Specific Therapy**, by John A. Kolmer, M. D., Dr. P. H., with an introduction by Allen J. Smith, M. D., Sc. D. LL.D.

**Diagnostic and Therapeutic Technic**, by Albert S. Morrow, A. B., M. D. Second edition, thoroughly revised.

**PAUL B. HOEBER**, New York, 1915.

**Cancer—Its Cause and Treatment**, by L. Duncan Bulkley, A. M., M. D.

**P. BLAKISTON'S SON & CO.**, Philadelphia, 1915.

**Diseases of the Skin**, by James H. Sequeira, M. D., F. R. C. P., F. R. C. S.

**The Difficulties and Emergencies of Obstetric Practice**, by Comyns Berkeley, M. A., M. D., M. C. F. R. C. P., M. R. C. S., and Victor Bonney, M. S., M. D., B. Sc., F. R. C. S., M. R. C. P. Second edition.

**WASHINGTON GOVERNMENT PRINTING OFFICE**, Washington, D. C., 1915.

**Public Health Reports**. Volume 30, Nos. 7, 8, 9.

**Organization Chart of the United States Public Health Service.**

**Report of the Director of Sanitation of Porto Rico (1914).**

**Report of the Department of Health of the Panama Canal for the Month of December, 1914.**

#### **MISCELLANEOUS.**

**Annual Report of the United Fruit Company Medical Department (1914).** (Press of Geo. H. Ellis, Boston, 1915.)

**Notes of the Hog-Cholera Conference at Purdue University, December 18, 1913.** (Haywood Publishing Company, Lafayette, Ind.)

**Progress of the Department of Health of the City of New York During the Year 1914.**

**The Fifth Annual Report of the Commissioner of Health of the Commonwealth of Pennsylvania.** Parts 1 and 2 (1910); Parts 1 and 2 (1911). (The Telegraph Printing Company, Harrisburg, Pa.)

**Stallion Enrollment.** Purdue University Agricultural Experiment Station. (Haywood Publishing Company, Lafayette, Ind.)

**Statement of Mortality for the year 1914 for the City of Shreveport, La.**

**A Few Facts About the Charlotte Medical Journal, Charlotte, N. C.**

**Annual Report of the Library Committee of the College of Physicians of Philadelphia for the Year 1914.**

**Biennial Report of the Board of Health for the Parish of Orleans and the City of New Orleans 1912-1913,** Brandao Printing Company, New Orleans.

**The Banner Prohibition States: Kansas and Maine.** (The National Home Rule Association, Cincinnati, Ohio.)

**The Harrison Anti-Narcotic Law.** (H. K. Mulford Company.)

**New and Non-Official Remedies, 1915.** (American Medical Association, Chicago.)

**President's Address Delivered at the Seventieth Annual Meeting of the American Medico-Psychological Association, Baltimore, May 26, 1914,** by Carlos MacDonald, M. D. (The Johns Hopkins Press, Baltimore, Md.)

## MORTUARY REPORT OF NEW ORLEANS.

Computed from Monthly Report of the Board of Health of the City of  
New Orleans for February, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	4		4
Intermittent Fever (Malarial Cachexia).....		1	1
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	1		1
Diphtheria and Croup.....	5		5
Influenza.....	24	10	34
Cholera Nostras.....			
Plague.....			
Pyemia and Septicemia.....	1	1	2
Tuberculosis.....	57	50	107
Syphilis.....	5	3	8
Cancer.....	22	8	30
Rheumatism and Gout.....	1		1
Diabetes.....	5		5
Alcoholism.....	1		1
Encephalitis and Meningitis.....	1		1
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	19	13	32
Paralysis.....	3	2	5
Convulsions of Infancy.....	1		1
Other Diseases of Infancy.....	9	4	13
Tetanus.....	1		1
Other Nervous Diseases.....	3	1	4
Heart Diseases.....	87	28	115
Bronchitis.....	6	5	11
Pneumonia and Broncho Pneumonia.....	31	32	63
Other Respiratory Diseases.....	2		2
Ulcer of Stomach.....		1	1
Other Diseases of the Stomach.....	2	1	3
Diarrhea, Dysentery and Enteritis.....	10	8	18
Hernia, Intestinal Obstruction.....	2	2	4
Cirrhosis of Liver.....	9	3	12
Other Diseases of the Liver.....	5	1	6
Simple Peritonitis.....			
Appendicitis.....	4	2	6
Bright's Disease.....	28	14	42
Other Genito-Urinary Diseases.....	5	2	7
Puerperal Diseases.....	4	5	9
Senile Debility.....	5	1	6
Suicide.....	6		6
Injuries.....	19	16	35
All Other Causes.....	10	3	13
<b>TOTAL</b> .....	<b>399</b>	<b>217</b>	<b>616</b>

Still-born Children—White, 24; colored, 18. Total, 42.

Population of City (estimated)—White, 272,000; colored, 101,000.  
Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 17.60; colored,  
25.78. Total, 19.82.

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

Mean atmospheric pressure .....30.10  
Mean temperature .....56  
Total precipitation .....4.23

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## Original Articles.

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

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### GENERAL OBSERVATION ON ENLARGED THYROID, WITH REPORT OF A SUCCESSFUL CASE OF THYROIDECTOMY.\*

By L. SEXTON, B. S., M. D., New Orleans.

The thyroid gland, like other ductless glands, such as the ovary, supra-renal, pituitary, pancreas, supplies some needed secretion to the well being of the human subject. The thyroid is an epithelial gland with a thyroidal duct in embryonic life, which becomes closed in early infancy. The constitutional symptoms in enlarged thyroid depend upon the inter-relation between secretion and absorption in the thyroid gland. There is no secretion in the gland during fetal life. At puberty the thyroid often enlarges and the system absorbs the secretion of the gland; if the secretion is in excess, and is not absorbed, cystic goiter results. Hyperthyroidism is the increased secretion and absorption from the gland causing thyroid toxemia. Young girls at puberty and pregnant women suffer occa-

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\* Read before the Orleans Parish Medical Society, January 25, 1915. [Received for Publication March 30, 1915.—Eds.]

sionally from enlarged thyroids, which may gradually disappear in the former, and after confinement in the latter, either with or without treatment. The textbook causes of goiter are given as drinking melted snow water, or water charged with sulphate and carbonate of lime, which is the kind of water often found in Wales, Canada, Switzerland and in certain portions of the United States. The lack of iodine constituents in the food, and the lime salts in the water seem to cause enlargement of the thyroid gland. It has been observed that the drinking of boiled water in districts where goiter seem to be epidemic would stop the formation or enlargement of the gland, thus leading to the supposition that some infections or microorganisms existed in the water, which were destroyed by boiling. An instance has been related of two schools approximating each other where the children came from adjoining territories;— at one school the water supply was from a well, and at this school many of the young girl pupils developed enlarged thyroids. The other school used water from a flowing spring, and very few of the children were affected by thyroid enlargements. Kocher advised the boiling of all drinking water in all the valleys of Switzerland where goiter was epidemic. It is not known whether boiling the water does good by precipitating the lime salts, or by the destruction of some microorganism (ultra-microscopic) in the water. Sulphate and carbonate of lime in drinking water is so often associated with goiter in certain valleys with limestone subsoil, where goiter is epidemic, that this condition has been considered a prominent cause of many goiters, but this relation does not exist in many countries, and places where no hard water is consumed; as, for instance, the case which I am about to report, where the patient had used only rain water during the development of the goiter, proves hard water not to be the only cause. Goiter is not peculiar to the human family, as it occasionally affects dogs, horses and mules in the same locality where it is endemic among people. Nor is goiter dependent upon high elevation, for it has been often found and reported in non-mountainous countries, and among people who never drank melted snow or lime water. In the United States there are several sections where goiter seems to attack the growing young female. The source of infection seems to be mostly in the water supply, as instanced above, and many of these cases where the water is thoroughly boiled before being consumed, or where the lime salts were precipitated, the enlargement of the thyroid seems to disappear.

Patients usually seek the doctor or surgeon for relief in the last stages of this disease, on account of the deformity and weight of the tumor, or from pressure on the nerves, or for cardiac and nervous symptoms resulting from hyper-thyroidism. The cardiac nervous vascular symptoms of thyroidism may exist long before there is any perceptible enlargement of the thyroid gland.

Thyroidism constitutes a condition of lowered vitality, lethargy, with mental and physical inertness similar to myxedema or cretinism. The enlargement of the gland may be present in this condition, but its physiological function is often destroyed as the gland changes its epithelial to fibrous or other tissue during the process of the disease. The enlargement of the gland may be either parenchymatous, cystic, fibrous or malignant adenocarcinoma. The thyroid gland is distinguished from other enlargements about the neck and trachea by the fact that it always rises with the trachea upon swallowing. In exophthalmic goiter the most notable symptoms are protrusion of the eyeballs, with inability to close the lids, emaciation (the symptoms are usually exaggerated by the administration of thyroid extracts, or iodin), physical and mental fatigue, intermittent sweating, diarrhea, vomiting and depression, shortness of breath and tachycardia, ptosis, tremors of the hand, rapid heart action with great depression.

No case of thyroid enlargement occurring in girls at puberty should be operated upon until thorough rest cure, hygienic and medicinal means have been given a fair trial, as the enlargement has often been known to disappear upon the boiling of all water drunk, and the treatment suggested below, in connection with general tonics and good nourishing food. The injection of boiling water (or iodin) into the middle of the gland, or of from sixty to one hundred drops of a five per cent. carbolic solution into the body of the gland, and the rubbing in, or driving in by heat, of the red iodid of mercury ointment, should all be faithfully tried before an operation is resorted to. But such treatment should not be persisted in indefinitely, for if an operation has to be performed, it should be attempted before too severe damage has resulted to the nerves and heart from the absorption of the toxic thyroid secretion. Operators have also contended that the injections of irritants into the gland causes adhesion, which makes its subsequent removal more difficult. The causes of deaths reported have been from hyper-thyroidism, sepsis, tetany, hemorrhage, shock and injury

to the parathyroids and to the recurrent laryngeal nerve. The mortality from enlarged thyroids is estimated at the present time to be from five to ten per cent. in non-operated cases, death usually resulting in damage done to the vascular and nervous system.

A preparatory treatment before any operation for goiter should be rest in bed in a well ventilated dark room, twilight sleep, a meat free nourishing diet, tepid baths and perhaps mild sedatives until the fast heart is slowed down.

Before operating, several thicknesses of gauze should be placed over the mouth and nose to prevent infection from coughing and sneezing during the operation. The head should be well covered with sterile towels. If a general anesthetic is used, ether is to be given the preference. It should be preceded one hour before operating by an injection of one-fourth grain of morphia, and one one hundred and fiftieth of atropin, as less ether is then required, and part of the anoci is obtained. It also enables the operator to raise the patient's head to an angle of thirty degrees during the operation, which facilitates his work and lessens hemorrhage. The goiter can usually be removed under reasonable speed before the patient awakens, without the further use of ether, which should be discontinued when the operation begins.

Excision of all or parts of the thyroid gland and tying of the inferior and superior thyroid arteries, with division of the isthmus, seem to offer the best chance for improvement to patients in this condition. The superior thyroid artery may be ligated previous to the operation and in order to reduce the blood supply through the thyroid gland. It is found at the upper edge of the thyroid cartilage just in front of the sterno-mastoid muscle. It runs inward and downward to the thyroid gland and is closely accompanied by the recurrent laryngeal nerve. Rest in bed, avoidance of worry, relieving the heart load by lying in the horizontal position one or more hours in the middle of the day is one of the best factors in the treatment of the disease. Some internists have recommended ten drops of tincture of belladonna with five-grain capsules of bromid of quinin three times daily, and have claimed a reduction in the size of the gland and the accompanying symptoms by such treatment. Individually, I have not much opinion of internal medicine as a treatment for enlarged thyroids, as cases often recover without any treatment at all, so how are we to know that medicine really does any good?

Mrs. C., age seventy-five, had raised a large family of children and never suffered from any serious sickness of any kind. She noticed at puberty a small swelling of the thyroid gland, which reduced or disappeared without treatment in a few years. About ten years ago, she noticed an enlargement on the right side of the neck, which had gradually increased in size until it was as large as a pear, and similarly shaped. The tumor extended upward from the isthmus of the thyroid to a point just under the right angle of the jaw. As it grew larger, she noticed her eyes becoming more prominent, until a permanent exophthalmos was present. Nervous symptoms developed with insomnia, the fingers and hands trembled when extended; the pulse rate gradually increased from ninety to one hundred and forty per minute, averaging one hundred and twenty all the time. The enlarged tumor pressed upon the recurrent laryngeal nerves and sympathetic ganglia, rendering it impossible for her to rest in the recumbent position. The age of the patient, the fast heart, and weakened condition; the impossibility of using any general anesthetic deterred me from removing the gland for two years. Finally, when it became impossible for the patient to lie down at all, and when it became necessary to give a hypodermic of morphin or of codein every night, in order to secure any rest, then we determined to remove the tumor, after explaining to the family the possibility of its not being a success, or perhaps with a fatal termination.

We performed thyroidectomy under local analgesia, using one per cent. cocain solution for the skin incision and novocain for infiltrating the deeper tissue. Kocher's incision was employed, convexity downward, only incising one side, as there was no enlargement on the other side. We dissected back the skin flap and pulled to one side the sterno-thyroid muscles, not finding it necessary to divide it. We secured the thyroid vessel as soon as it had been exposed and divided it between forceps, thus preventing hemorrhage; all other vessels were treated likewise. The recurrent laryngeal nerve and the parathyroids lie near the trachea just under the thyroid capsule; in order to avoid injuring them in operating a portion of the posterior capsule should be left. We removed the entire right lobe, dividing the gland at the isthmus after carefully dissecting out and removing it, arresting all hemorrhage; we mopped out the large cavity with equal parts of tincture of iodin and alcohol, leaving a small drain in the most dependent portion, closing up the wound with catgut sutures, covering it well with thick padding in order to prevent any possible infection. She complained of no pain during the operation, so the local anesthesia was a complete success. The wound united by first intention. No opiates were given after the operation. Within a few days the back rest was removed, so that the patient could rest upon the pillows. She had been sitting up so long that a pressure ulcer, or bed sore, formed

on her back, which gave us more trouble than the operation wound. Though she was operated only a few months ago, at present she rests well in bed in the recumbent position without any sedatives. The heart, nerves and exophthalmos are greatly improved.

It has been suggested by some operators to tie the superior and inferior thyroid veins in order to prevent the toxic effect of blood and secretion during the operation for throidectomy. In manipulating the gland it should be handled as gently as possible in order to prevent any possible infection from traumatism. The oozing which often follows the removal of a large gland can be prevented by the application of half and half of tincture of iodine and alcohol to the surface from which the gland has been removed. The leaving of a suitable drain for twenty-four hours, which can be removed without disturbing the other dressing, is also important. The mortality from the operation when properly performed by a competent surgeon are few and may be the end results of disease conditions which have taken place in the patient previous to the operation. The post-operative treatment should be the avoidance of all nervous excitation, or violent exercise, or emotion, nourishing easily digested food, and with agreeable surroundings to bring the case to a successful termination.

#### DISCUSSION.

DR. E. D. MARTIN: I congratulate Dr. Sexton upon his success in this case.

DR. URBAN MAES: I have not much to add, as Dr. Sexton's paper has thoroughly covered the subject, especially as regards the diagnosis of this case. It is rather rare at such an age (75) to have a true hyperthyroidism. The results in this case are very gratifying. Local analgesia is to be preferred in this class of cases. I do not like scopolamin preceding the case. In one case I had a very distressing experience in using the drug following operation. The patient slept for some hours.

DR. L. J. GENELLA: In the discussion of goiter work, I believe the day is passing when any report on the surgery of the hormonal organs will be reported without some mention being made of the conditions of the other glands of internal secretion, and I believe the day has passed when any report on goiter work should be made unless the report is accompanied with detailed report on the condition of the thymus, at least.

I believe that all rational surgery on the goiter should aim



towards drainage of the normal products of the thyroid. Surgery by various technics does just this, but unintentionally. Ligation of the superior pole does what? It simply allows drainage through tissue that was formerly used in other capacities. Removal of a lobe does what? It simply allows drainage through the cut isthmus; injections of hot water does the same by forming cauterized fistulae into the body of the gland; the iodids do the same by causing the disappearance of the damming hyperplastic tissue in the goiter. And so down the line of medical or surgical methods in goiter work they all do good or bad only in so far as they facilitate or interfere with drainage. Working on this idea, I have lately passed silk threads into the body of the gland in the hopes of establishing a more permanent drainage. My results to date have been very promising, although one should always bear in mind the habit goiters have of improving at the most unexepected time.

DR. C. J. MILLER: The cases that drain too much are the ones that give us the most trouble.

DR. GENELLA: My answer to that, Dr. Miller, is that you, like many of our textbook writers, have erroneously presumed that thyrotoxic goiters are free draining goiters, and yet they naively will admit that, outside of registering the thyroid content in iodine percentage, they cannot go any further. I cannot reconcile the two beliefs that first the active constituents of the thyroid are simply a blood-borne hormone and the admitted fact that the Germanic analytic chemists have not better described it.

DR. SEXTON (in closing): I am glad to see that my simple paper has stirred up such an interesting discussion. I do not think that the blood picture, as suggested by Dr. Miller, has been paid very much attention in the big clinics of this country, where thyroid tablets or iodine are used. These increase the symptoms of hyperthyroidism in some cases. Some form of iodine is rubbed in, given internally or injected directly into the tumor, as is hot water, which in some cases proves beneficial.

The injection of hot water simply coagulates the albumen in the gland. I do not think that the drainage theory suggested by Dr. Genella has anything to do with the condition. The toxemia resulting from the absorption of toxins is the condition which causes the symptoms. The destruction of the epithelial cells improves the conditions; by injection we stop this by hypersecretion and following toxicity.

## REPORT OF A CASE OF PELLAGRA TREATED WITH TRI-SODIUM CITRATE.\*

By A. E. FOSSIER, A. M., M. D., New Orleans.

The following case was treated according to the recommendation of Professors Alessandrini and Scala, and whilst we cannot judge the efficacy of a remedy from one case, yet the result was so gratifying that I thought it advisable to make this report:

J. C. Whiteman, a farmer. Forty years of age. Born in Louisiana. Was admitted to the Charity Hospital on the first day of October, 1914. Previous to the last few years, except for occasional attacks of malaria, was a robust and healthy man. History negative for venereal diseases. He was from a healthy and strong family, his parents attaining ripe old age and all his brothers and sisters robust and healthy.

The patient was brought on a stretcher. His mind being blank the following history was elicited from his brother: The present trouble began several years ago with an eruption on the face and hands, which would disappear in the winter, and return, greatly intensified, in the spring and summer. Beyond the occasional attacks of diarrhea and loss of weight, slight attention was paid to the other symptoms until the past winter, when he had seven severe recrudescences of the affliction.

He was greatly emaciated and in poor physical condition. Was completely disoriented, and in constant apprehension; there were visual and auditory hallucinations, and a total loss of memory.

The hands and arms up to the elbow were one mass of papulo-vesicular lesions of such intensity as to demand surgical dressings. The mouth was sore and inflamed. Bowels very loose, had from twelve to fifteen stools a day. Temperature 102 degrees (Fahr.).

Dr. Ménage confirmed the diagnosis of pellagra.

The patient was given two decigrams of cacodylate of soda for twenty-five consecutive days, also daily injections of one cc. of a 10 per cent. solution of tri-sodium citrate by hypodermic injections. Fever ranged from normal to 102 degrees during the first twenty days of treatment, after which it gradually subsided. The bowels became regular and the skin gradually improved. The mental condition cleared up. At the end of the month the patient was wonderfully improved both physically and mentally and was walking about.

When he was discharged on the 12th day of December all visible evidences of pellagra, the skin lesions, the mental conditions and the gastro-intestinal disorders had disappeared.

Whilst this is a disease of many recurrences and frequently of apparent recoveries, I am greatly tempted to ascribe the immediate and remarkable cure to the use of the sodium citrate.

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There is no doubt that the arsenic is a valuable adjunct to the treatment on account of its great alterative and blood-making properties.

The sodium citrate specified by Alessandrini and Scala is the neutral salt and can be prepared by any pharmacist. Parke Davis' Experimental Laboratory puts the same in sterilized glass ampules of 1 c.c. each.

#### DISCUSSION.

DR. W. H. SEEMANN: Every now and then we hear of some new medicine that cures pellagra. The etiology of pellagra is a very uncertain one. Goldberger thinks it is due to an insanitary diet. Dr. Fossier makes no mention of the previous diet of the patient. The diet of the average farmer is one that in the early spring has just begun to manifest itself. Then vegetables are used and the patient begins to pick up. I think Dr. Fossier's case is simply one of a coincidence, and not a cure.

DR. FOSSIER (in closing): I read an article in a journal about the trisodium citrate treatment. In other cases it has been used with good results. I strongly believe the treatment has something to do with the cure of the disease.

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## THE TECHNIC IN THE CLOSURE OF ABDOMINAL INCISION.\*

By E. DENEGRE MARTIN, M. D., New Orleans.

"Take care of the little things, and the big will take care of themselves," is an old axiom too often neglected. In no occupation of life is strict attention to detail more essential than in surgery, and yet how often do we see every principle thrust aside for the sole purpose of getting into an abdomen; and still more shamefully neglected because the rude handling of the viscera has so shocked the patient that a warning from the anesthetist must result in a hasty retreat, and either through ignorance or circumstance the proper technic in the closure of the abdominal incision is neglected.

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It is just this kind of work, absolutely unsurgical, which is producing an army of neurasthenics; we all have them, but those who are consulting the welfare of their patients rather than their own selfish ends, either by taking them to competent men, or by properly preparing themselves to do this work, are furnishing the least number of recruits.

It was during my internship at the Charity Hospital that my attention was first called to the many complications in operative wounds, especially abdominal, and I have since given this particular phase of surgery the closest study, and believe that my technic for the last three years is worth reporting. It is now almost possible to predict with certainty the course of every abdominal incision after laparotomy; it was just as possible some years ago, but the prognosis was quite different. It was the discomfort of patients, and especially pain in abdominal wounds, which originally excited my interest. I first noticed that the stitches were nearly all buried in the tissues a few days after operation, and that every movement was painful, but that just as soon as the stitches were removed the patients were comfortable. I further noticed that tight sutures invariably produced stitch abscesses. It was then that I adopted the plan of tying them loosely; not only were the patients more comfortable but the stitch abscesses were less frequent. My surgical training began in the antiseptic period and merged into the aseptic period; this afforded me the opportunity of studying the methods of both schools. In the antiseptic period I cannot recall an instance where an abdominal wound healed without infection, usually confined to stitch abscesses, often extending to the deeper structures. I am now convinced that these results were due as much to the technic employed as to the methods practiced. Ventral hernias, too, were common. The first wound I ever saw heal primarily was an incision over the left shoulder, six inches in length, made for the purpose of removing a lipoma. It was the first operation done in the Charity Hospital in which asepsis was practiced throughout. The gauze, instruments and catgut were sterilized by Dr. Parham. The operation was performed and the dressing allowed to remain untouched for a week. The interns, including myself, expected to see the man's shoulder bathed in pus, and some were open in their criticisms of the doctor, practicing new-fangled notions and willfully neglecting the patient. You can well imagine our surprise when the dressing was finally removed to see the wound

not only healed, but the catgut sutures drop off with the dressing. This one case established what years of talk by others had failed to do, the advantages of asepsis. This was a great step forward, but other details had to be and still must be worked out. The sterilization of instruments and dressings by heat was a fixed procedure, but the sterilization of the skin was not. Experiments in laboratories showed such a diversity of bacteria in the skin that these were thought to be responsible for the ill-results in most cases, and the strenuous methods adopted for their destruction was likewise destructive to tissue, and so traumatized the skin as to lower its vitality and make it a nidus for invasions of bacteria. So likewise was the trauma inflicted by tight sutures the greatest contributing cause to stitch abscesses, not only interfering with the circulation but producing necrosis by cutting deeply into the tissues. When used, catgut overcame this objection to some extent, as it was more elastic and too weak to stand the same amount of strain as silk or silk worm. To overcome these difficulties all kinds of fancy stitches were devised, through and through, running suture, interrupted, figure of eight, etc., etc., and still the infection went on. From my observations I learned the following facts: (1) The skin was often blistered from preparation; (2) sutures were too tight and invariably cut deep into the skin; (3) when removed early, wounds did better, but as most of these sutures were put through all the tissues, including peritoneum, it was unsafe to remove them too early; (4) stitch abscesses often resulted in deep infection; (5) deep infection meant tedious convalescence, especially if buried silk sutures had been used; (6) infected wounds nearly always resulted in ventral hernia.

The first objection has been overcome by our saner methods of preparing the skin surface, it needs only to be shaven and cleansed with benzoin and iodine after the patient is brought into the operating room; by this method no trauma is inflicted and the pores are blocked with iodine.

In making the incision a clean cut should be made and all tissues should be dissected with a sharp knife or scissors, the practice of tearing the muscle from its bed is unsurgical; it causes an unnecessary amount of trauma, destroys nutrition, and in many instances the result is latent hemorrhage or dead space. The fascia should be cut a little to one side of the median line, the muscle is dissected up, pulled over to one side, exactly as is practiced in the Battle

operation, the posterior sheath and peritoneum are then opened. Before the operation on the viscera is begun the raw edges of the wound should be protected with small cloths or gauze and held in position with retractors or forceps.

This serves a double purpose; it prevents further trauma of the wound and protects it against possible infection. The protection of the raw surfaces against the repeated trauma, produced by dragging gauze or instruments over the surface, is of greater importance than many are inclined to think, especially if the operation is to last any length of time. Another practice to be condemned is that of wiping out the wound from end to end with gauze—if this practice is repeated a number of times the capillaries are destroyed, a marginal necrosis results and delays union, and, furthermore, it is sure to spread infection if any be present. Have your assistants sponge by simply pressing the gauze against the bleeding surface. Every bleeding point, no matter how insignificant, should be caught. It may not be necessary to ligate each small vessel, crushing is frequently sufficient to control hemorrhage, but secondary hemorrhage is always a menace and prevents primary union.

We now come to the most important step in the technic, the closure of the incision. First, ligate all vessels. In order to prevent post-operative adhesions or post-operative hernias, the peritoneum must be closed perfectly, any raw surface or any small opening overlooked means either an adhesion or a hernia. The posterior sheath should always be included with the peritoneum when possible. If the dissection has been clean and no unnecessary trauma inflicted, the muscle will drop back into its bed; it may not appear to fill the space at once, and it is for this reason that so many have thought it best to suture it back; never suture the muscle if avoidable, only an injured muscle need ever be sutured. It is active, and if sutured to the fascia its functions are impaired and is often the cause of unnecessary pain; this condition is less liable to occur if plain catgut is used. The superficial fascia is then closed, brought snugly together, but not tight enough to pucker. Many hernia operations, I am confident, have failed as the result of tightly suturing the fascia. We should remember that just so long as tissues are brought in contact they will adhere, and that being crushed together does more harm than good. What better illustration have we of this fact than in skin grafting, when every precaution is taken not to put too much pressure on the graft?

Inspect the wound carefully before closing the skin and be sure that all bleeding points are checked.

In closing the skin if the operator would bear in mind the fact that its only function is to cover over and protect the deeper structures, and plays no part whatever in supporting the abdominal walls, I believe a great problem would be solved. Such being the case, we have but one rule to observe, to approximate the edges and to keep them in contact for a sufficient length of time with just as little tension as possible. If the deeper structures hold, so will the skin. In patients with firm abdominal walls I find that not more than one suture to every inch is sufficient. These must be introduced at least one inch or more from the margin of the wound; the farther from the line of incision the suture is placed the fewer are required. The first suture must be placed on a line with the end of the cut, otherwise the wound will gap at this point. The skin is elastic, if caught near the margin it will retract and require a suture every quarter of an inch to keep it in contact, but if caught at a distance from the margin of the wound it is pulled up *en masse* and the edges are held in situ without pressure or trauma.

The choice of suture material is important. I use catgut in everything but the skin, here I prefer silkworm as it is less liable to carry infection. Catgut, however, should never be used for through and through sutures if a mass of tissue, including muscle, is tied with catgut, especially if tightly tied, the edema of the tissues will either slip the knots as soon as they soften, or break the gut. In putting in any suture the amount of tension should always be calculated, and especially is this true of the skin. Sufficient tension to approximate the edges is all that is required; the tissues should never pucker. Hyperemia always follows trauma, and when the cut edges are approximated and held in apposition by tight sutures, the swelling is often sufficient to bury the suture. The result is pain and discomfort to the patient, burrowing of the suture into the skin surface, stitch abscesses and sometimes deep infection. If the skin sutures are properly applied, they have served their purpose in three or four days and will be found loose after that time. In flabby, thin abdominal walls sutures must be introduced at much closer intervals, but the rule applies here that never should an unnecessary suture be used *anywhere*.

Should any bleeding occur and a noticeable hematoma form, the

stitches should be removed and the entire clot turned out. This procedure applies as well to infection. When an abscess occurs in a wound following operation, there is no greater error than attempting to drain it through a small opening. Just so soon as the abscess is detected every suture should be removed, the wound irrigated with sterile solution and drained with gauze until the surface is free from infection and well covered with granulations; the edges can then be approximated and held with plaster strips. This infection is usually superficial and gives little trouble if drained at once. Patients with very fat abdominal walls are especially prone to infection, so much so that I now make it a rule to drain such wounds with silkworm gut or small rubber tubes, especially in cases operated upon for umbilical hernia, which nearly always occur in very fat women. On the eighth day, sometimes earlier, sutures are removed, the surface painted with tincture of iodine to block the orifices of the suture holes, and no dressing applied. This has been the technic followed by me for three years, and my results are excellent. Less pain and discomfort to patients, fewer abscesses, and a more rapid convalescence. I have long since realized that the bulky dressing, held in position with tight adhesive strips, is a waste of material and an expense which should be condemned, especially in public institutions.

#### DISCUSSION.

DR. C. JEFF MILLER: I agree with what Dr. Martin says, and have nothing to add to any extent. We do not fully appreciate the value of our previous mistakes. The suture should be used simply as a splint. We should not get over 1 per cent. of bad results. There is a good method of closing in old cases. I go through the old scar and then overlap in closing. I do not dissect any of the layers. Why does Dr. Martin desire to open up an infected wound and then pack?

DR. C. WILLIAM GROETSCH: As to the efficiency of Dr. Martin's method of closing abdominal wounds, I wish to bear testimony. I have supervised post-operative treatment of over thirty-odd cases to date in our recent hospital service, with not a single case of wound infection. This includes his cases and mine. However, as to the doctor's method of treating infected abdominal wounds by "ripping them wide open at once," I do not exactly agree. My



experience has been to allow very free drainage by keeping infected wounds well opened, separated by silver wire device, and, if necessary, changing drainage daily; *never* packing wound.

DR. L. SEXTON: In clinics which I have visited I have heard it claimed that *Staphylococcus albus* was the principal cause of stitch infection, probably due to inserting the needle from without inward, thus carrying the germs in with the needle puncture. I would recommend inserting the needle from within outward, if the puncture is the cause. Do not tie the suture too tight, as stitch necrosis may result; hold scissors under stitch as they are tied. In regard to handling of parts operated upon, I think that the practice of Dr. Lane, of London, is ideal; he does not touch the wound, which is covered, as soon as made, by sterile towels; he picks up the materials to be used with forceps, hence nothing has touched the wound, except sterile instruments. I think the minor details in surgery should be more closely followed, as this would afford more protection to the patient. I would recommend one or two sutures in the muscles in closing the wounds for future protection against hernia. While the sheaths of muscles and membranes are being approximated we might as well reinforce against hernia by having the muscles do their part.

DR. L. J. GENELLA: I believe surgeons should always bear in mind that many patients cannot stand general bathing without it setting up a violent dermatitis, accompanied with various psychic disturbances, often in a marked degree. This peculiar individual idiosyncrasy is, in my mind, often the cause of post-operative delirium or other psychoses. As a matter of medical history is not Dr. A. B. Miles always credited with having been the first to introduce aseptic surgery into the New Orleans Charity Hospital?

DR. URBAN MAES: I think aseptic preparations very important. I think the present method of using benzoin is most practical. It simply hardens the skin and prevents the dissemination of bacteria. I think that, after passing through the skin, then everything should be cleaned up, changing of gloves and cleansing of exposed parts. I do not think that the practice of pulling down the omentum is good, as it may lead to ptosis of surrounding viscera. I prefer the closure of the peritoneum by cutting the edges of same outwardly. Traumatism is always productive of infection. It is best to leave the tissues in good condition.

DR. MARTIN (in closing): I think that packing is a mistake. Gauze dressing should be used to allow proper drainage. In answer to Dr. Miller, I would say that I do not like overmuch dressing. Never dress a free wound. I think that the importance of overlapping old scars is very fine. Never saw any bad effects from benzin, except possibly blisters when it runs down the sides.

I do not think Dr. Miles was the first surgeon here to use the aseptic technic, but think it was Dr. F. W. Parham, following the procedure of Dr. Laplace. Dr. Miles later adopted this method.

Never use catgut for through and through abdominal sutures; it is too easily absorbed.

I think it is purely the technic which succeeds, and not the mere changing of gloves.

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## REPORT OF CASES.\*

### I. Removal of Gasserian Ganglion; II. Ulcer of Stomach; III. Probable Perineal Fistula; IV. Ruptured Bladder.

By CARROLL W. ALLEN, M. D., New Orleans.

#### I. Removal of Gasserian Ganglion.

Miss M., age 26. Family history negative. Has had some nasal trouble, for which she was operated by Dr. William T. Patton.

For several years past has suffered from neuralgic attacks on right side of head, particularly in supra-orbital and temporal regions; for past year these attacks have become more violent and frequent, the area of disturbance spreading, involving at times the superior and inferior maxillary areas; there has also been much pain in the occipital region and back of the neck. The most constant and severe pain had been in the temporal region.

Dr. Patton had previously injected the peripheral branches with alcohol without much effect upon the pain; he then resected the supra orbital branch and secured relief from pain in this region. The pain persisting in the other parts, she was referred to me for an injection of the gasserian ganglion. This was done with Dr. Patton's assistance in December, 1914, using the Hörstel route. Foramen ovale was reached and entered without much difficulty and 1 c. c. of 80 per cent. alcohol injected. There was, however, no relief from the pain; this was unusual, and naturally gave rise to some doubts regarding the accuracy of the injection. It was accordingly repeated in ten days. This time I took special precautions to make

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sure that the ganglion was reached by first injecting a novocain solution and waiting for anesthesia in the peripheral distribution of the nerve trunks. This developed in about five minutes, and was quite pronounced on the entire right side of the face, the needle meanwhile having been allowed to remain in position 1 c.c. of 95 per cent. alcohol was injected. No benefit to the pain followed this injection. The young woman was quite willing for anything in her efforts to seek relief, and accepted an operation upon the ganglion quite willingly.

She was operated January 16, 1915, with the assistance of Drs. Patton and Cole.

The lateral temporal route above the base of the zygoma was selected. A skin incision was made which was limited to the hairy scalp, except for about one-half inch at its anterior extremity. The temporal muscle was split in the direction of its fibers and freely retracted to either side. This method of exposing the bone for any subtemporal operation has decided advantages from the cosmetic point of view, as it prevents the unsightly depression which often follows cutting of the muscle or peeling it down from the bone; the replaced muscle also better protects the opening in the skull. The subsequent steps of the operation progressed very smoothly and presented no particular features of interest. The skull was opened and the brain and dura progressively elevated from the floor of the skull until the ganglion was reached; here we did not quite carry out our program. We had intended to divide only the sensory root of the ganglion, this having the more conservative and equally effective operation and eliminates the danger of possible trophic disturbance in the eye. To prevent the better exposure of the ganglion and to facilitate the recognition of the sensory root, the mandibular branch was divided at the foramen ovale and the proximal end caught with forceps to put the tissues slightly on tension. With Mayo scissors the two layers of the dura were separated exposing the ganglion. At this point the nerve tore away from the ganglion. The second division of the nerve was then utilized as a tractor in a similar way, but this, too, tore away from the ganglion. This experience was unusual, as the ganglion is generally tough and fibrous and not easily torn. The ganglion itself was then caught in the forceps, but was pinched off without any traction being applied; following this the site of the ganglion was not disturbed further, as we wished to permit any portion of it

yet attached to the ophthalmic division of the nerve to remain in continuity. The inner layer of the dura above and behind the ganglion was then opened and the sensory root divided.

The operation was finished by a small drain placed beneath the dura. The separated fibers of the temporal muscle were approximated over the opening in the skull and the scalp sutured. Progress was uneventful until the fifth day, when a mild grade otitis media developed, for which Dr. Patton did a paracentesis.

On the sixth day facial paralysis was evident, and was quite marked the day following.

Slight pain which had existed in the eye for several days now became more troublesome and was associated with double vision.

These several troubles have slowly cleared up. The double vision had disappeared in a few days. The pain in the eye, which was unassociated with any inflammatory trouble, and the ear disturbance are slowly clearing up, as also the facial paralysis which at this time is much better. The eye pain is easily explained as a consequence of the destruction of the trophic center in the ganglion which must have been more extensively removed than we thought at the time, due to its unusual friability.

The otitis media was without doubt an independent development and does not appear to have had any connection with the operation. The paralysis of the seventh nerve was not apparently due to the ear trouble, and is not easily explained; it may have been due to the edema spreading backward from the operative field.

The area of anesthesia on the right side of head and face was complete from vertex to inferior maxillary region and extended from the midline of the face in front to the ear posteriorly.

## II. Ulcer of Stomach.

H. S., aet 52. Syphilis during early manhood; alcoholics moderately. Had always been a robust man. Was referred to me by Dr. F. R. Gomila in September, 1910, suffering from gastric hemorrhage. He gave a history of pain after eating for several months, gradually growing more severe; occasional vomiting gave some slight relief. Just prior to being referred to me began to vomit blood and pain in stomach became very severe. It was constant, but made worse by eating. The vomiting of blood occurred daily often losing as much as a pint at a time. This soon reduced the patient to an extreme degree of anemia, with rapid feeble pulse.

We attempted to make a stomach examination, but his condition became so alarming that we operated without obtaining this information.

Operation, September 17, 1910, assisted by Dr. Gomila. Midline incision. The entire upper part of the abdomen around stomach was a dense mass of adhesions extending from one side of the abdomen to the other. After much difficulty the fundus of the stomach was defined. It felt thick and infiltrated. Slowly other parts were gradually liberated from the mass. Everywhere the stomach walls felt thickened and woody. We were at a loss to explain this pathology. After spending over an hour in breaking up adhesions we had not liberated either anteriorly or posteriorly any healthy stomach-wall which could be utilized for a gastro-enterostomy. The case was accordingly abandoned and the abdomen closed. We gave an unfavorable prognosis and expected an early termination.

To our great surprise, after recovering from the anesthetic, the patient felt much better; all pain had gone of the kind that he had previously had, and there was very little post-operative discomfort. There was no post-operative vomiting, and he soon called for food and took it with a relish. His convalescence was rapid, and he soon gained strength and left the hospital with no return of his previous symptoms. He was put on mixed treatment some time later, and in a few weeks returned to work feeling quite restored to health. I was as much surprised at his improvement following operation, as I was unable to explain the pathology we encountered in his abdomen; I could not understand how we had benefited him, and was inclined to attribute some of his post-operative improvement as another triumph of mixed treatment, and had recorded the case as one of the unsolved mysteries of medicine.

The sequel of this case was to be written four and one-half years later when the mystery was solved. During these four and one-half years he had enjoyed good health, free from any disturbance, and had not missed a day from work. During November, 1914, he began to have some stomach distress, which soon became a pain, worse after eating; the pain became so severe that he would go several days without eating, but never vomited. He was again referred to me by Dr. Gomila and by me to Dr. Simon for a stomach examination. Dr. Simon reported hyperacidity with pyloric obstruction.

Operation January 6, 1915. Midline incision. The stomach was found perfectly normal in appearance, with no adhesions except on the posterior surface at the pyloric end, where an area about

three inches across was intimately adherent to the posterior abdominal wall. These adhesions were very firm, and the thick and callous edge of an old ulcer could be clearly outlined in the stomach wall. As the adherent area embraced the vena cava and portal vein, and as the patient was in no condition for an extensive resection, a posterior gastro-enterostomy was done. The conditions met with at this operation as compared with those encountered at the first operation four and one-half years ago showed a complete transformation. The dense adhesions previously met with had entirely disappeared; the anatomy was perfectly normal except around the ulcerated area. The cause of the pathology encountered at the first operation was now apparent, the ulcer had perforated and produced a localized peritonitis around the stomach, but why the breaking up of adhesions at that time should have relieved all symptoms for so long a time is not so easily explained.

The post-operative progress following the second operation was uneventful until the fifth day, when a gastric hemorrhage occurred, with vomiting of considerable blood. This recurred the day following when we washed his stomach with very hot water. The stools at this time were tarry. Slight hemorrhages occurred on the seventh and eighth days when we began the administration of one-half grain emetine by needle daily, after which there was no recurrence, and patient made steady progress towards recovery, with no further incident of note.

He is now quite well, with complete relief from all previous symptoms, and has resumed his work. The explanation of the hemorrhage following the second operation is not easy; it is not likely that a gastro-enterostomy wound which had previously shown no symptoms of hemorrhage should begin to bleed freely on the fifth day, what seems more probable is that it occurred from the ulcer and was due to some disturbance to it brought about by the gastro-enterostomy.

### III. Probable Perineal Fistula.

Mr. G., aet 25. A robust young man applied to me July 26 with a subacute gonorrhoea. Examination revealing a moderately infected prostate. This was treated by the usual methods, and at first without incident of note. After about two weeks he complained that he was getting the seat of his trousers wet during the irrigations; as this did not occur from the use of the irrigating nozzle at the meatus, steps were taken to determine its source. First a towel and then a vessel placed between his legs collected some of this fluid, which was seen to be the irrigating solution. It was evident that a leak was taking place somewhere along the urethral tract, but repeated examination failed to locate its site. It

was not from the rectum, as this was always found empty after repeated fillings of the bladder, and it was not likely that fluid could escape through the anal canal without his knowledge. Further investigation showed that this leak always took place when the solution was entering the bladder and not when he was voiding it, and he never soiled himself when voiding urine at other times. I was able to locate the point of leak as somewhere in the perineum, but the exact spot could not be determined, although repeated search was made for it; as he was very stout it was difficult to irrigate and watch the perineum at the same time. Endoscopic examination of the urethra failed to reveal the opening, or any other abnormalities.

It was most probably a periurethral gland which had opened externally, leaving a small capillary channel communicating with the urethra.

#### IV. Ruptured Bladder.

C. S., aet 26, city fireman. While fighting a fire on December 18, 1914, at 3:00 A. M., was forced by the flames to jump from a gallery about twenty feet above the street. In landing upon the pavement he came down squarely upon his buttocks. He stood up following this, but felt badly bruised and was removed to the hospital in the ambulance. Upon arrival at the hospital physical examination was negative; a general feeling of abdominal soreness was all that he complained of; he was accordingly admitted to Ward 69 for further examination.

When seen by me about 10 A. M., he was complaining of some abdominal pain which was general over the entire cavity; physical examination was negative and was unsatisfactory, as patient was very stout and heavily muscled. Temperature, pulse and respiration were normal. He had not voided since entering the ward seven hours previously, and felt no desire to. Upon being questioned, he stated that he had urinated upon retiring the night previously. The alarm had sounded about 2:00 a. M., and he responded without emptying his bladder, which consequently must have been full at the time of his fall.

When interviewed by me, approximately fourteen hours since he had voided, he felt no desire, and was unable to accomplish the act. This point I would like to emphasize, as a diagnostic point in rupture of the bladder. A catheter was passed and withdrew about four ounces of what seemed to be pure blood.

Operation at 2:30 P. M. revealed a large irregular rent in the upper portion of the bladder wall about as large as a good sized lemon and looked as if the top of the bladder had been blown out. The cavity was full of urine and blood.

The rent was closed with a double row of stitches, the second row peritonealizing the first. A suprapubic vesical drain was inserted. Three drainage tubes were placed in the cavity, one above the bladder down to Douglas's cul-de-sac, and one in each flank through stab-wound. The abdominal cavity was closed, and the patient put to bed in the Fowler position.

His progress was without incident of note. No vomiting, no temperature and practically no distension. The drainage tubes

were removed on the fifth day, the suprapubic catheter removed and an urethral catheter inserted.

He left the hospital after several weeks, having made a perfect recovery.

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## RECLAIMING THE STEPCHILD OF OPHTHALMOLOGY.\*

By R. CLYDE LYNCH, M. D., New Orleans.

The overflow of tears has occurred since man possessed eyes. The relief for this condition by reëstablishing nasal drainage was suggested by the ancient Greeks, but was never practiced to any extent, and was finally forgotten. It became the duty of the ophthalmologist to adopt this seemingly unwelcomed stepchild, and the treatment has been in his hands from that time to this. His methods have consisted in washing, probing, sac extirpation and partial removal of the lachrymal gland, none being to his entire satisfaction. A suggestion was made to combine the partial removal of the sac with reëstablishing of nasal drainage, and this has seemed to revive once more the method proposed by the Greeks of long ago.

The lachrymal sac, lying as it does in a small depression on the outer nasal wall, separated from the frontal ethmoidal and maxillary sinuses by the thinnest bone, having a pin point opening from the eye and a larger drainage outlet in the nose, the cavity lined by ciliated epithelium moving towards the nasal opening, bear thus such a close resemblance to the other nasal accessory sinuses that we can well consider it as such with a specialized function just as we do the ear with its eustachian tube, etc.

To think of it in this manner will explain Kuhntz' assertion, concurred in by Brückner and Rhese, that the nose is responsible in 93.7 per cent. of the cases for involvement of the lachrymal sac. It will also point clearly to the more rational methods now adopted for its relief, by establishing proper nasal drainage.

We may tabulate or group the nasal causes of lachrymal disease as follows:

1. Those interfering mechanically with the normal drainage, producing damming back of secretions and an overflow of tears, such as septal deflections, sharp septal spurs, dental cysts, unerupted teeth, hypertrophy of the middle turbinate or cystic en-

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largement of that bone; polyps, hypertrophy of the anterior end of the inferior turbinate, or localized hyperplastic changes in the mucous membrane near the nasal opening; congenital atresia or strictures of the nasal duct; the presence of foreign bodies lodged in the neighborhood, fractures from the injuries, etc., etc.

2. Inflammatory infections of the nose that extend by continuity or contiguity of tissue to the lachrymal apparatus, such as acute and chronic catarrhal and purulent rhinitis; atrophic fetid rhinitis; by the direct spread through the tissues of tuberculosis, lupus, cancer, scleroma and syphilis, or by the erosion of the thin bony walls in frontal ethmoidal and maxillary sinus infections.

Whether it be one or several of these causes that influence this apparatus, there is produced a definite distortion of its normal physiology, an overflow of tears, and likely a cavity filled with mucus and pus. To relieve this and restore it to its normal function as nearly as possible is our duty, and to this end we are striving.

As you can see, many of the cases will yield to purely local measures—topical applications to the eye, irrigation of sinuses, removal of foreign bodies, and relief of hypertrophies will bring about the desired results. If the ophthalmologist and the rhinologist, working together from each end of the apparatus, cannot by conservative means restore its proper flow and relieve its sac of the accumulated pus contents, it would seem now to fall to the lot of the rhinologist as the one most properly equipped to restore the drainage into the nose by some one of the ingenious surgical procedures devised for this purpose.

In the selection of any operative procedure, our first thought should be the permanent relief of the faulty state, this to be done in a manner that returns the part nearest to its normal with the least amount of destruction of tissue or disturbance of surrounding parts. Resection of the sac, followed by possibly a resection of the lachrymal gland, would seem far away from this ideal. On the other hand, the reestablishment of drainage into the nose, and that in such a way as to restore the whole apparatus to its normal state, would approach the ideal laid down above.

Such are our efforts now to reclaim the ophthalmological stepchild. Four types of surgical procedures have been devised thus far: Tati, West, v. Eiken, and Yankauer.

I. In 1904, Tati operated by detaching the periosteum from the

lachrymal fossa, drilling or boring a hole through the floor of the fossa, excising the nasal mucous membrane, then resecting that part of the sac in relation with the nasal opening, suturing the external wound. His recoveries numbered some 45 per cent., but there was much trouble in maintaining the nasal opening, and the external scar was a drawback. In many cases the communication between nose and eye was so free that nasal secretions were blown through the eye, the conjunctiva was more open to infection, or, when otherwise infected, was especially hard and slow to heal. The method was not then, and is not now, popular, though L. Leighton Davies reports ten cases with seven recoveries.

II. In 1911, West reported his endo-nasal window resection of the lachrymal sac. He proceeded by making rather an inverted U-shaped incision over the prominence produced in the nose by the lachrymal fossa. This is to be seen just in front of the attached end of the middle turbinate and corresponds to the posterior border of the nasal process of the superior maxilla externally. Incisions extend down to the bone, the flap reflected downward. With a small gouge over the denuded bone a window is cut in the external nasal wall; the sac is then seen as a glistening white membrane and picked up with small, appropriate forceps, and the portion exposed resected; the flap, with a small section posteriorly excised, is placed back in position and held in place by packing until healing is established, usually in twenty-four to forty-eight hours. Drainage is established at once. West now reports 235 cases, with 94 per cent. cures.

In this operation the sac alone is touched, the duct remaining untouched, and the drainage takes place over the inferior turbinate into the vestibule. This operation is easy and rapid to perform, gives slight reaction and secures fair drainage. The objections are that it leaves the duct untouched and corresponds then to draining an abscess at its upper part instead of its lowest—drains the pus of tears into an unnatural locality of the nose, permits retrograde blowing, and infection through the puncta into the eye, and has been known to produce excoriations and furuncles of the vestibule. It is this operation that is attracting the attention of the rhinological world, and the one now in most favor.

III. Von Eiken, after doing a radical or Caldwell Luc operation, opens the nasal duct by resecting the naso-antral wall, follow-

ing the resection to the sac. The duct is then resected, both intra-antrally and intra-nasally. He does not fear secondary antral infection when a large intra-nasal opening per antrum is made. The method is no advance, destroys normal parts, requires antral opening and drainage (in many cases normal), does not drain into usual site of nose, would be likely to cicatrize and produce recurrence. It permits the possibility of antral infection and is mutilating and unsurgical.

IV. Yankauer devised the operation I have selected to follow in all my thirteen cases, and, though tedious and difficult, it surmounts all of the objections raised so far, and in my hands has produced most satisfactory results. I realize the number of cases (thirteen) is too small, but the results have been so universally satisfactory that I am encouraged to report them now.

The operation is suitable for all conditions where drainage is indicated, and is the only one so far suggested that will permit a perfectly free opening of the sac and canal; enlarges the bony boundaries to prevent subsequent contractures; establishes the drainage to the inferior meatus and maintains the normal physiological processes concerned in the proper drainage of the tears from the eye to the nose. It neither destroys any part of the sac nor requires an external or antral opening. Air, pus, or other material cannot be blown back to the conjunctiva, and the eye is no more liable to infective processes than before, and, when they do occur as independent conditions, will yield as readily to treatment as usual.

The operation is as follows: I administer morphin and scopolamin in appropriate doses one hour before. I cocainize the nasal mucous membrane with powdered cocain dipped in adrenalin, making two or three applications at about three-minute intervals. This produces quick, profound anesthesia and marked contraction of the tissues at the same time.

I begin a horizontal incision somewhat above the attached end of the middle turbinate on the outer wall of the nose, extending it as far forward as the anterior end of the inferior turbinate; drop a vertical incision to and through the anterior end of the inferior turbinate and continue this back on the free border of that body for a distance well back of the point of drainage of the sac.

This large flap with its periosteum intact is reflected back and tucked under the middle turbinate. The turbinate bone is then re-

sected slowly and accurately to its highest point of attachment and beyond the point of outlet of the canal, care being especially taken to preserve the membrane on the outer aspect of the turbinate bone.

A muscle hook of the eye outfit is then used to locate the normal opening of the nasal duct. This offers some difficulty but can be overcome readily by following Yankauer's suggestion of drawing the hook from behind forward with the tip closely applied to the outer wall. When surely and definitely located the hard anterior lip of the bony canal can be removed with a small straight chisel. The greatest care must now be maintained to preserve undisturbed the membranous canal; by appropriate bone forceps, chisel and straight rongeur I have found no difficulty here. Continue this bony opening to the dome. When this is reached I slip a Bowman probe through the upper or lower canaliculus to the sac. It will show in the nasal wound and can be felt. I then use a short pointed canaliculus knife, slightly curved, and, while holding the sac well away from its external wall, incise the sac from dome to isthmus. This will allow the contents to flow into the nose, and is quickly caught on a cotton applicator. The muscle hook is then applied in the canal from above downward and, using this as a guide, I slit the canal close to its anterior border from the isthmus to its nasal opening, using the hook to determine any obstruction, stricture, bridge, etc., to be sure the pasageway is perfectly clear from top to bottom. The Bowman probe is then seen to pass through the sac down the open gutter into the nose and is maintained there while the flap is replaced and kept in place by stitching or packing, or both. I have always been very careful not to injure any part of the mucous lining of the canal except along the line of the incision. The flap of mucous membrane created by the incision is folded back over the posterior bony ridge and held in place there until the mucoperiosteal flap is accurately replaced in its position. I pack with gauze moistened with compound tincture of benzoin, which is removed in from twenty-four to thirty-six hours, when drainage is usually established. There is but little reaction and discomfort and the patient returns home the same day. The post-operative treatment consists usually in pus cases, of argyrol instillations into the eye, occasionally one washing of the sac to remove any clinging mucus or blood clot. I continue the argyrol, usually once a day, for a week, after which it seems useless to do anything else, for the patients are well.

I have learned to "keep hands off" the nasal end and, except for the application of vaselin twice daily in the nose by the patient, do nothing.

My thirteen cases have all succeeded perfectly in establishing nasal drainage, relieving entirely and completely the overflow of tears, and I have been unable to express any pus from the sac. In fact, I cannot tell by any way which side has been operated on either from the looks of the eye or of the nose.

All thirteen cases had pus at time of operation. In one the sac was distended almost to the rupture point. She had two external fistulæ before this. The sac was opened intranasally, the external swelling disappeared without scar and she has had no recurrence, nine months since operation. One was congenital, obstruction operated on at fourteen years of age. Three others had existed since two years of age. Two were of two or three years duration; one had osteoma, blocking floor and inferior meatus. The osteoma was removed at one sitting, the sac two months later. This case was one of marked muscle imbalance, and my consultant, Dr. Robin, reported marked improvement after the sac drainage. Four were cases of atrophic fetid rhinitis, which had a preliminary stage of treatment before operation. My older case, in point of operation, is a little over a year, and he still continues well and happy.

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## USE AND ABUSE OF FORCEPS; REPORT OF CASES.\*

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

It is not the object of this paper to burden you with the usual textbook indications and contra-indications for the use of forceps. It is my intention to relate from my limited experience in this line some failures as well as successes, and also to urge from a practical side the more general use of forceps in suitable cases and discourage their abuse in unsuitable cases. De Lee says the forceps of obstetrics is an instrument designed to extract the fetus by the head from the maternal passages without injury to it or the mother. How often do we see this abused, and as a result of hasty application or carelessness in selection of cases obtain as a final result an invalid mother, a stillborn or crippled child? During the course

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of obstetrical practice the very important question often arises, should we use forceps or should we allow a further attempt at spontaneous delivery? To decide this frequently taxes to the utmost the ingenuity of the physician, because in so doing he is considering first the life of the mother and child and, second, the future welfare of the mother and child. Very often the earnest appeal for help from the mother or the constant suggestion from some member of the family will cause one to act hastily and terminate a labor which, if left alone, would have accomplished the same with less injury to the mother and probably the child. In order for forceps to be properly used, it is necessary that the individual cases be studied thoroughly; no one can set aside one class of cases and say forceps should be used or another class and say they should not be used. In both hospital and private practice there are undoubtedly cases in which labor should be terminated with the use of forceps and others in which they should not be used. Unfortunately we are all guilty of not thinking seriously of the possibility of operative interference in obstetrical work until, after several hours of trial, we conclude that the patient will not deliver naturally. A careful study of the pelvic measurements with a preliminary diagnosis of presentation and the position of the fetus and, also, the approximate size of the fetus will assist materially in making a prognosis at time of delivery and in determining the proper treatment in prolonged labor. This I think essential, and if properly carried out will not only reduce the infant mortality, but the infant and maternal morbidity as well. In looking over the records of the Charity Hospital for the year 1914 I was impressed with the fact that forceps were used so seldom and I was also impressed with the high fetal mortality when they were used. Four hundred and sixteen cases confined during the year of 1914 and forceps were used in only nineteen cases.

*Abuse of forceps:* The chief abuses of forceps are in the high application; that is, when the head is at or above the brim or inlet of the pelvis. Harrar, in the *American Journal of Obstetrics*, 1913, gives the fetal mortality in this condition as seventeen to twenty-six per cent. Aside from the mortality, we have the morbidity to consider, which is certainly very discouraging. Of all injuries to the child the high forceps will give the most extensive and numerous, including intracranial hemorrhages, compression and concussion of brain, fracture of skull and numerous nerve injuries resulting in temporary or permanent paralysis. As for the mother, the

injuries resulting from this condition are very serious, such as extensive lacerations of anterior and posterior walls of vagina and the cervix, and often rupture the uterus. As the high application is frequently associated with an incomplete dilatation of the cervix, the injury here is extensive, and very hard to cure; the tear often extends into the broad ligament or the lower uterine segment, and the amount of scar tissue formed during the healing process is hard to remove and is frequently the cause of much pain. Besides the danger of infection in this condition, the possibility of profuse hemorrhage is always present. One of the principal exceptions that I might mention in condemning high forceps is in dry labor in a normal pelvis with the head engaged at the brim of the pelvis and the cervix completely dilated; even in this condition if position was normal I should employ forceps only as a last resort and after pituitrin and other more simple methods had failed. The second and equally as great abuse of forceps is in cases of contracted pelvis; in the extreme cases the condition is so marked that even pelvimetry is not essential to make a diagnosis, the case is at once determined a suitable one for Cesarean section, but it is in the milder degrees of contraction, the so-called borderline cases (where the conjugate vera measures 9 or  $9\frac{1}{2}$  cm.) that the abuse is so marked. Watson, in the *Canada Lancet*, 1914, says in borderline cases where, with the pelvis normal in size or slightly contracted, there is a disproportion between the fetal head and pelvic brim, and the head has failed to engage at the beginning of the second stage, that immediate application of forceps will result in the death of the fetus in 25 per cent. of cases, and there will be a maternal mortality of 1 to 5 per cent. and a high morbidity. If the labor be allowed to continue without interference spontaneous delivery will occur in 75 to 80 per cent. of cases, with a fetal mortality of 1 to 2 per cent. Cesarean section performed before any attempt has been made to deliver with forceps should give a negative fetal mortality and a maternal mortality of 2 to 3 per cent, and finally the performance of the operation after one tentative application of instruments, providing asepsis has been observed, will give almost equally as good results. Should an attempt be made to use forceps in this condition, traction must be slight, as any case requiring more than the ordinary amount of force obtained from contraction of biceps muscle is not a case for forceps. In suspicious cases estimation of the relative size of the fetal head and maternal pelvis, as

advocated by Kerr and Mueller, will assist very much in determining the possibility of spontaneous or safe forceps delivery; failure to cause the head to engage, will usually indicate Cesarean section.

*Practical Indications for Use of Forceps:* Probably the condition most often calling for forceps is uterine inertia, frequently associated with resistant perineum in primiparæ, most often elderly primiparæ. Artificial rupture of membranes or use of pituitrin will sometime remove indication for forceps in these cases. Should this fail and the head remain on the perineum for a period of two hours or more, with slight progress, even though the pains be fairly strong, I think the labor should by all means be terminated with forceps. Another condition often necessitating the use of forceps is in occipito-posterior positions of vertex presentations with incomplete rotation and the small fontanelle directed towards the mother's sacro-iliac synchondrosis; this represents a class of cases where forceps are most often necessary, and even though the diagnosis has not been previously made, a prolonged second stage labor with strong contraction of uterus and slow progress should always cause one to think of occipito-posterior positions, especially if there has been a premature rupture of membranes, which is so often associated with this position. The fetal heart as a guide is also a good indication for the use of forceps; should the rate exceed 160 per minute or drop below 100 per minute, the labor should at once be ended; severe convulsive movements on the part of the child are likewise significant of lack of normal supply of oxygen and mean that an early termination of labor is necessary for the welfare of the child.

In a series of 253 cases delivered by Dr. Lanaux and myself, we found it necessary to use forceps forty-one times, with a fetal mortality of  $2\frac{1}{2}$  per cent. Our indications in these cases were as follows:

Uterine inertia, with resistant perineum..	20 cases
Occipito-posterior positions .....	9 cases
Slightly contracted pelvis .....	6 cases
Prolapsed cord .....	1 case
Threatened eclampsia .....	2 cases
After coming head in breech cases.....	2 cases
Placenta previa .....	1 case

In this series there were eight high forceps, with a fetal mortality of 13 per cent; ten mid-forceps, with a negative fetal mortality. In



this group there were two cases of contracted pelvis of mild degree, one with a conjugate vera measuring 9 cm., and the other a case of occipito-posterior position with a normal conjugate vera but a diminished transverse diameter of the outlet. Both of these cases had been in labor for several hours before we saw them, and death of the fetuses had already occurred before forceps were applied. There were twenty-three low applications in our series, with a negative fetal mortality; one of these cases also had a mild contracted pelvis with a conjugate vera of  $9\frac{1}{2}$  c.m. Another interesting case in this group was a case of uterine inertia with resistant perineum, pituitrin had been given, but because of slow progress and rapid fetal heart sounds, forceps were applied, and an apparently asphyxiated child was delivered, which I found after delivery of the placenta was due most likely to a premature detachment of placenta caused by the pituitrin.

In conclusion, I wish to emphasize the necessity of studying the individual cases and also the importance of careful pelvic measurements and, with a view of diminishing the maternal morbidity and the fetal mortality, to condemn the general application of high forceps and to urge forceps in prolonged second stage labor, provided that all normal indications are present.

#### DISCUSSION.

DR. J. W. NEWMAN: In his service at the Charity Hospital, where the Chief of Clinic is called into consultation in every forceps case, forceps had been used only five times in one thousand cases. Forceps are often used unnecessarily.

DR. P. J. CARTER (question to Dr. Newman): Has there not been an increase in the mortality on account of the small percentage of cases in which forceps were used in the Charity Hospital?

DR. NEWMAN (replying): I cannot consider that any lives have been lost on account of forceps not being used. The tendency on the part of the obstetrician is often to use forceps too late instead of too soon.

DR. M. A. SHLENKER: Greater attention should be paid to the fetal heart sound. In mild contraction, delivery usually occurs.

DR. W. T. RICHARDS: The use of high forceps is a barbarism, which will soon be relegated to the past. If the use of low forceps terminates labor several hours sooner than it could otherwise be

done, the relieved suffering of the mother more than justifies it, especially so in some cases where a better control of the perineum is secured.

DR. D. L. WATSON: The absence of surgical cleanliness in maternity is only too common. I think that when properly applied, forceps have their usefulness.

DR. PHILLIPS (in closing): I thank the members for their interest and discussion. Cleansing of the parts and proper sterilization, before any application of the forceps is begun, is imperative.

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## POSTURAL OR ATTITUDINAL DISTURBANCES.\*

By JOHN TOLSON O'FERRALL, M. D.,

Visiting Orthopedic Surgeon to the New Orleans Dispensary for Women and Children;  
Junior Orthopedic Surgeon to Touro Infirmary; Assistant Visiting Orthopedic  
Surgeon to New Orleans Charity Hospital,  
New Orleans.

The subject to which I invite your attention this evening is one often encountered. Once recognized, the diagnosis is usually made without difficulty. The treatment, while tedious, is highly satisfactory, if persisted in, as will be seen by the ultimate results. It is also a subject that manifests itself in many ways, and which presents many complications, and, because of these facts, often at first misleads one in making a diagnosis. Because of the multiplicity of symptoms, I will only attempt to present the points of greatest importance and interest for your consideration.

In speaking of posture, or attitude, I mean those positions of sitting, standing, and walking, which people assume, usually unconsciously, and, if incorrect, the results of such body strain upon the health and efficiency of the individual. When the posture is pathological, or, in other terms, the weight-bearing lines are distorted, or the statics are abnormal, the case will present one of several definite trains of symptoms. It is the prevention and relief of such symptoms that is the aim of the orthopedic surgeon.

The onset is necessarily slow. The natural guy-ropes, so to speak, and supports of the body are stretched and become relaxed very slowly, the resulting disturbed physiology taking place insidiously from malposition. Coincident with this malposition, especially with

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the abdominal viscera, certain internal shelves or supports are destroyed by absorption and overstrain, such as the retroperitoneal fat supporting the kidneys, and the cervical fascia. The sequence of untoward symptoms are then rapidly increased.

The two types met with are the congenital and the acquired. The signs and symptoms of the two are almost parallel; however, the former is confined largely to children, and is seen early, yet many cases go to adulthood without recognition. The condition is essentially secondary, and is that of a visceral ptosis, that is, a muscular and ligamentous relaxation, followed by a descent of the abdominal viscera, with a compression and a restricted action of the thoracic viscera, consequent upon improper posture. In the congenital type, the patient is, of course, born with some anatomical abnormality. While this is present from birth, it seldom manifests itself until the child has assumed an upright position, i. e., walking, and gravity assists the defects of nature in disturbing the physiological action of organs. In investigating the anatomy of such conditions, we are told that one person in every five is born with an abnormally distributed and attached mesentery, thus allowing very great sagging and festooning of the viscera; even more, it may allow telescoping of the gut,—explaining some of the cases of intussusception. In such cases, the stomach is long and tubular, as is normal in the early stages of embryologic development. The small and large intestine are almost always shorter than normal, the latter with a mesentery on the ascending and descending portions only. The liver and kidneys are more movable, due again to the absorption of retroperitoneal fat and relaxed cervical fascia.

With the thoracic viscera compressed and restricted in their action, and all the abdominal viscera movable, it is not hard to see how the hollow viscera, their ducts, vessels, etc., are prevented from functioning normally by the constant changing positions with coincident pressure, kinking and telescoping. The most apparent abnormality is seen in the standing position, but serious trouble may be experienced in recumbency, especially during sleep and anesthesia, when the reflexes are inactive and the muscles relaxed. The symptoms, resultant upon the above, will be described with those of the acquired type, as they are very similar except in details.

The acquired type, when recognized, is more easily dealt with than the congenital, as its natural supports are present. It is caused

by one or a combination of several factors, each of which will be taken up separately.

Probably the most common cause is that of habit. One finds the center of gravity deranged because of the unconscious, slovenly way in which we sit or stand when at rest, and the unsoldierly manner in which we carry our bodies when in motion. Because of this relaxation or slumping, our head and shoulders droop forward, the back muscles are on the stretch, the abdominal muscles are relaxed, and our frame, as a whole, is in a state of semi-collapse. The frame is in such a lack of balance that the smallest amount of efficiency is obtained from the energy and exertion expended,—to say nothing of the esthetic, especially in the female. Readily we see that this will soon produce a descent of the viscera, with accompanying functional disturbances.

General debility may be the factor underlying this loss of muscular tone. The slumping will be of such a degree that the muscles are unable to overcome the faulty balance without help from apparatus, exercises, etc. During a convalescence, if the muscles are held in equal balance, it will, of course, result in no visceral ptosis.

Occupation, in a large number of cases is the sole cause of the deformity. The enforced bad posture soon becomes a fixed one, and our train of symptoms soon appears. It is almost needless to mention anesthetists, seamstresses, stenographers, stone-cutters, clerks, etc., as illustrations of this type.

Probably the most common cause of faulty attitude among women, is the absence of, or poorly fitting, corsets. In many instances, if a properly fitted corset is procured, the unfortunate sufferer is not well instructed in regard to its proper application and the effect is lost. When women habitually go without corsets, the abdominal walls, probably already relaxed by former pregnancies, become more so without support and the back muscles, being overtaxed, give way, and the typical enteroptosis is found. Other articles of wearing apparel are at fault, especially the underclothing of children, carrying their weight from the point of the shoulder instead of the base of the neck. Other causes in children may be improper shoes, chairs, desks, etc., in the schools, and overloading with school books.

Skeletal abnormalities, especially the malformations of the fifth lumbar transverse processes and the articular processes in the same

region, are responsible, in a large measure, for bad posture and its results. These abnormalities are most frequently productive of lumbago and sciatica (as I have stated in a former paper) but are often the cause also of attitudinal disturbance. In this connection, nearly all cases of scoliosis are accompanied by bad posture and have a visceroptosis. In many cases the correction of one deformity serves to relieve both.

As previously stated, these cases present very typical signs and symptoms. When the congenital type is found in children, we find the under-nourished, anemic and emaciated child, presenting all the "ear-marks" of a condition we have always known as "delicate." He has been very prone to catch all of the diseases of children, and, with constant digestive disturbances, has never been a healthy child. In standing, the head and shoulders droop forward; the chest in its upper and middle portion is flat and retracted, while the costal border is flaring. The costal angle is acute, rather than approaching a right angle, as it would normally. Harrison's grooves are present also. The abdomen is very prominent, soft and tympanitic. The back presents an increased lordosis, and the knees are hyperextended. The scapulæ are almost of the angel-wing type. It is now easily seen how the lung and heart action is interfered with by this retracted thorax; how the stomach, liver, and other abdominal viscera, are forced down, often in the pelvis, by this pressure from above and the complete relaxation of their anterior and posterior supports. This ptosis, especially with the viscera loaded with food, produces great pressure of the blood vessels and nerves, to say nothing of the bile ducts, pancreas,—producing, no doubt, the so-called bilious attacks with nausea and vomiting. The kidneys are in ptosis, because of the pressure from above and the absorption of the retroperitoneal fat, their natural supports. In this type, the symptoms increase as the patient grows older, unless the parents have recognized the condition as similar to their own, if such exists, and consult the physician. This fact of inheritance may account for many of the so-called hereditary diseases, such as chronic rheumatism. This idea was first suggested by Dr. Goldthwaite of Boston, who has done a great deal of work along this line.

When these younger patients reach this stage, it is practically that of the acquired type. The adult usually presents herself as an emaciated, anemic person (although we see them occasionally apparently well nourished) with dry, sallow skin and existing

chloasma, or liver spots. In standing, the scapulæ are prominent, and the back is in increased lordosis, or the very flat type. The latter is usually that of a congenital abnormality and is seen in the sciatic cases. The head and shoulders are drooping forward, the chest flat in its upper half, and flaring at the costal margin. The abdomen is very prominent, flabby, and often filled with gas. The knees are hyperextended; the feet often flat. One cannot fail to recognize these unfortunate people, and the average physician sees many of them.

It, of course, suggests itself to you, the predisposition these people have for disease, especially the infectious diseases. The low power of resistance possessed by them often offers little chance for recovery. It is astonishing, when one investigates the matter, to find how many cases are treated for the predominant symptoms and the chronic or underlying cause is overlooked. We owe it to these people, not necessarily to prevent death or invalidism, but, to put them in such perfect physical condition that they may carry on the routine of life with the maximum of efficiency.

If we can teach the parents of such children to recognize these deformities and the importance of early treatment, the children will grow up strong men and women, being rapidly relieved of these sources which retard their mental and physical development.

You are all familiar with the much overworked term "neurasthenia," and the type of case to which this is generally applied. If you will call to your mind's eye these people, you will find that many of them coincide with the cases I am trying to describe. Often speedy relief is obtained by a proper interpretation of their many symptoms. It often occurs that their backs are strapped for sacro-lumbar and sacro-iliac disease, with slight relief, because of the failure to recognize the postural strain and the accompanying visceræ ptosis. These people lose all ambition and energy; they are often looked upon as being lazy, and after having gone through a long list of medicines, they themselves feel utterly valueless.

It is next to impossible to describe the great variety of ways in which these countless symptoms manifest themselves, so I will mention only those which are most often met with.

With the aforementioned slumping, the patient complains of pain in the muscles of the neck and back, especially between the shoulder blades. This pain does not exist except when standing and sitting, and often during recreation is entirely forgotten. A very severe and

persistent pain exists in the low back, over the lumbo-sacral region, and often over the buttocks and thighs. The spinal motions are very free, which at once rules out the existence of a bone lesion. The patient insists that he is as tired upon arising as when going to bed. Because of this constant feeling of fatigue, all exertion is, if possible, avoided.

There is a detailed account of gastrointestinal disturbances. A feeling of fullness after eating is present, even with very small quantities of food; at the same time, belching, with frequent eructation of food, exists. Large quantities of gas soon accumulate in the stomach and intestines, with pain from the distention. Often nausea and vomiting are present, and account for the so-called bilious attacks. Constipation is usually present, but diarrhea may exist. The simplest food is often tasted for hours after ingestion. The patient, while very hungry, refrains from eating because of the extreme discomfort.

It would be seen from the above that I am claiming posture as a factor in the causation of the majority of conditions; but upon investigation it is not improbable that the disturbed physiology present finds its explanation in these peculiar muscular and visceral deformities and the resultant mechanical maladjustment.

The radiographs taken with bismuth show the entire viscera prolapsed, often the colon and stomach within the pelvis. Gynecological conditions often arise when the ptosis is extreme. Upon seeing this marked descent of the hollow viscera, one wonders that the symptoms are not more severe.

The treatment is comparatively simple, and depends largely upon the patient. In order to succeed, instructions must be carried out painstakingly and with regularity. In short, the treatment is that of correcting the faulty attitude by restoring the normal center of gravity. This is most satisfactorily accomplished by properly directed exercises, the purpose of which is to tone up the whole muscular system, and especially the muscles of the anterior abdominal and chest walls and those of the back. The natural guy-ropes and supports of the viscera will then be restored. The respiratory capacity will be increased, and the elimination of accumulated toxins from constant fermentation will be greater. In connection with such exercises, the patient should assume certain positions tending to overcome the maladjustment of the viscera.

In addition to the above, many cases demand temporary artificial

support until the proper muscular development is attained. The types of apparatus most used are the anterior-posterior pads, spring-back braees, belts, etc. In women, a properly fitting corset usually suffices, however, a belt worn over the corset may be necessary in extreme cases. These, of course, should be used only temporarily, if possible.

At the same time, a change of occupation is helpful in obtaining the most satisfactory results. Once the sufferer learns to stand and sit correctly, and appreciates the importance of same, he will seldom return to his faulty attitude. We must also instruct our patient to preserve his proper center of gravity, by attempting to grow tall without standing on the toes, to hold his head up, chin in, and chest thrown out. To keep the abdominal wall flat and retracted.

In some cases, when the above fails, which is seldom, especially in those cases of marked colonic stasis, operative procedures are necessary, such as short circuiting and resection. This is a routine procedure of Dr. Lane of England, in all tuberculous or chronic joint diseases. However, it has not become popular in America.

The problems presented in these cases are tedious, but very satisfactory if persisted in. They are best solved by the combined efforts of the physician, the surgeon, and the orthopedist. As the last of these, we correct the deformity by means of the positions assumed, exercises, massage, apparatus, etc., and when unsuccessful seek the assistance of the physician or the surgeon. This should work both ways, and by the combined efforts attempt to mold over the patient into a state of the greatest efficiency. No higher calling could one ask, and no greater compensation for each or all, than the restoration of the patient.

If I may be permitted to have a little additional time, I would like to show a few lantern slides illustrating the conditions I have attempted to describe, without giving case histories, of which I have many, because of the consumption of time.

#### DISCUSSION.

DR. J. T. NIX: Only slight mention is made concerning dorsal scoliosis.

DR. O'FERRALL: Torsion jackets are much in vogue in the treatment of enteroptosis and scoliosis.

DR. C. L. ESHLEMAN: Inquired of Dr. O'Ferrall if he meant that a child who stands improperly develops enteroptosis, as most of



us think that scoliosis is the result of enteroptosis and not vice-versa.

DR. O'FERRALL: The clinical results prove conclusively that the relief of false positions cure visceroptosis in many cases.

DR. E. DENEGRÉ MARTIN inquired of Dr. O'Ferrall, if he had not seen this condition in a well developed person.

DR. O'FERRALL, in closing stated that the percentage of visceroptosis is enormously greater in persons who maintained a faulty position.

# N. O. Medical and Surgical Journal

## Editorial Department.

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### STATE MEDICINE IN LOUISIANA.

The wisdom which dictated the elemental necessity for state medicine in Louisiana, and which made its promotion mandatory upon the state has been substantiated many times and particularly within the period of administration of the present State Board of Health which has promulgated and made effective a comprehensive Sanitary Code. The police power of the State Board has been confirmed, and in the ramifications of its usefulness, a broad interpretation has been allowed the function of the health office. As an operative body, within the law, the State Board of Health of Louisiana has already set the machinery in operation for more

effective sanitary practises, reaching into the community life as affecting its food supply and its urban institutions.

The scope of usefulness can be no better exemplified than by referring to the late act of the Board in making patent medicines liable to regulation, through which all such shall, after September 18, 1915, be required to set forth the ingredients of the remedy on the box, or package; otherwise the names of ingredients must be filed with the Board of Health. Moreover patent or proprietary medicines may not hereafter be advertised so as to mislead the public.

The parasitism of these remedies needs such action to kill them, and it can only be a matter of time when right thinking people will want the law enforced.

We note that the State Board has begun the investigation of certain contagious and infectious diseases, or proposes to undertake such investigation, as would be indicated by the inclusion of pellagra, whooping cough, trachoma, hookworm and malaria among the diseases reportable to the authorities, and the new regulation explicitly declares this rule is adopted "for purposes of investigation and statistical record."

The educational work of the Louisiana State Board is a matter of record, and this has been a large factor in establishing the power for good which is now within the office of the State Board of Health.

### **NEGROES IN THE UNITED STATES.**

The Department of Commerce of the United States, under date of April 12, has summarized the status of the negroes in the United States, affording a number of interesting features. The numerical importance of the negro is striking, there being no less than 9,827,763 in 1910, or 10.7 per cent. of the total population of the country. Nearly 80 per cent. of these are reported as of pure negro blood, although the report declares that there has been a continuous increase in the population of mulattoes during the past forty years. Of individual States, Georgia leads with 1,176,987 negroes; Mississippi is second, with 1,009,487, and Alabama is third, with 908,282.

The center of population for the negro race in this country is determined at about 5.4 miles north-northeast of Fort Payne, in northeastern Alabama. Of cities, 43 each had more than 10,000

negroes in 1910. Washington led with 94,446, with New York (91,709), New Orleans (89,262), Baltimore (84,749) and Philadelphia (84,459) next in number of negroes.

In the ten years ending with 1910, Birmingham, Alabama, showed the largest increase, with 215.6 per cent., New York and Philadelphia next with 51.2 and 34.9 per cent. increase in negro population.

Other points of note are that negroes marry earlier than whites; that 47.3 per cent. were attending school in 1910, among negroes 6 to 20 years of age, the highest percentage being in Connecticut (67.1) and the lowest in Louisiana (28.9). The percentage of illiterates among negroes ten or more years old was 30.4; the lowest percentage was in Minnesota (3.4), the highest in Louisiana (48.4). Seventy-one per cent. of male negroes 10 years or more old were "gainfully employed"; of these 30.9 per cent. were farm laborers and 25 per cent. were farmers. The other leading occupation groups for negro males were: Laborers, building and hand trades, 5.2; laborers, saw and planing mills, 2.9; laborers, steam railroad, 2.7; porters, except in stores, 1.6; draymen, teamsters, and expressmen, 1.6; coal mine operatives, 1.2; laborers, porters and helpers in stores, 1.2; waiters, 1.1; laborers, road and street building and repairing, 1.1; cooks, 1.0; deliverymen, stores, 1.0; carpenters, 1.0.

For females, the leading capacities in which employed, with the percentage represented by each, were as follows: Farm laborers, 48.1; laundresses (not in laundry), 17.9; cooks, 10.2; farmers, 3.9; dressmakers and seamstresses (not in factory), 1.9; school-teachers, 1.1.

The death rate in 1910 for the registration area (comprising about 58.3 per cent. of the total population of the United States for that year, but comprising only 19.7 per cent of the negro population) was 25.5 per cent. per 1000 (with 14.6 per cent. per 1000 for white).

Deaths caused by malaria, tuberculosis of the lungs and other forms of tuberculosis, pneumonia, and whooping cough are relatively more numerous among negroes than among whites; while the mortality, due to measles, scarlet fever, diphtheria, cancer, appendicitis, diarrhea, and violence (including suicide) is noticeably higher among whites.

The relative proportionate decrease in mortality for a period of ten years, showed an advantage for the whites generally, but in 24

southern cities the negro mortality had decreased 4.0 per cent. as compared with 2.9 per cent. decrease for whites.

The most notable feature of this report from our point of view is the separation of negro mortality statistics, hitherto classed with those of other "colored" races, as Chinese, Japanese, Indians and the like. For the South for a long time general mortality statistics obtained without reference to race, thus doing a large injustice to the healthfulness (relative) of the whites.

Altogether this summary from the Census Bureau is illuminating as it represents the general status of the negro as far from unsatisfactory, even though in many places, his condition might be much improved. The gravitation of the negro population to the larger cities of the East (New York, Philadelphia, Washington and Baltimore, particularly) is an interesting feature and might invite sociologic study. A suggestion might be ventured in this that the many railroads with sleeping cars ending one part of the journey at those places would account for some large part of the negro population, in turn attracting relatives or former neighbors.

The question of the negro is always interesting to us, and such authoritative contributions help in the general problem.

### THE PAN-AMERICAN MEDICAL CONGRESS.

The efforts of the officers of the Seventh Pan American Medical Congress are deserving of reward, particularly as the task has been thrust on them. This Congress was to have met in South America, but the arrangements fell through, and the result has been to attempt a repetition of the successful *first* Congress, which met at Washington, D. C., in 1893.

No program has appeared as yet, but the meeting should be a success, as it is arranged to take place in San Francisco, and on June 17 to 21, just about the time of meeting of the American Medical Association and of the American Society of Tropical Medicine.

The Congress embraces all of the North, South and Central American countries, the islands in the Atlantic neighboring these, as well as the islands in the Gulf of Mexico and in the Caribbean Sea.

There is to be a variety of section meetings, and the San Francisco end has looked after the comfort of the intending congressists.

The Palace Hotel will be the headquarters, and the low rate of fare on account of the Exposition should make the visit to San Francisco attractive at the time of the meeting.

All physicians of recognized practice and standing are eligible to membership, which may be obtained, with all information regarding the Congress, by sending name and address with the \$5.00 membership fee to Dr. Henry P. Newman, Timken Building, San Diego, California.

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### **THE LAKE CHARLES MEETING OF THE STATE SOCIETY, APRIL 21-22.**

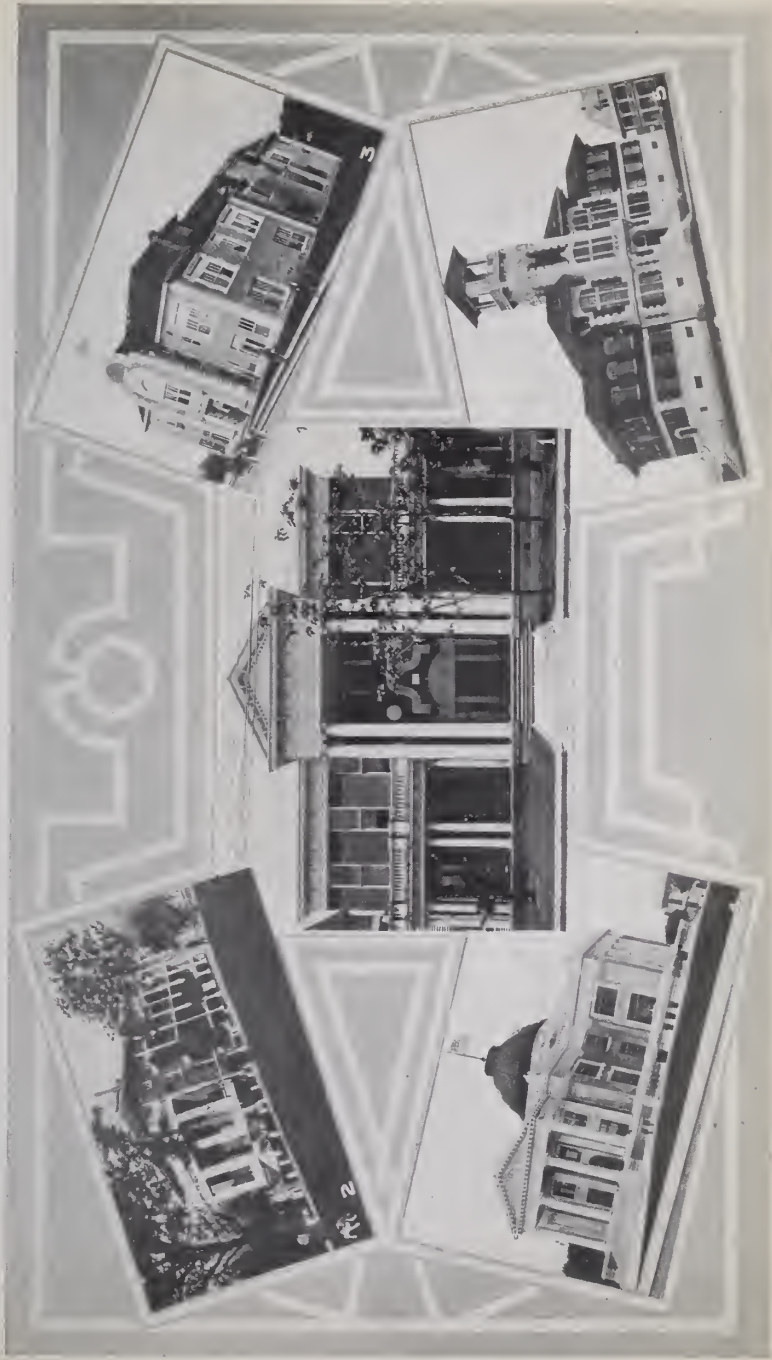
The thirty-sixth annual meeting of the Louisiana State Medical Society has gone into history. It was altogether a success. The program was not crowded and the president, Dr. George S. Bel, of New Orleans, proved himself an efficient officer in the chair, regulating both papers and discussion with due consideration for all. The most of the papers were read by the authors and there was a noticeable number of absentees among those who were listed for papers. The efficient and industrious secretary, Dr. L. R. DeBuys, of New Orleans, was on hand and facilitated the machinery of the meeting.

Considering the geographic location of the meeting, the attendance was fair, though not all that could be desired, there being present over 150 of a membership of some 800. New Orleans was well represented with forty-odd members, over 25 per cent. of the attendance.

The sessions were all well followed and the general high character of the papers read maintained a continuous interest. The discussions were also profitable, though at times too restricted.

The meetings of the Society were held at the Elks' Hall, this organization turning over their rooms to the registration and the exhibits, as well. The House of Delegates met in the Federal Building just across the street from the meeting place.

The luncheon at the Masonic Temple, tendered by the Calcasieu Parish Medical Society, the drives over the marvelous highways radiating about Lake Charles, the excursion to the sulphur mines and the royal entertainment there, the dance after the public meeting, the boat ride up the Calcasieu River, and the banquet on the



VIEWS OF LAKE CHARLES.

1. Elks' Home, where meetings were held.
2. St. Patrick's Sanitarium.
3. Masonic Hall, where Calceus Medical Society gave luncheon.
4. Court House.
5. City Hall.





last night, made a list of entertainments which notably demonstrated that Lake Charles could provide for the social side with that same degree of liberality which has made her business acumen so famous.

The wisdom in having the occasional meeting away from New Orleans, the home of the Society, has sometimes been questioned and particularly by the country members, who enjoy a few days in the metropolis. The direct stimulus to the members of the Society who live at or near the place of meeting, away from New Orleans, more than compensates. The Lake Charles meeting proved this, for many men were there who had not had the chance to get to a State meeting for several years. More than this, the general interest in the Society, now none too potent, is bound to have an added focus, when a new community is invaded, and too long a control of policies may be avoided by disseminating such an interest all over the State.

The officers selected for the coming year, upon nomination by the House of Delegates, are as follows: President, J. C. Willis, Shreveport; first vice-president, T. H. Watkins, Lake Charles; second vice-president, A. D. Henriques, New Orleans; third vice-president, J. M. Mosely, Arcadia. The secretary-treasurer, L. R. DeBuys, holds over.

Councillor of First District, W. H. Knolle, New Orleans; Second District, Homer Dupuy, New Orleans; Third District, J. W. K. Shaw, New Iberia; Fourth District, H. H. Smith, Cotton Valley; Fifth District, O. W. Cosby, Monroe; Sixth District, J. J. Roberts, Baton Rouge; Seventh District, C. A. Gardiner, Sunset; Eighth District, E. L. Henry, Lecompte. L. J. Menville, Houma, was elected delegate to the A. M. A. for 1915, and Dr. W. H. Scemann for 1916.

Dr. A. H. Gladden, of Monroe, was re-elected chairman of the House of Delegates.

The next meeting will be held in New Orleans, the time being left to the decision of the executive committee.

Dr. F. M. Thornhill was recommended for election as honorary member in recognition of his past valuable services to the Society and the profession of the State, now that he has retired from active practice. The Society unanimously endorsed the recommendation, a deserved compliment and only a slight recognition of Dr. Thornhill's many labors in the interest of medicine.

**SCIENTIFIC PROCEEDINGS.****FIRST DAY—MORNING SESSION.**

PRESIDENT BEL called the meeting to order at 9:30 A. M. and introduced Rev. G. B. Hines, of Lake Charles, who gave a brief prayerful invocation. He was followed by the Hon. G. Riling, Mayor of Lake Charles, who welcomed the Society and extended the privileges of the town to the members. Dr. Geo. S. Kreeger, president of the Calcasieu Parish Society, then gave the glad hand to the local unit of the State body, among other things declaring the stimulating fact that every medical man in Calcasieu Parish was a member of the local Society, which also had included men from neighboring parishes, in which organization had not yet been effected. Dr. J. D. Tuten, as chairman, submitted the work of the committee of arrangements, largely represented in the program in the hands of the members.

**SECTION ON MEDICINE AND THERAPEUTICS.**

DR. S. L. WHITE, Ruston, Chairman.

DR. THOMAS E. WRIGHT, of Shreveport, read on

**“The Intravenous Use of Quinin in Malaria.”**

Most of the conclusions submitted have been drawn from experiences at the hospital established at Monroe for the employees of the Missouri Pacific Railroad, which has provided an excellent field for the study of malaria. The paper is based on thirty cases of estivo-autumnal fever, already partially considered in a report read before the Southern Medical Association, at its 1914 meeting. The considerations involved in the paper take up the effects of the intravenous use of quinin (1) upon the patient; (2) upon the kidneys; (3) upon the blood changes; (4) upon the temperature; (5) upon the circulation; (6) upon the malarial parasite.

The effect upon the patient varied, but for the most part proved inconsiderable. The head symptoms, fullness, roaring and dizziness were only temporary and not alarming, with the majority of cases being quite transitory and over in a few moments. The concentration of the quinin solutions seemed to make no difference.

The urinary importance was negligible. Hemolytic action in sixteen cases was negative. The average temperature recorded was 99.5; effect on blood-pressure was not noted. The effect on the plasmodia was not unlike that produced by quinin given by any

other method. The parasites showed several days after in some cases. In some cases the plasmodia disappeared the day after treatment. Within twenty-six hours improvement noted was satisfactory. Patients who had previously taken quinin expressed themselves as favorably impressed by the method now employed.

The technic followed was the same as with ordinary infusion. The author emphasized the use of distilled water. Any vein sufficiently accessible may be used.

Four cases suffered relapses; reinfection probably accountable; fourteen cases received two treatments; thirteen cases received but one treatment.

The hydrochlorid of quinin was used and the dosage of fifteen (15) grains in 20 c.c. of normal saline solution.

This method of treatment has not been popular; the history of its use is meager. This does not deter the author in the statement that it is both possible and proper to use this method. The inconvenience to the patient is slight and it is superior to the intramuscular injection, which is crude and also painful.

The dosage of 15 grains is about the limit of safety. Ten grains in 20 to 26 c.c. of saline is safer, but the size of the dose, the number of doses, and the permanency of relief secured must be worked out by further use and observation.

#### Discussion.

**Dr. O. W. Cosby, Monroe.** Impressed with the report. Would take the treatment that way himself, if he needed quinin. The strongest argument is the relief of annoyance occasioned by usual dosing.

**Dr. C. J. Edwards, Abbeville.** Related case of pernicious malarial fever, emphasizing danger to eyes from quinin and the possibility of amaurosis.

**Dr. C. P. Gray, Monroe.** Dr. Wright has broken away from traditions. The method has much to commend it in selected cases, especially in malarial subjects. It is the amount of quinin absorbed which does the work, and we may probably later on get our results from such a method by using smaller doses.

**Dr. C. J. Menville, Houma.** Asked if any functional test had been employed in determining kidney complications.

**Dr. Wright (closing).** Had not seen eye symptoms in cases embraced in report. Once had seen eye symptoms in patient who had taken ninety grains of quinin by the mouth.

Ordinary urinalysis only was employed for kidney determination.

Results were constant and prompt. One case brought in delirium, almost comatose, weak pulse. Blood examination showed in every field three to five plasmodia of estivo-autumnal type. He was given fifteen grains at 6 P. M. At 9 A. M. next day the temperature was normal, general status restored and he was well enough to ask for food.

At this juncture the President introduced Dr. B. B. Martin, of Vicksburg, Mississippi, and Dr. Gerald B. Webb, of Colorado Springs, as guests of the Society.

DR. A. NELKEN, of New Orleans, read on

**“Five Years Experience With Salvarsan in Syphilis.”**

First referring to the inception of Ehrlich's treatment and its slow acceptance by conservative practitioners, the author contended that the end results could not be estimated, but submitted his own belief in the value of salvarsan (and neosalvarsan) and then proceeded to his argument and detail.

If treatment is begun early enough Ehrlich's ideal may be realized. In late cases the results are not so good. Mercury is used as adjuvant in all treatment.

The author deprecated insufficient dosage in early cases, but insisted that the spirochete should be demonstrated before salvarsan is used; young cases give positive examination. He preferred the India ink method. The Wassermann test should be employed as a check. In his experience the Wassermann is positive 25 per cent. of cases in the second week and in 75 per cent. after the fifth week. The author deprecated the rendering of an uncertain diagnosis and believed that a suspicious case should be watched for three years before a negative diagnosis can be assured.

In discussing the preparations of salvarsan and neosalvarsan, the latter was declared superior. Dr. Nelken had seen no unfavorable results from neosalvarsan. Both seem to act alike, but neosalvarsan preferred. Considers Wassermann test of little value while patient is under treatment. The larger the dosage the more serviceable is the result. Laboratory experiment with spirochetes on the slide does not show that strong solutions of salvarsan affect the organisms differently from weak solutions.

Nine (9) decigrams is accepted as the proper dosage for the normal adult. Recent infection requires less than cases of longer standing. Three injections at short intervals with intercurrent mercurial inunctions should effect a cure. In older cases treatment should be maintained for nine (9) months, using the inunctions in repeated courses. Has yet to see a case which has not yielded to salvarsan (meaning either drug), while many cases do not yield to mercury and iodids.

The author emphasized the employment of mercurial inunctions

in all cases, usually beginning these after the second dose of salvarsan. The positive Wassermann test, in the author's opinion, always means syphilis. It is true that patients with other diseases may give Wassermann, but this does not contravene the original proposition.

When is syphilis cured? Inoculation proof cannot be established, but the author instanced three (3) cases of second attack after original cures had been effected with salvarsan.

The author's conclusions have been derived from results in 420 cases; the youngest was 7 years old, the oldest, 70 years old. No fatalities, nor serious consequences. In weak subjects, begins with small dosage. Only contraindication is renal disease. Other considerations formerly observed do not now obtain. In three patients disagreeable rashes appeared, fading in a short time. Facial paralysis in one case and deafness in another. The author expressed the belief that such conditions occurred, not because of, but in spite of the use of salvarsan.

#### Discussion.

**Dr. L. J. Genella**, New Orleans: Syphilis is systemic from the appearance of the chancre. The spirochete is a parasitic animal enjoying its existence on the human blood. It is too soon to prognosticate the end results from treatment with arsenic.

**Dr. I. I. Lemann**, New Orleans. Rose to express some points of view of the man who saw syphilis several years after acute stages. The value of the Wassermann test is undoubtedly as great as the reader of the paper attributes to it. The negative Wassermann, however, does not mean that the patient has not syphilis. Case instanced in which patient had an undoubted initial lesion. Several years after had an attack of fever, with a heart murmur. Several diagnoses were made; at post-mortem a gumma of the spleen was demonstrated. Insufficient treatment should be always emphasized. Before present laboratory methods many cases were not treated and the burden of a doubtful diagnosis impressed patients who may never have had the disease.

**Dr. Charles Chassaignac**, New Orleans. Subject one of pronounced interest; too complex for full discussion. Two points should be impressed. Conservatism first. Enough time has not elapsed to place the value of salvarsan. The speaker four years ago uttered the same note of warning, when cases were claimed as "cured" after short observations. This does not discourage salvarsan treatment; on the contrary, it urges its intelligent use; for the same conservatism should be observed with the older treatment.

The second point is as to the effect of arsenic preparations, as to their direct chemical action or if they act indirectly through the blood. The speaker had conducted some experiments with a view to determining this point. A special serum from salvarsanized sheep was obtained from a biological laboratory and in a number of cases there were undoubted effects produced, without the employment of other remedies. There is

no question of the therapeutic effect from this serum, the chemical examination of which showed no arsenic present. A case of **gumma of the iris** was instanced, which was dissipated by this serum treatment. The deduction was that the serum was active, though free of salvarsan as such, rather disproving the chemo-therapy of the drug and arguing its effect as altering the quality of the blood, in its relation to syphilitic organisms.

**Dr. H. E. Menage**, New Orleans. A case at the New Orleans Charity Hospital was instanced, of late syphilis, where Wassermann test was negative. The clinical diagnosis of syphilis was, nevertheless, persisted in and prompt results were obtained from salvarsan.

Dermatologists frequently see fresh distribution of eruptive syphilis of the macular type resulting after the administration of iodids to deep-seated old lesions, as gummata, throwing organisms into the circulation. A mistaken diagnosis of a second attack of syphilis might occur in such a case.

**Dr. H. Blum**, New Orleans. Testified to the value of salvarsan in the treatment of syphilis of the eye, in gummata and in cases of neuroretinitis. Cases of the latter condition requiring two or more years of the old treatment now get well in one week after salvarsan has been administered.

**Dr. J. T. O'Ferrall**, New Orleans. Said that the luetin test was often positive when the Wassermann is negative. Provocative doses of salvarsan caused stronger luetin test and, in cases of bone syphilis, further treatment cured them.

**Dr. George S. Bel**, New Orleans. The laboratory man is often discredited because the practitioner expected too much. A negative Wassermann in an untreated patient might show a positive test as soon as enough organisms had been killed to release toxins to be fixed by a reaction.

**Dr. Nelken** (closing). Dr. Chassaignac's remarks are important as controverting Ehrlich's claim of chemo-therapy for salvarsan, suggesting that it acts perhaps rather in stimulating resistance in body cells which destroy the organisms of syphilis. The value of the luetin test is not lessened by the occasional negative test.

#### FIRST DAY—AFTERNOON SESSION.

##### Section of Medicine and Therapeutics.—(Continued.)

**DR. GERALD B. WEBB**, of Colorado Springs, discussed the  
 “Recent Advances in the Diagnosis and Treatment of Tuberculosis.”

The diagnosis of tuberculosis is still clinical. We have no other way of exact diagnosis. First feature is exposure of others to case infected. Case related where a tuberculous subject had buried three wives with this disease, himself surviving.

Notable symptoms are presence of a cough, always suspicious of tuberculosis. Next the temperature and the pulse. A daily rise to 99° or a fraction above, with no explanation of the same; malaria is ruled out in Colorado.

Loss of weight, sweats, hemorrhage, easily fatigued, are indications.

In Colorado the tuberculin test is seldom employed. The reaction gives little aid as most everybody reacts, whether tubercular or not. The question for solution in Colorado is not if the patient has tuberculosis, but if tuberculosis has him. The apices and the roots of the lungs are carefully examined. Two methods are employed: First—Breathing and coughing and then expiration and coughing, to find râles. Sternal creaking may mislead, but this may be differentiated. If râles are evident after or with both kinds of coughing, tuberculosis is usually positive.

Swelling of the thyroid in young subjects is suggestive. The neck, cervical glands, the thyroid and the position of the trachea should be noted. When pleurisy has occurred the trachea is pulled to one side. This malposition may give misleading percussion sounds, stimulating a "dry cavity," which does not exist. Conclusion is that adhesions in the lung cause the divergence of the trachea and such fibrosis would contra-indicate pneumothorax, if such were otherwise indicated.

We have no specific for tuberculosis as with syphilis. None the less tuberculosis is curable and nature helps a lot in giving the patient a chance.

The first thing is to put the patient in bed and rest. A man breathes approximately 30,000 times a day. If he rests he will breathe with less effort and will cause less injury to the diseased areas of the lung. Rest should be continued until the temperature is normal. This may require a few weeks or may take years. (Dr. Webb exhibited a number of charts to show relative changes in temperature, pulse and respiration of patients so treated.)

The speaker deprecated the advice to patients to go to Colorado, to "live in the open air and climb mountains." Such advice is usually followed by disaster. Some victims may recover, but most of them succumb to the disease, when they follow such a plan. The speaker's cases do not get out of bed until the temperature is normal.

The effect of altitude in tuberculosis. The red corpuscles are increased by altitude. The white corpuscles are helpless against tuberculosis, due to the fact that tubercle bacilli are a product resembling beeswax, which the white blood cells cannot dispose of. The lymphocytes, however, are powerful against this product and

they digest it as well as the tubercle bacilli. Altitude increases the lymphocytes as well as the red blood corpuscles.

#### Discussion.

**Dr. W. J. Durel**, New Orleans. Took exceptions to some points discussed by Dr. Webb. Râles are not signs in "incipient" tuberculosis. In most cases of incipient tuberculosis he had found no râles. The breathing signs described may occur in other conditions. Are we going to wait for destructive lesions before we make a diagnosis? We may not find a positive reaction in all cases where the tuberculin test is applied, but a positive tuberculin test means a focus somewhere and it means the patient is tuberculous. If latent, it may mean a form of entrenchment, accounting for many advanced cases; these are determinable by the tuberculin test.

The theory of lymphocytes has been disproven (quoting Dr. Solis-Cohen as further authority). Twenty patients in the Louisiana Sanitarium for tubercular subjects showed same increase in lymphocytes as in altitude of Colorado.

**Dr. A. Henriques**, New Orleans. The solution of tuberculosis lies in its early recognition. Clinical signs of importance have been detailed by Dr. Webb. Over 600 X-Ray plates of tubercular subjects had been made by Dr. Henriques in last few years. The diagnosis is exceedingly difficult. We have been taught that tuberculosis begins at the apex; the majority of cases begin at the root of the lung. We have been able with the X-Ray to confirm the findings of the clinician and frequently have supplemented them. The X-Ray should constitute an important adjunct in the physical diagnosis of these conditions.

**Dr. C. P. Gray**, Monroe. The most important thing in the treatment of the tubercular is to so handle the patient as to prevent other cases in the household.

**Dr. I. I. Lemann**, New Orleans. In spite of the beautiful pictures of climatological advantages, we must remember that these are comparative or relative. The land of golden hopes beckons many cases which ought to stay at home. The average individual of moderate means stands a better chance of getting well at home, particularly when he has to work for a living in the new environment. Dr. Webb's paper should stress "rest" more than "climate."

**Drs. Genella, C. J. Bloom, Penick and Wright** also discussed the paper.

**Dr. Webb** (closing). Fatality in his experience with tuberculin test had occasioned his discontinuance. He believed we should be careful. The X-Ray is subject to suspicion and is often misleading. May serve in showing extent of disease in advanced cases. Believed the cough method of exact value in early cases and that it should not be condemned until after it had been tried.

DR. E. S. HATCH, of New Orleans, read on

#### "The Modern Treatment of Scoliosis."

Three years ago plaster jacket corrective measures were used. Scoliosis is a normal condition. School children acquire it, but in changing position, correct it. The treatment should consist in



placing the body in opposite direction, even with over correction, to gain the average position. Abbott, of Portland, Maine, has devised a method of accomplishing this end. (Technic described in detail with a discussion of its application.)

Dr. O'Ferrall, of New Orleans, discussed the paper, saying that he had brought the Abbott method and its modification to New Orleans and appreciated the importance given it by Dr. Hatch's paper.

DR. J. E. KNIGHTON, of Shreveport, read on

**"Gastro-Enteroptosis."**

The speaker described two types, the congenital and acquired; the former more common and the latter found oftener in women, probably due to tight lacing, frequent pregnancy, etc.

The congenital form due to condition of anatomical framework. Both provoked by habit. The evidences usually marked by intestinal disturbances, hyperacidity, stagnation of secretions and neurasthenia. Many neurotic symptoms occur. Colonic stasis is pronounced. Diagnosis is made by palpation, percussion and after inflating the intestinal canal. The X-ray is used for diagnosis after ingestion of bismuth.

The author detailed treatment, much of which was along the lines of usual practice and included rest, regulation of function, diet. (Carbohydrates, especially should be regulated.) Irrigation of the colon should be practiced in the beginning. Supporters were advised and the Lane operative procedure referred to.

**Discussion.**

Dr. Sidney K. Simon, New Orleans. It is wrong to consider ptosis of an organ as a disease sui generis. We may find from X-Ray pictures that stomach may have varied positions, and so long as the musculature is intact and function is regular, the stomach is normal. Ptosis belongs to a general status with associated nerve drain and other symptoms of a general condition, making up a complex. With this conception, we can devise a better idea of treatment.

DR. L. J. MENVILLE, of Houma, read on

**"The Diagnosis and Treatment of Renal Calculus."**

With well equipt X-ray, diagnosis of renal calculus is easy. The country practitioner, however, is required to make his diagnosis otherwise. Frank cases are easy, but other cases are uncertain. The elements in diagnosis depend on:

1. Urinalysis, which may show blood, a point of great importance;

2. Catheterization, on both sides, should be practised;
3. Radiography, of doubtful value;
4. Functional diagnosis. The phthalein test is valuable and of great aid to the general practitioner.

If there is any obstruction in function, it causes delay in secretions; this helps the diagnosis. The author related a case in point, detailing the various symptoms. The Murphy "fist" method of examination was mentioned as of service.

#### Discussion.

**Drs. Nelken, Gray, Samuels, Genella and Henriques** discussed the paper.

DR. SIDNEY K. SIMON, of New Orleans, read on

#### "Peptic Ulcer from the Medical Viewpoint."

The etiology of this disease still remains in doubt. Many widely divergent theories have been advanced as explanation for the tissue necrosis and eventually autodigestion of the musoca, which makes up the essential pathology of the lesion.

Dr. Simon believes that a relative deficiency of the mucous secretion plays an important role in the etiology in conjunction with a coexisting hyperacidity of the gastric juice. Both these abnormalities of secretion might be explained on the basis of a disturbed innervation. The recent peptic ulcers are amenable to medical control. When, however, complications arise, due to scar tissue formation, surgery often becomes necessary.

Clinically the surgical indications are: First, pyloric obstruction; second, hour-glass contractions; third, perigastritis or periduodenitis with adhesions; fourth, deep infiltration of the ulcer base; fifth, perforation. In the avoidance of surgical intervention early diagnosis and early treatment, therefore, are essential. There should be no strife between surgeon and internist as to jurisdiction. There are definite limitations for exact plan of procedure.

In the medical treatment, the essential details are absolute rest in bed for at least three weeks, a modified isolation and a diet along the lines laid down by Lenhartz. The patient should be under observation for several months following the treatment in bed.

#### Discussion.

**Dr. Knighton:** Inclined to agree with Dr. Simon that the absence of mucus plays a role in the etiology of ulcer. Observed that those cases which had suffered from pain are the ones which have no mucus. Significant that some patients with high acidity suffer less than do others

who have a relatively low acidity. Why do some patients secrete less mucus?

**Dr. Henriques:** Called attention to cases with symptoms which point to ulcer, but are due to tuberculosis or appendicitis. In these cases the X-rays are of great assistance in making the differential diagnosis. Radiography has advanced our knowledge of the physiology of the stomach and intestines. By means of the X-ray we are able to show the position of the ulcer and the change in the physiology of the stomach. Where there is delayed motility, this is probably due to the spasm of the pylorus, and the ulcer is in the stomach at the pyloric end. Duodenal ulcer, on the other hand, causes hyper-motility. It is a matter of very great difficulty to determine which of these cases should be treated medically and which surgically.

**Dr. A. L. Levine, New Orleans:** Emphasized Dr. Simon's statement that if the pain does not subside after five days' treatment the case should be turned over to the surgeon. I wish to ask Dr. Simon if, since the pain is due to the absence of mucus, olive oil would not be indicated as a substitute for the mucus? I have seen the use of olive oil in conjunction with alkaline treatment afford relief where the latter alone has not relieved. Stress should be laid upon the finding of occult blood in the stomach contents as a differential point between stomach ulcer and pulmonary tuberculosis.

**Dr. Ellis, of Crowley:** As a means of differential diagnosis, great value, I think, should be attributed to the string test of Einhorn. Has done this test by having patients swallow a B. B. shot firmly attached to a string. Lays little stress on the degree of acidity. As W. J. Mayo said, "You change the degree of acidity of your stomach every time you change your boarding-house."

**Dr. Simon (in conclusion):** Dr. Ellis' remarks about the Einhorn string test affords the opportunity to speak of a series of cases reported a few weeks ago before the Orleans Parish Medical Society, consisting of forty cases, in which there was no suspicion of ulcer and in which there was probably no ulcer. In other words, they were control cases. Of these forty cases, only four showed traces of blood on the string. In answer to those who believe that the string test will show blood in normal cases, I would say that this will occur in very few cases if the test is properly done. The quality and length of the string, as well as the weight to be attached, must be exactly as Einhorn has described. Ordinary B. B. shot will not suffice. If the string is too long and the weight passes down into the jejunum, it may be withdrawn with some force, and thus cause a traumatism of the mucous membrane, and thus give us a false positive test. Twenty cases of undoubted gastric ulcer all gave a positive string test. With regard to Dr. Levine's question, I would say that the gastric pain is not due primarily to the absence of mucus. Gastric pain due to ulcer is of three types: 1, Pyloric spasm; 2, pain due to the action of gastric juice on the denuded mucous membrane; and, 3, pain due to gastric distension.

#### SECOND DAY—EVENING SESSION.

DR. I. I. LEMANN, of New Orleans, read on

#### "Bedside Recognition of Types of Cardiac Irregularities."

By the use of the sphygmograph and the electrocardiograph certain definite clinical entities have been established and our notions

of cardiac pathological physiology have been entirely changed. Not all cardiac irregularities are of the same prognostic significance. Each calls for a different therapy. The use of these instruments in daily practice is impossible because of the cost, the time necessary for the proper employment, and, finally, in the case of the electrocardiograph the instrument is not portable. It is, however, possible by simple observation of the types of the irregularity of the radial pulse and of the heart beat as observed at the apex by means of the stethoscope to determine in many, and in fact most cases, what particular form of heart muscle disturbance we are dealing with.

Sinus arrhythmia, which is a condition without pathological significance, is characterized by the change of the heart rate several times within a minute. Premature contraction or extra systoles give the impression of a dropped beat to the palpating finger on the radial pulse, but when observations are made at the heart it is noted that the abnormal pause is preceded by a hastened beat. This hastened beat is often so ineffectual as not to send a wave as far as the radial artery.

Auricular fibrillation, which is due to constant imperfect twitching of the auricles which are constantly in a state of dilation, produces irregular and disorderly contractions of the ventricles, and hence a similar pulse. Heart block, "due to interruption of the conduction of impulse from auricles to ventricle," may be suspected when there is a persistent slow rate of the heart as observed at the heart, and especially when there is a sudden halving or doubling of the heart rate.

#### Discussion.

**Dr. A. C. Eustis**, New Orleans. Referred to value of atropin in heart block. Instanced case saved by atropin. Believed that 95 per cent. of such cases died.

**Dr. Lemann** (closing). Said that digitalis caused heart block and urged the dangers in its administration. Heart block is not so fatal as Dr. Eustis has indicated. In heart conditions the heart beat should always be counted **at the heart and not at the pulse.**

DR A. L. LEVIN, of Harvey, read on

#### "Clinical Significance of Indicanuria."

Paper based on over 3000 gastrointestinal cases in which excessive amounts of indican were observed.

Indol is toxic, and is derived from the intestine, appearing in the urine as indican. Indicanuria is one of the most important

things in clinical medicine, and the presence of indican in the urine is never normal. Indican is a good indication of auto-intoxication. Excessive protein diet, catarrhal conditions of the intestine, constipation are contributory to indicanuria. Neurasthenia, with a long list of varied symptoms, may result from indican toxemia. (Several case reports were presented to demonstrate the points of the paper.)

#### Discussion.

**Dr. Simon.** Indican is looked for as a matter of routine at the Touro clinic. Indicanuria comes to the rescue as a causal factor in general functional disorders, where nothing else can be found accountable. Indican is an excess of protein balance acting in a harmful way.

**Dr. Eustis.** Has been harping on this subject for past ten years. Does not consider indican the toxic factor, but when indol is present in the intestines we know that other toxic substances are there (leucin, tyrosin, etc.). The amino-acids have certain physiological functions, forming amines; so tryptophan, breaking up, forms indol. Some of these substances, if administered, will raise the blood pressure, some will cause asthma. Often cases of asthma are relieved by removing intestinal toxemia. Dr. Eustis presented an elaborate argument for the dangers of certain intestinal flora and their products, and submitted that indican in the urine was just the evidence of indol in the intestine.

**Dr. Levin,** in closing, at the request of several members, stated that the technic employed by him for determining indican was exceedingly simple:

Take about equal quantity of urine and of concentrated hydrochloric acid in a test tube; add a few drops of peroxide of hydrogen and, if indican is present, the mixture will turn indigo blue. The amount of indican may be approximately shown by the addition of chloroform, shake well and on settling the chloroform goes to the bottom, stained blue or some shade of blue.

The treatment consists in removing the causal factor. Meat and eggs should be excluded from the diet and vegetables, fruit and cereals should be eaten. As to drugs, the salicylates are held in first rank; the *Bacillus Bulgaricus* is used also, and in some places beverages are prepared with this bacillus for easy consumption by those employing it.

#### SECTION OF RADIOLOGY AND RADIOTHERAPY.

DR. E. C. SAMUEL, New Orleans, Chairman.

The only paper read in this section was by the chairman,

DR. E. C. SAMUEL, on

“Treatment of Myoma of the Uterus.”

Since the author's first experiences, reported at the Baton Rouge meeting in 1913, sixty cases had been treated with newer technic, and with Gauss' apparatus and technic. Success has been good. Noted three (3) failures in submucous types. Best results obtained

in intramural cases. Complications in adnexa are not favorable. Malignancy should be determined by gynecologist before X-ray treatment is undertaken. Women under forty with tumors of the womb are not within the province of the radiologist. The best service is in older subjects. Three cases of menorrhagia in young women were quite successful, the flow being stopped in two cases and in the third case the flow was brought to normal. In suitable cases, the result is the removal of the tumor and the stoppage of menstruation. In most cases the tumor will continue to decrease after treatment has been stopped. Only cases which have been competently passed upon by the gynecologist should come under this treatment.

#### Discussion.

**Dr. Henriques.** This paper presents recent development in X-Ray work. We use different wave lengths in X-Ray treatment. The shorter the wave length, the deeper the penetration. Improved apparatus has allowed deep-seated effects. Proper occlusion of longer waves will allow deeper penetration. Certain tissues are more affected than others. The ovaries and tumor growth of the uterus shrink *pari passu*. Some think the tumor decreases without such effect on the ovary. In order that best results should be obtained, every case should be diagnosed by competent gynecologist. This treatment must be administered by intelligent operators; enormous doses have been employed, with corresponding damage, in the way of unnecessary burns.

**Dr. Samuel,** in closing, said that about two weeks before the meeting he had had a patient with the worst burns he had ever seen. This patient had been treated with two open tubes opposed at points of exposure.

#### SECTION ON DISEASES OF THE SKIN.

DR. H. E. MENAGE, New Orleans, Chairman.

DR. MENAGE presented a short introductory paper discussing

#### “The Ringed Eruptions of the Skin.”

He emphasized the habit of the general practitioner in calling by the name of “ringworm” all eruptions of the skin appearing in any shape resembling a circle or ring. “Ringworm” as a title should be abandoned as a misnomer in the first place, and as misleading in the second place. Many diseases which are not *tinea trichophytina* have circular arrangement, and the object of the selection of the topic was to put this fact in such a light as to impress it on the membership of the State Society.

Dr. Menage then illustrated his point with lantern slides, showing the ringlike eruptions of erythema multiforme, psoriasis,

leprosy, syphilis, morphea, pityriasis rosea, etc., graphically showing the salient features of each, with the main feature of ringed formations in the functions shown.

#### Discussion.

**Dr. Isadore Dyer**, of New Orleans, opened the discussion, pointing out the value of the study of arrangement and shape of skin lesions. Ringed eruptions are always either parasitic or constitutional, and the habit of occurrence makes the differentiation. Dr. Menage had opened up an interesting field for study, as no particular attention had been called to the diagnostic differences in ringed eruptions. Among all of the pictures shown, however, careful study of the lesions would show differences to prevent confusion. The lesions of leprosy and pityriasis rosea were seldom annular; they are usually ovoid in their shape—on the other hand the real “ringworm” is usually circinate.

**Dr. Genella** acknowledged the difficulties in diagnosis of skin diseases and expressed himself as lost in the maze of differentiation of such diseases as leprosy.

#### SECTION ON DISEASES OF CHILDREN.

**DR. M. S. PICARD**, Shreveport, Chairman.

President Bel announced that owing to the unavoidable absence of **Dr. A. C. Eustis**, of New Orleans, on the first day, his paper had been handed in without reading, under the rules of the Society, but as **Dr. Eustis** was now present he should be allowed to read.

**DR. EUSTIS** read on

#### “The Use and Abuse of the Stomach Tube.”

He detailed the numerous cases as instances in which the stomach tube had been of signal value in arriving at a proper diagnosis and in which it had served as a valuable therapeutic instrument. The tendency at present to disregard the diagnostic significance of gastric analysis is unscientific, and to combat this tendency was the object of the paper. The stomach tube must be regarded, however, only as an aid to diagnosis, and the condition of other organs responsible for gastric symptoms should be determined. By cocaineizing the pharynx and tongue, one is able to pass a stomach tube in otherwise impossible cases, and for correct interpretation of results the patient should not be apprehensive or unduly excited. Deductions can rarely be made from a single gastric analysis. The principle contraindications to the passage of a tube are (a) Recent hematemesis, (b) Aneurism of the Aorta, (c) Advanced Myocarditis.

In using a Politzer bulb as an aspirator, care should be taken

that suction is stopped as soon as wrenching starts, as serious injury to the gastric mucosa may otherwise ensue. Microphotographs were exhibited showing portion of gastric mucosa aspirated in this manner. Failure to procure gastric contents may be due to the end of the tube impinging on the side of the stomach with subsequent buckling, to hour-glass contraction or to extension of a tumor into the stomach cavity.

#### Discussion.

**Dr. Levin.** Took issue with reader of paper in employment of local anesthetic in throat. Believes psychic control of patient can be secured. Practical point in putting tube in place and for swallowing: Patient should throw head slightly forward, leaving the throat and adjacent structures relaxed. The opposite position puts the throat (and esophagus) on tension and flattens or narrows the gullet so as to cause some annoyance as the tube goes down, sometimes provoking cough or gagging.

**Dr. Eustis** (closing). The introduction of the stomach tube is not so simple as it looks, and care should be exercised in its use. A thorough physical examination should be made in every case, for sudden death has attended tube introduction. The laryngologists usually employ local anesthetics for throat manipulation and applications and do not trust to psychic control of patients.

DR. CHARLES J. BLOOM, of New Orleans, read on

#### “Fevers of Unknown Origin (With Cases).”

Author related ten (10) cases of fever of unknown origin. Frequent (at least three) examinations should be made of patient before abandoning etiology. In this way pyelitis or otitis media, frequently accounting for irregular fevers, may be determined. Examinations should be thorough, and should proceed to the laboratory, if necessary.

DR. SOLON G. WILSON, of New Orleans, read on

#### “Empyema.”

The pneumococcus is found in most cases. Empyema usually follows pneumonia, broncho-pneumonia and infectious diseases, as scarlatina, pertussis, etc. The condition is found equally in boys and girls, and as often on the left as on the right. Mortality is 73 per cent of cases in first year; 58 per cent in second year, and 16 per cent in third year. Empyema occurs at pneumonia crisis. If prompt attention is given the fluid will be serous; later and promptly it may become purulent. The blood picture is not clear, due to walled off pus pocket. The bedside picture is important; the patient looks sick. The temperature chart is character-



istic. The percussion note is of boardy character. When the fluid is considerable the heart apex is displaced and the apex beat may be felt in the epigastric region.

The use of an aspirating needle may cause death, though the instrument may not be at fault. The method practiced by the author in twenty-three (23) cases, has reduced the convalescent period. This consists in dissecting one inch of rib, with local anesthesia (one-half of one per cent. novocain solution). A suction apparatus, operated with small motor, has been helpful in cleansing the cavity; this avoids sudden gush of fluid. The thorough cleansing of the cavity does real good. The suction may help also to stimulate or to aid the lung function.

Drainage tubes are often left in too long and do harm by producing local irritation. In author's cases drainage tube was discontinued in twelve (12) days.

#### Discussion.

**Dr. Charles J. Bloom.** Empema in children is probably more frequent at the crisis of lobar pneumonia.

**Dr. Bel.** If temperature continues over ten days in pneumonia use a needle anyhow. Physical examination may show all lung signs of consolidation, and yet pus be present.

DR. M. S. PICARD, of Shreveport, read on

#### "Chronic Intestinal Indigestion in Children."

(The reporter was unable to hear the reader of the paper).

#### Discussion.

**Dr. Eustis.** Pediatricists are high protein feeders. Be sure and examine urine before you cut down carbohydrates. The diarrhea is often an attempt of nature to get rid of offending material. It pays often to stop milk altogether, so as to let the bowel change its flora. Worms in children are often responsible for intestinal indigestion.

### SECTION ON NERVOUS AND MENTAL DISEASES.

DR. C. V. UNSWORTH, New Orleans, Chairman.

The papers listed on the program were not read, through the absence of the authors. The President introduced Dr. A. T. Truitt, of Jackson, Louisiana, who presented the subject of

#### "Syphilis and Mental Disorders."

as a volunteer paper.

The work of Noguchi in finding spirochetes in the brain has established the relation of syphilis to general paralysis.

General paralysis has early signs, of neurasthenia with eye symptoms and fatigue. Besides, there are changes in personality; morality changes to immorality; such persons dress in showy colors; they fail to keep engagements and appointments. Later, more marked memory lapses occur, leading on to more serious memory disturbances.

There are ideas of grandeur, variously manifested. Illusions as to personal appearance, as to experiences and achievements, are expressed.

Motor paralysis supervenes and there may be tabetic types. The reflexes are disturbed; the gait is affected.

We see juvenile forms up to sixteen (16) years of age, often congenital.

There are pupillary changes (Argyll-Robertson). The eye muscles are affected, too. Speech and writing show disturbance; there is lapse of tone in the voice and tremor, both in speech and writing, ankle clonus and other exaggerated reflexes.

There are serological findings in about ninety (90) per cent of cases. There is increased cell count and globulin in excess.

Discussing treatment, the speaker referred to the Swift-Ellis treatment with salvarsanized serum. Some favorable results have been reported. At Trenton, New Jersey, of twenty (20) cases, two (2) were cured—biologically and clinically; ten (10) cases were arrested; six (6) were improved, and five (5) died. Generally, treatment is discouraging; active persistence may produce results.

In insane hospitals about thirty (30) per cent of white males are syphilitic; about fourteen (14) per cent of admissions to insane hospitals are paralytics.

#### **Discussion.**

**Dr. B. A. Ledbetter**, of New Orleans. The subject as presented shows the importance of early diagnosis and proper treatment of syphilis.

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#### **TRIP TO SULPHUR MINES.**

Upon the adjournment of the morning session the Society members and their ladies were transported to the mines at Sulphur, Louisiana, where an opportunity was afforded to see the various processes in producing sulphur for the market. The stupendous undertaking impressed all. The points of most striking interest were: The immense bins of ninety-nine (99) per cent pure sulphur,

almost an acre square and some thirty (30) feet high; the size of the proven tract—some sixty (60) odd acres; the large number of boilers (oil burning), one hundred and thirty-eight (138) in all, arranged in “batteries”, or units of eight (8), which supply the steam for liquefying the sulphur underground (some 300 to 800 feet down); the amount of trackage, aerial lines and pipes, derricks and quarters, in which nearly 500 employees are occupied. The importance of this industry may be estimated, upon its present assessment of \$12,000,000, paying in taxes nearly \$300,000 annually to the State and parish. The plant provides its own roads through its more than 4,000 acres, and its own railroad and equipment, rather suggestively known as the “Brimstone R. R.” Every courtesy was extended the visitors, including an elaborate luncheon, served in an immaculate mess hall. The last word we are pleased to say about these mines and their management is that on every hand there is a general expression of popular sympathy, indicating both their value and service to the community and State.

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Upon the return to Lake Charles, the Society again engaged the scientific program.

#### **SECTION ON GENITO-URINARY AND RECTAL DISEASES.**

DR. G. GORDON HOLCOMBE, Lake Charles, Chairman.

DR. E. M. ELLIS, of Crowley, read on

**“Urothorperineal Fistula Following Abscess of Cowper’s Gland (with report of cases).”**

He enumerated the causes of the condition, giving gonorrhoea as the most frequent, and described the symptoms; he mentioned the usual location of the pointing of the abscess, giving the basis of treatment as consisting of incision, thorough drainage with careful packing. He insisted that prevention was the most important item, and consisted in the early and appropriate treatment of the cause. He reported three cases to illustrate the various phases of his argument.

DR. HERMANN B. GESSNER, of New Orleans, read on

**“The Operative Treatment of Fistula in Ano.”**

The author referred to the outlining of complex cases by skiagraphy after Bismuth paste injection. He stressed the excision

of cicatricial tissue around a complete fistula as well as the exposure of high incomplete tracts by vertical ischio-rectal fossa incisions (Tuttle). In conclusion he recommended the following details to prevent incontinence:

1. Division of the external sphincter ani at right angles to its axis.
2. Avoidance of more than one division of the sphincter at one sitting.
3. Care not to injure the nerve supply (which comes in laterally and posteriorly) by overzealous onslaught on cicatricial tissue.

#### **SECTION ON GYNECOLOGY AND OBSTETRICS.**

DR. A. O. HOEFELD, New Orleans, Chairman.

DR. WM. KOHLMANN, of New Orleans, read on

##### **“Abdominal Cesarean Section.”**

He referred to the degrees of pelvic contraction indicating interference, and he enumerated eclampsia, tumors, rigid and cicatricial cervix and vagina, large fetus and uterine hemorrhage as indications under appropriate conditions. The author in conclusion enumerated the cases of section operated on by him—12 for contracted pelvis, 2 for rigid or cicatricial cervix and vagina, 2 for placenta previa, 2 for accidental hemorrhage, 1 for large fetus, 1 for ovarian cyst, 1 for fibroid, 1 for eclampsia—without loss of a single mother or child. The technics comprised the high incision and two rows of chromic catgut stitches, one heavy interrupted line, extending down to, but not involving the endometrium, and a finer, continuous Lembert line.

#### **SECOND DAY—EVENING SESSION.**

The evening session was held at the Arcade Theater, and was open to the public.

DR. A. J. PERKINS, of Lake Charles, was the master of ceremonies, and presented the speakers of the evening.

DR. GEORGE S. BEL, of New Orleans, delivered the

##### **“President’s Address,”**

dealing with the phases of the plague. A review was given of New Orleans’ recent experience, and proper tribute was paid to the U. S.

Public Health Service for the efficient work of its officers. Credit, too, was allowed the community for its co-operation in making a short campaign in the attack against the disease.

Some history and facts were presented covering the subject of plague, and repeated warning was uttered by the speaker urging the destruction of rats and, more important, the protection against rats by proper and adequate ratproofing.

This address was followed by the

**“Annual Oration,”**

delivered by MR. W. B. WILLIAMSON, prominent in the legal profession of Lake Charles. Mr. Williamson elected as his subject, “*Efficiency*,” which he discussed from the point of achievement in the history of the world, exemplifying Hippocrates, Pasteur, Lister, Gladstone, Disraeli and Goethals as men who had brought efficiency into their world of service. The oration was extemporaneously rendered, and was full of suggestion and metaphor, concluding in a peroration which laid the motive of the title and text in lines of Pasteur, which defined true efficiency.

The devotees of Terpsichorean practice adjourned after the meeting to Elks’ Hall, where a dance program was arranged.

THIRD DAY—MORNING SESSION.

**SECTION ON TROPICAL AND PREVENTIVE MEDICINE.**

DR. E. M. DUPAQUIER, New Orleans, Chairman.

DR. W. H. SEEMAN, of New Orleans, presented the subject of

**“The Serum Treatment of Plague.”**

Opinions as to the value of serum treatment of plague vary, and at present we are at sea as to particular merits of such remedies. Some observers believe cases do as well without as with serum.

The English Commission separate septicemic and other types of plague in their conclusions. The mortality in Septicemic plague is usually 100 per cent; in other types from 24 per cent to 12 per cent. The results may be governed by the varieties of serum employed. In New Orleans the Yersin treatment was followed (serum strain obtained from Pasteur Institute in France). Twenty-eight (28) cases in all were admitted to the plague hospital. Four (4) were not plague, leaving twenty-four (24), of which five (5)

died. Three of these received no serum; two (2) of those receiving serum died. Both of these cases were in advanced stage when serum was administered. No case, with chance of life, receiving serum died. Experience in Havana, in 1914, was about the same as in New Orleans. This year (1915) in Havana the results have been just the contrary—all cases have died.

The most potent factor in serotherapy of the plague are the lysins. All serum used in New Orleans was administered intravenously; the salvarsan apparatus was adopted; serum was given at bend of the elbow; no local anesthesia was employed; injection was allowed to enter vein by gravity method.

Immediately after early administrations some suffocation was noticed, probably due to cloudy serum. Sedimentation and decanting was then practiced, overcoming this condition. Serum was administered at temperature of the body. Charts were shown giving the clinical course of the disease, and indicating the effect of serum. One case was four (4) years of age probably (in the speaker's opinion) the youngest case with serum treatment. One case in the group was given 200 c. c. of serum, probably the largest dose ever administered.

The New Orleans experience showed evidence of uncertainty in prognosis in these cases, some of which were condemned to a fatal issue by the authorities in charge, and yet recovered. No quarantine was practiced at the plague hospital. Relatives were freely admitted to patients. Of course, there were no pneumonic cases, or a different practice would have prevailed. All precautions were used to prevent fleas in the buildings, beds and furniture, as well as floors, etc., receiving treatment with culicidal exterminants.

#### Discussion.

**Dr. Bel.** The variation in death rate is probably due to difference in virulence of the organism. In Havana too little serum may have been used, or there may have been worse types of the disease, or a greater prevalence of the disease.

**Dr. Ledbetter.** What is the result of serums in pneumonic types? The large dosage seems to have a similar effect in the treatment of diphtheria; the larger the dose, the better the effect.

**Dr. Menville.** Would like to know if there are different strains of plague bacillus?

**Dr. Seeman** (closing): The method of treatment in Havana is the same as used last year, but the cases this year have been more severe. We do have types of plague bacilli which are more virulent than others. We cannot estimate the serum possibilities in plague as with diphtheria

and tetanus. There are endotoxins in plague, but no exotoxins. Strong has separated a mild strain of plague bacillus which he uses for immunizing, and so far as reports go the immunization has been successful. In pneumonic types nothing in the world but a miracle will save the patient; there is no record of success in the treatment of such cases.

In New Orleans the economic question arose as to the period of detention of cases after symptoms had disappeared, and where buboes remained, suppurating and discharging. At first patients were kept until buboes healed. Experiments were conducted with the discharges to find when these cases could go out. The conclusion was reached that buboes were sterile of plague as soon as patients were clinically recovered.

DR. J. C. COLE, of New Orleans, read on

**"A Practical Study in the Diagnosis and Care of Intestinal Amebiasis."**

Amebiasis has spread so as no longer to be a purely tropical disease; any portion of the United States may be affected, and this disease is no respecter of person; child as well as adult may be affected and as easily. Dysentery may be acute, bacillary, chronic, or amebic in its forms. Dysentery may last over a year; the acute onset is a sign of amebiasis. There are frequent, loose stools, ten (10) to twenty (20) daily, slimy in type. The victim can get little rest at night. Weakness and prostration obtain.

Amebic dysentery always shows mucus in the stools; without mucus the endamebæ are seldom found. The best way to study the ameba is for the patient to have the stool in the office. Even if the patient has just evacuated, you can obtain some specimen and with straining the mucus is apt to be present.

Technic is simple: From the stool, pick out a bit of mucus; put this on a slide; lay on cover glass; use a little pressure to spread mucus on the slide, and examine with a high, dry lens. Motile amebæ may be easily recognized, if its morphology is fairly studied in advance. Trained diagnosticians may find amebæ in cold stools. Here staining must be done and examination made with an oil immersion lens.

In every case of amebic dysentery the *Endameba histolytica* is found. So far this organism cannot be artificially grown. As this is a chronic condition, treatment requires from six months to a year. After confinement in bed for six or eight weeks, the average patient will report a return to normal, with no other symptoms in evidence. Such patients do not see the need of further confinement. Absolute rest, however, is imperative. There should be restriction in diet. Omnivorous animals are oftenest affected with amebiasis; herbivorous animals are infected with difficulty. The diet should be

regulated accordingly. Medicinal treatment is based entirely upon ipecac and its alkaloid, emetine (hydrochlorid).

The method of treatment consists in morning and night doses of one-half grain of emetine hydrochlorid by needle, and at night pills of ipecac are given, beginning with ten (10) pills, five (5) grains each, and salol coated, reducing the number by one a day, until three (3) pills or fifteen grains of ipecac are taken daily until the period of rest is completed. Then ten (10) days of rest intervene; after that alternately ipecac is given for a week, a period of rest, and so on until treatment is over.

Throughout the routine examination of the stools should be practiced.

#### Discussion.

**Dr. Chassaingnac** called attention to the historical fact that ipecac had been used for dysentery long before the reason for its use was discovered, again emphasizing the fact that there is something in "empiric" therapy.

**Dr. Cole** (closing). Emetine alone is not as successful as when used in conjunction with ipecac. Ipecac should be prepared carefully to prevent solution of the coating in the stomach and letting loose of the ipecac.

#### SECTION ON EYE, EYE, NOSE AND THROAT.

DR. J. A. CARUTHERS, Baton Rouge, Chairman.

DR. E. A. ROBIN, of New Orleans, read on

#### "Some Ocular Lesions and Their Relations to General Diseases."

Owing to the vastness of the subject, he selected only some of the commoner lesions, with a view of calling the attention of the profession to the importance of their early diagnosis. He laid stress upon the early recognition and correct interpretation of the changes which manifest themselves in the retinal circulation, as a result of local and general arterio-sclerosis.

Albuminuric retinitis, a characteristic lesion, is a late manifestation of renal disease, the writer insisted, few patients surviving more than six months after its occurrence. All cases, therefore, should be studied closely with the ophthalmoscope, with a view of revealing the fine retinal changes of the early stages of renal troubles, consisting of a corkscrew-like arrangement of the smaller arterial twigs, of a flattening of the veins where crossed by these arteries, and, in the more advanced cases, of small exudates and hemorrhages scattered through the fundus.

It is well established that the ophthalmologist is often the first to discover the presence of renal disease from these lesions.



The eye lesions caused by syphilis are frequent and familiar. They sometimes present themselves so that their etiology can be traced with almost infallible accuracy.

Among several cases cited to give strength to his various contentions, he related one of paralysis of the left external rectus and opacities of the vitreous, in which a searching examination elicited the presence of diabetes mellitus. Prompt treatment was followed by subsidence of the ocular lesions and great improvement of the general health.

#### Discussion.

**Dr. Genella.** Stated that, in his opinion, the oculist was the only real specialist, as he did not accept cases out of his province. Also he had high regard for the results of their examinations relating to possible general troubles, adding he thought that often a better idea as to the presence of syphilis could be obtained from a thorough examination of the eyes than from a Wassermann test.

DR. R. C. LYNCH gave a

#### “Demonstration of the Suspension Laryngoscope.”

Prof. Gustave Killian, of Berlin, came upon Suspension Laryngoscopy by accident, while arranging to draw the larynx of a cadaver; he passed a depressor over the tongue, hanging the handle to the side of the table, and was surprised at the field it displayed. From this idea he worked until 1912, when he presented his Suspension Laryngoscope before the International Laryngological Congress, at Berlin.

A demonstration of the instrument in New York, in 1913, made me think of its possibilities. As my experience increased, I soon learned that it was much too light and limited in its motions; I could not see the anterior commissure in many cases. To correct these difficulties I devised this modification, which will permit a larger opening of the mouth and moves the tooth plate for a greater distance. I used this modification for some time, when, while suspending a man of extra weight, the plate bent decidedly, and I was afraid it would not be safe. My latest model opens the mouth to one and three-quarter inches, and is arranged to allow for a movement of the tooth plate, nearly one and a half inches, making the tongue spatulas more flexible. An additional hook allows it to be used in varying positions. The tooth plates are changeable—to adapt to various sized mouths and differences in teeth. The instrument is strong in all its parts, and will withstand the severest test. The screw that opens the mouth gag is drilled throughout its

circumference, so that it can be opened like a jack would be. These new tongue spatulas will not permit the tongue to slip over the side, and give the broadest possible view to the opening of the larynx.

The instrument is introduced into the mouth closed, the tongue spatula following along the post-pharyngeal wall. The tooth plate is adjusted carefully behind the teeth of the upper jaw. The screw that operates the ring to which the tooth plate is attached is turned, thus driving the tip of the spatula well under the epiglottis, the procedure I have called—Jacking of the Epiglottis. The mouth is then opened wide and the hook attached to the traveling crane. By the vertical and horizontal movements of this crane the instrument can show the anterior commissure.

From these lantern slides the various steps in the technic, and a photograph of the vocal cords and the interior of the larynx are shown. Note the absence of any projecting screw or anything else that will interfere with a good view of the parts or with the operative manipulations. Once the larynx is brought into view, we can proceed to the diagnosis and treatment in the same manner as one works upon the skin surface or a gynecologist in the vagina.

Working in this manner I have removed singer's nodules from the vocal cords, pedunculated tumors of various kinds from the interior of the larynx. In one instance, after a large raw surface was left, I stitched the edges, obtaining healing by first intention, thus diminishing the scar and giving the patient a good voice, which he could not have had by any other means.

The tendency of papilloma of the larynx to return, I have maintained, is due to incomplete removal, because only punching or biting forceps have been used, and you can no more remove a laryngeal papilloma by this means than you could a wart from the surface of the hand. Now, I dissect them out completely, and in fourteen cases have had no recurrence.

I have operated on four cases of intrinsic cancer of the larynx, so far without recurrence, but I consider an extrinsic cancer of this region absolutely a contra indication for work of this kind.

I have applied the actual cautery a number of times with good results in laryngeal tuberculosis. The pain will be relieved and the surface heal after this procedure.

I have removed a peanut kernel from the trachea and bronchus of a baby fourteen months old, using this speculum to separate the

vocal cords, without a tube. Also a chinquepin from the trachea of a larger girl, and a safety pin, impacted in the oesophagus, with the point up. This case was referred by Dr. J. D. Hunter, of Rayne, La., who made the diagnosis, and had the X-ray taken. Under suspension I was able, with these forceps, to actually turn the pin around, catching the clasp end with one forcep, the spring end with the other, bending the pin so as not to stick in the side wall of the esophagus, removing the pin without tearing the parts.

I believe, with the instruments presented to you, that I am as able to work in the larynx, in an operative way, with just as much accuracy, and almost as much speed, as on the skin surface. You can realize, then, what the possibilities are.

**Discussion.**

**Dr. Chassaignac** said the paper could not be discussed because the reporter had said what there was to be said; but he wished to voice the sentiment of those present as being proud of Dr. Lynch's accomplishment.

DR. H. DUPUY, of New Orleans, read on

**"Acute Infections of the Middle Ear in Early Life."**

He discussed the etiology and pathology of the disease, as well as its symptomatology, dwelling in speaking of the latter on the point that the absence of pain was no guide as to the severity of the condition, while the elevation of temperature was more significant, although not an infallible indication. By means of colored charts he indicated the best location for the necessary incision, and urged upon his hearers the necessity for this step to be taken early, in order to prevent serious, if not fatal complications.

**Discussion.**

**Dr. Seemann.** Discussed especially the bacteriology of the subject, explaining the usual nature of the infection.

**Dr. C. P. Gray.** Related a case in an infant who had symptoms of meningitis as a result of middle ear abscess, whose condition was diagnosed only after a careful examination of the ear was made.

**Dr. L. J. Menville.** Urged in his remarks that all young children who exhibited rise of temperature without an evident cause should have their ears carefully examined.

DR. O. W. COSBY, of Monroe, described

**"A Simple Means of Preventing General Invasion from Local Foci During Operation."**

This method was suggested to him by observing the results following in two cases upon operation for suppurative appendicitis,

with large pus accumulation; after incisions there occurred septicemia, metastatic abscesses, and one patient died, while the other got well, only after a tedious convalescence. He argued that what was at first a local infection and inflammation, had become general after the cutting had broken down the wall thrown around by nature as a barrier around the original focus. The plan he follows is in imitation of nature's action. The edges of incisions and the tissues incised, as well as the abscess cavities are swabbed with a strong solution of bichlorid of mercury, which, acting as a coagulant, imitates nature in its protective method.

This paper was discussed by **Drs. Simmons, Gray and Genella.**

#### **SECTION ON SURGERY AND ANATOMY.**

**DR. G. N. STAFFORD**, Alexandria, Chairman.

**DR. C. W. ALLEN**, of New Orleans, spoke of

##### **"Abdominal Operations Under Local Anesthesia."**

He first discussed the history of local or cocain anesthesia including three stages: The first of overenthusiasm, leading to many fatalities; the second, that of the search for safer substitutes for the cocain, several of which were about as dangerous, the most useful being novocain, and, in spinal analgesia, tropacocain; the third period was that beginning in 1901, the use of adrenalin in combination with the analgesic, diminishing thereby the case of absorption and increasing the local effect. Coming more directly to the actual application in the field referred to, the doctor explained the nerve supply of the peritoneum in order that its sensitiveness, especially that of its parietal side, might be understood. The abdominal wall must be infiltrated directly and, later, it is important that the rami communicantes be reached from inside the abdomen. In operating on abdominal cases by this method, incisions must be made larger than when resorting to general anesthesia, in order to avoid pulling or stretching the tissues. It acts better in chronic processes than in the acute inflammatory conditions, which increase the sensitiveness. It works better in thin patients than in the stout. He does not advise its universal use in abdominal cases, but especially when the giving of general anesthesia is thought hazardous. It should not be used on nervous patients, those easily terrified. It is useful to give a moderate dose of morphin with a small amount of scopolamin about an hour before resorting to the local anesthesia, as the patient is quieted and is in an indifferent

state, which makes the application of cocain more efficient. Dr. Allen described the details of the method of injection as far as the time limit permitted, and closed the discussion by answering questions by DRs. SEEMANN, HEROLD, SIMMONS, KNIGHTON and GENELLA.

DR. A. J. PERKINS, of Lake Charles, read a paper on the  
"Principles of Medical and Surgical Ethics."

He discussed these principles under three heads: The duties of physicians to their patients; the duties of physicians to each other, especially when called in consultation, one with the other; also the duties of patients to their attending or consulting physicians. Dr. Perkins aimed at showing that many ethical questions and amenities were frequently forgotten nowadays, and that the spirit of commercialism had become too rampant. Owing to the time limit Dr. Perkins was unable to finish reading his paper, which was not discussed.

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## Medical News Items.

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THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS will hold its annual meeting at Washington, D. C., May 10, 1915.

THE AMERICAN PEDIATRICIANS' SOCIETY will hold its annual meeting May 24 to 26 at the Laurel House, Lakewood, N. J., under the presidency of Dr. Geo. N. Acker, Washington, D. C.

THE SEVENTH PAN-AMERICAN CONGRESS will meet in San Francisco, June 17 to 21, inclusive. The countries and colonies embraced in the Congress are: Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba, Chile, Costa Rica, El Salvador, Ecuador, Guatemala, Honduras, Hayti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Uruguay, Venezuela, British Guiana, Dutch Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent. The organization of the Congress is perfected in these countries and will be represented by duly accredited delegates. Further information can be had by addressing Harry M. Sherman, chairman, committee of arrangements, San Francisco.

THE AMERICAN SOCIETY FOR PHYSICIANS' STUDY TRAVEL will leave Philadelphia June 6 and proceed to the meeting of the A. M. A. at San Francisco. The party leaving Philadelphia will be joined by physicians from other sections at various cities. Full information about the trip can be had by writing to the office of the A. M. A. *Journal*.

THE AMERICAN SURGICAL ASSOCIATION will meet in Rochester, Minn., June 9-11. After the meeting the members will go to the A. M. A. meeting in a special train, via Kansas City and Sante Fe route, to San Francisco.

THE NATIONAL CONFERENCE OF CHARITIES AND CORRECTIONS will be held in Baltimore, from May 12-19, inclusive. One of the special features of the program of this meeting will be a series of discussions under the general topic, "Health," of which section Dr. Richard C. Cabot, of Boston, is chairman.

THE INTERSTATE ASSOCIATION OF ANESTHETISTS will hold its organization meeting, in conjunction with the Ohio State Medical Association, in Cincinnati, May 4 and 5, 1915. An elaborate program, devoted to the recent advances in anesthesia and analgesia, will be presented. The headquarters, assembly room, and exhibits will be in the New Hotel Gibson, in which all the sections of the Ohio State Medical Association will meet. Anesthetists, surgical and dental, as well as surgeons and general practitioners, are cordially invited to attend. For further information address Dr. F. H. McMechan, secretary, 1044 Wesley Avenue, Cincinnati, Ohio.

THE FEDERATION OF NON-SECTARIAN CHARITABLE AND PHILANTHROPIC ASSOCIATIONS, of New Orleans, held its second quarterly meeting on April 7, 1915. It was decided to select a committee of three from each of the affiliated societies for the purpose of having them solicit new memberships or subscriptions. There are only 2,200 people in New Orleans subscribing to the association or its branches and as \$75,000 is needed to take care of the unemployed, it is hoped to increase the funds. Dr. J. F. Oechsner was elected director, to succeed Dr. Gayle Aiken, who resigned, and all of the other officers were re-elected without opposition. The officers of the association are: Alvin P. Howard, president; Leon Godchaux, Jr., first vice-president; Mrs. A. J. Stallings, second vice-president, and Charles H. Behre, treasurer.

THE ASSOCIATION OF SURGEONS OF THE ILLINOIS CENTRAL AND YAZOO AND MISSISSIPPI VALLEY RAILROADS held its annual convention at Memphis, Tennessee, March 31. More than 200 surgeons, headquarters between Minneapolis, Minn., and New Orleans, were in attendance.

PARISH SOCIETY FORMED.—On March 23, physicians from the Parish of Assumption met at Napoleonville, La., and organized a Parish Medical Society. Those present were: Drs. W. E. Kittredge, Thos. B. Pugh, W. W. Pugh, L. E. H. Duffel, Chas. S. Roger, Henry C. Dansereau, L. V. Painchaud. A meeting will be called in the near future to adopt a constitution. The officers elected are: Dr. W. E. Kittredge, president; Henry C. Dansereau, vice-president; Chas. S. Roger, secretary, and W. W. Pugh, treasurer.

THE SIXTH DISTRICT MEDICAL SOCIETY was organized in Baton Rouge, La., April 8. The meeting was called to order by Dr. Jesse W. Lea, Jackson, La., Councillor of the Sixth District. Dr. Lea appointed Dr. Clarence L. Pierson, of Jackson, as temporary chairman. The following officers were elected to serve the first year: Dr. Chas. W. McVea, Baton Rouge, president; Dr. J. W. Lea, Jackson, vice-president; Dr. R. P. Jones, Baton Rouge, secretary. The president appointed as a committee on by-laws: Dr. C. L. Pierson, chairman, with Drs. E. M. Toler, Clinton, and A. S. J. Hyde, East Baton Rouge. The meeting was attended by about twenty-five physicians from the various parishes forming the Sixth District. Considerable enthusiasm was shown and the prospects are for a large membership.

LOUISIANA RAILWAYS SURGEONS' ASSOCIATION.—The fourth annual meeting of this Association was held in Lake Charles, Louisiana, on Monday, April 19, 8 p. m., in the Elks' Hall. Dr. W. M. Perkins, of New Orleans, read on "*First Aid to the Injured*"; Dr. P. T. Talbot, of New Orleans, on "*The Management of Wrecks*," and Dr. Hermann B. Gessner, of New Orleans, on "*Amputations*." The following officers were elected for the coming year: President, Dr. Chas. McVea, Baton Rouge, La.; first vice-president, Dr. M. L. Hoffpauir, Crowley, La.; second vice-president, Dr. I. W. Cooper, Newton, Miss.; secretary, Dr. J. J. Robert, Baton Rouge, La.; treasurer, Dr. P. T. Talbot, New Orleans.

BALTIMORE TO FIGHT MOSQUITOES.—Surgeon-General Gorgas had a conference recently with the city officials of Baltimore regard-

ing the abolition of the pest of mosquitoes. General Gorgas expressed the opinion that the question was wholly a matter of drainage, thereby removing the breeding places of the mosquito, but that it was impossible to destroy the mosquito absolutely.

**GRANT FOR MEDICAL COLLEGE IN CHINA.**—A grant of \$16,200 annually for five years to the Yale Medical College, Changsha, China, has been recommended by the China Medical Board of the Rockefeller Foundation. Six American physicians are to be supported at the institutions by this grant.

**ANTITYPHOID INOCULATION EFFECTIVE.**—The British Under-Secretary of State for War recently made a statement in the House of Commons that only 421 cases of typhoid had developed in the British forces during the present war. Of these 421 cases, 305 had not been inoculated within two years, and among those who had been inoculated within two years, there was only one death and he had received only one inoculation instead of the two provided for by the regulations.

**PREVENTS SUICIDE.**—In an effort to prevent suicide and relieve despondency the coroner of Chicago hit upon the plan of placing on coroner's juries only those who were in need. About 7,500 men, since September 1, who were out of employment, have sat on these juries and received their dollar a day. More than twenty men have already testified that they were on the verge of suicide before they were saved by this plan.

**ORGANIC DISEASES INCREASE DEATH-RATE.**—In an address entitled "America's Pressing Mortality Problem," Elmer E. Rittenhouse, president of the Life Extension Institute of New York, points out the rapid increase of deaths from apoplexy, kidney and urinary diseases and cardiac and circulatory disease in the United States, and a corresponding decrease of deaths from these causes in England and Wales. This address has recently been issued in pamphlet form and the text is accompanied by a series of charts which graphically illustrates these facts. The author gives, as his solution of this problem, that education in individual hygiene is the remedy for these conditions and the final means by which length and efficiency of life may be accomplished.

**VERMONT PASSES EUGENIC LAW.**—The Legislature of Vermont recently enacted a eugenic marriage law which provides a fine of



\$500 for any person who marries without a physician's certificate of physical and mental fitness.

**NEW YORK STATE WOOD ALCOHOL BILL.**—Recently a bill has been introduced into the State of New York requiring that wood naphtha, or wood alcohol, shall be distinctly labeled, "Poison." The label must also bear a skull and crossbones and the name and address of the maker or seller printed conspicuously in red ink. The bill reads further: "It is unlawful to use this fluid in any article of food, beverage, or medicinal or toilet preparation for human use, internally or externally."

**SEAMAN MEDAL AWARDED TO GENERAL GORGAS.**—Surgeon-General William C. Gorgas has been awarded the Louis Livingston Seaman Medal for progress and achievement in the promotion of hygiene and the mitigation of occupational diseases.

**INFLUENZA IN WASHINGTON.**—Grippe has prevailed to a greater extent in Washington this year than at any time since 1891, according to health reports. In six weeks 210 deaths resulted from the disease, as against 113 for the corresponding period last year.

**WELLESLEY COLLEGE GIRLS CONTRIBUTE.**—The sum of \$800 has recently been contributed by Wellesley College girls for the purchase of an automobile ambulance for the American Ambulance Hospital in Paris.

**BELGIUM'S ILLS.**—In a lecture delivered at the American Hospital in Paris, Dr. George W. Crile detailed a phase of Belgium's sufferings that had not been thought of by the lay mind. He said in part: "Death, sorrow, bereavement and destruction of property are not the worst of Belgium's ills. The effect of the long strain is manifesting itself on the whole people in an exhaustion of the central nervous system precisely like that which results in an individual who has long been under the knife. Men and women have aged in months, degenerative diseases that might have been deferred for decades have hurried to fatal culmination, and the life of the people as a nation has been shortened, their vitality impaired and their future embittered." Dr. Crile sums the whole thing up by calling it "the vivisection of a race."

**MAYO RESEARCH FOUNDATION, UNIVERSITY OF MINNESOTA.**—The faculty of the medical department of the University of Minnesota has approved the plan of Drs. William J. and Charles H.

Mayo, of Rochester, Minn., to establish a \$1,000,000 foundation for medical research in connection with the University of Minnesota. The interest of the fund will be used by graduates of the university medical department in research work at Rochester.

TRANSFER OF QUARANTINE IN NEW YORK.—Believing that the local quarantine affairs of the port of New York may be improved under government supervision, the Chamber of Commerce of New York, in a report to the council, favors its transfer to the Federal Government. The service has cost the city \$22,000 a year, and the new detention hospital which is shortly to be built will cost the city a quarter of a million for construction.

HYGIENE LECTURES.—A lecture course on "The Medical and Social Aspects of Hygiene" has been organized by Superintendent Gwinn of the New Orleans Public Schools. The lectures commenced on Friday, March 26, and will continue on every Friday until May 28. The lecturers and their subjects are as follows: Dr. C. C. Bass, "Prevention of Malaria"; Judge A. H. Wilson, "Physical Health and Juvenile Delinquency"; Dr. J. A. Gorman, "Oral Hygiene"; Dr. Dandridge P. West, "Nutrition in Infancy and Childhood"; Dr. Isadore Dyer, "Hygiene of Skin"; Dr. Marcus Feingold, "Hygiene of the Eye"; Dr. Chas. J. Bloom, "Significance of Physical Measurements of Children"; Dr. E. M. Hummel, "Nervous and Mental Hygiene," and Dr. Edmund Moss, "How Teachers May Help the Medical Inspector."

AID TO BELGIAN PHYSICIANS.—The report of the treasurer, Dr. F. F. Simpson, of the committee of American physicians for the Aid of the Belgian Medical Profession, shows a total disbursement, for the week ending April 3, 1915, of \$6,137.20.

TRACHOMA PREVALENT IN KENTUCKY MOUNTAINS.—The United States Health Service recently estimated that 33,000 cases of trachoma exist in the mountain section of Kentucky alone. This disease was formerly considered as a foreign ailment not existing to any extent in the United States. The majority of the cases examined were school children and the findings may be taken as a basis for examining adults. Almost all of those examined were whites, as the negro population in the mountain section of Kentucky is very small. As the bulk of the population of that section comes from old American stock, foreign immigration cannot be blamed for the prevalence of the disease. Hospitals have been established

at various points for the treatment of the disease and for the education of the general public as to the means of its prevention.

**OKLAHOMA NEWS ITEMS.**—The State Legislature has passed bills appropriating \$25,000 for the erection of new fireproof wards to take the place of those recently burned at Supply. Fifty thousand dollars were also appropriated for the erection of fireproof cottages to take care of the State's tubercular patients at some place to be selected by the State Board of Affairs. One hundred thousand dollars was appropriated for the purchase of the Norman Sanitarium. This institution is owned by a corporation, who have heretofore had a contract with the State to take care of the insane who could not be accommodated at the Insane Asylum at Vinita.

**PERSONALS.**—Dr. W. F. Mathews, Bomar, recently lost his office by fire.

Dr. J. G. Street, Oklahoma City, was recently elected commissioner of public property.

Dr. W. W. Brodie, Tulsa, has been appointed county physician.

Dr. J. F. Bolend, Oklahoma City, is attending the Army Medical School at Fort Leavenworth.

Dr. F. L. Carson, Shawnee, recently had part of his home burned by fire.

Dr. R. L. Morrison, Poteau, is visiting Hot Springs, Ark., for his health.

Dr. D. D. Howell, Nowata, recently fractured his wrist, cranking an auto.

Dr. Fred Sutton, Bartlesville, is quite ill.

Dr. W. E. Wright and Dr. C. D. O'Hearn, Tulsa, have bought out the interest of Dr. G. H. Butler in the Physicians and Surgeons' Hospital, Tulsa.

**MARRIED.**—Dr. G. W. Baker and Miss Martha Robertson, both of Leon.

Dr. D. Watts and Mrs. Emma Garriey, both of Laverne.

**DIED.**—Dr. S. M. Benepe, Holdenville, died recently.

**THE SAMUEL D. GROSS PRIZE AWARDED.**—Dr. John Lawrence Yates, of Milwaukee, received the Samuel D. Gross Prize of \$1,500 from the Philadelphia Academy of Surgery for an essay on "Surgery in the Treatment of Hodgkin's Disease."

**QUESTION OF EARLY MARRIAGE.**—A prize has been offered by Caspar L. Redfield of \$200 for evidence in favor of early marriage. The time of the prize offer has been extended to December 30, 1915. The American Genetic Association is working to secure repeal of laws allowing marriage at such ages as 15 for males (as in three States) and 13 for females (as in four States). For further information, address C. L. Redfield, 525 Monadnock Block, Chicago.

**TYPHOID MARY AGAIN AT LARGE.**—Mary Mallon, widely known as “Typhoid Mary,” was again apprehended by the New York Board of Health and returned to quarantine for an indefinite period. Typhoid Mary is probably the most celebrated “carrier” in medical history. She has recently been working as cook at the Sloane Maternity Hospital, where twenty-five cases of typhoid fever, with two deaths, resulted.

**“TWILIGHT SLEEP” BARRED IN MOVIES.**—Moving pictures illustrating the advantages of twilight sleep in childbirth, which were to have been illustrated in a lecture by a disciple of Krœnig and Gauss, have been forbidden and license has been refused to a movie theater in New York, planning to run the films.

**“LABORATORY WEEK” LECTURES.**—The JOURNAL has received an invitation to attend “Laboratory Week” for visiting physicians at the Research Laboratory of Parke, Davis and Company, Detroit, Mich., June 7-11, 1915. Besides the lectures, there will be demonstrations displaying the actual work in progress, with a comprehensive exposition of the apparatus and technic employed in the medical research work of this firm.

**ATTENDANCE AT STATE MEETING.**—The Lake Charles meeting of the Louisiana State Medical Society was comparatively small, which may be explained by the remoteness of the place. New Orleans, however, was well represented by the following members: Drs. H. Blum, C. J. Bloom, E. A. Robin, J. M. Gillespie, J. T. O’Ferrall, C. V. Unsworth, I. I. Lemann, W. H. Seemann, A. L. Levine, E. W. Mahler, S. K. Simon, E. S. Hatch, E. C. Samuel, L. H. Landry, William Kohlmann, B. A. Ledbetter, C. W. Allen, H. E. Menage, R. L. DeBuys, G. S. Bel, Chas. Chassignac, P. T. Talbot, S. G. Wilson, S. S. Schochet, O. Dowling, A. Whitmire, W. H. Knolle, H. Dupuy, E. L. Leckert, W. J. Durel, M. W. Swords, A. D. Henriques, A. C. Eustis, R. C. Lynch, G. F. Cocker, John Smyth, H. B. Gessner, Wm. M. Perkins, A. O. Hoefeld, J. C. Cole and Isadore Dyer.

**PERSONALS.**—Senior Surgeon Henry Rose Carter, U. S. P. H. S., Baltimore, has been promoted to the rank of assistant surgeon-general, under the Act of Congress providing increase of rank in recognition of his work in Canal Zone sanitation. Dr. Carter will take charge of the anti-mosquito crusade in Baltimore. The

JOURNAL, as well as his many friends in New Orleans, will be pleased at this distinction to Dr. Carter, all the more deserved because he has at all times earned reward for his zealous, earnest endeavors, always marked with his characteristic modesty.

Dr. William H. Welch, of Johns Hopkins University, has been appointed a member of the China Medical Board of the Rockefeller Foundation.

Dr. Joseph A. Estopinal, of Arabi, La., has been appointed chief of the ear, nose and throat clinic of the Illinois Central, and Yazoo and Mississippi Valley railroads.

Dr. William A. Pettit, of New Orleans, sustained a painful injury last month, caused by a collision between his motor car and a grocery truck.

Dr. Richard P. Strong, professor of tropical diseases at the Harvard Medical School, has been appointed head of the American Red Cross Sanitary Commission, which has sailed for the districts of Servia and Austria-Hungary, to undertake measures with prevalent epidemics of typhus, cholera and other contagious diseases.

Dr. D. L. Watson, of New Orleans, was fired at by one of four boys when he interfered with their robbery of a tool box belonging to the street car company. The shots were ineffectual.

Dr. E. M. Hummel, of the City Hospital for Mental Diseases, was recently commended by Mayor Behrman, of New Orleans, for his good work at that institution.

Dr. G. F. Patton, head of the vital statistics department of the Louisiana State Board of Health, has been very ill with an attack of gripe, but is fast recovering.

Dr. Solon G. Wilson (New Orleans) has returned from a recent trip to the North and has resumed practice.

Drs. J. T. Halsey, H. W. Kostmayer and Isadore Dyer, of the School of Medicine, Tulane University of Louisiana, attended the meeting of the South Texas Medical Association, held at Victoria, April 8 and 9.

Dr. P. C. Christian, of Oklahoma City, who was a visitor to the clinics of New Orleans during the month, has returned to his home.

Dr. C. C. Bass was honored April 7 by delivering the Eleventh Rush Lecture at the University of Pennsylvania; he again lectured on April 9 before the American Philosophical Society at Phila-

delphia. During his trip he also lectured at the University of Maryland.

Dr. G. McG. Stewart, who has been connected with the United States Public Health Service in New Orleans for a number of months, has gone to Laurel Hill, La.

REMOVALS.—Dr. J. T. Vick, from Antlers to Ringling, Oklahoma.

Dr. J. M. Wells, from Newby to Bristow, Oklahoma.

Dr. E. W. King, from Bristow to Oilton, Oklahoma.

Dr. B. H. Day, from Alma to Oklahoma City, Oklahoma.

Dr. G. McG. Stewart, from 133 University Place, New Orleans, to Laurel Hill, La.

Dr. Foster Jarrell, from Junction City, Ark., to Huttig, Ark.

Dr. G. H. Spurlock, from Hillister, Tex., to 3217 Austin Street, Houston, Tex.

The Rockefeller Foundation International Health Commission, from Washington, D. C., to 61 Broadway, New York City.

MARRIED.—On April 6, 1915, Dr. Isidore Loeb, to Miss Carrie M. Lengsfeld, both of this city.

DIED.—On March 30, at Charleston, S. C., Dr. Charles R. Henderson, of the University of Chicago.

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## Book Reviews and Notices.

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*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.*

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**Diagnostic and Therapeutic Technic.** A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M. D. Second edition. Thoroughly revised. W. B. Saunders Company, Philadelphia and London.

The purpose of the author has been to gather into one volume and thus make more generally available to hospital interne and general practitioner, technical procedures which both may be called upon at any time to perform. These procedures are widely scattered in many different text-books, and are often inadequately described in those text-books. The scope of the present volume covers among other things anesthesia, sphygmomanometry, infusion and transfusion, hypodermic administration of drugs,

administration of antitoxins and of salvarsan and neosalvarsan, Bier's hyperemie treatment, exploratory punctures, examination of the ear, nose, throat, stomach, colon, rectum, genito-urinary organs. The work will serve as a very valuable reference book. It includes most of the well accepted methods and describes them clearly. Among the methods for dilating esophageal stricture no mention is made of hydrostatic pressure and no description given of Seppy's instrument.

I. I. LEMANN.

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**The Commoner Diseases: Their Causes and Effects**, by Dr. Leonard Jones. Translated by William H. Woglom, M. D. J. B. Lippincott Company, Philadelphia and London.

This book consists of a series of twenty-six lectures on pathology. The lectures do not pretend to be exhaustive nor are they systematically arranged. While brief they are sufficiently comprehensive to give an adequate conception of the pathology of the diseases under discussion. Above all they are scientifically accurate and modern. The spirit of the lectures is admirable, in that they are not limited to description of morphological changes, but discuss these changes in the light of altered physiology. The illustrations are abundant, well chosen and well reproduced. The ample bibliography at the end of the volume, together with the conscientious quoting of authority and source for each statement made in the text, adds considerably to the value of the book. In spite of excellent qualities, however, it cannot replace the more systemized textbook of pathology for the medical student, and, on the other hand, it is too cursory and not sufficiently extensive to attract more than casual attention from the pathologist.

LEMANN.

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**Differential Diagnosis. Vol. II.** Presented through an Analysis of 317 cases. By Richard Cabot, M. D. W. B. Saunders Company. Philadelphia and London.

Dr. Cabot's second volume will meet the same cordial reception accorded the first volume. There is no question as to the advantages of the case method in presenting the subject of differential diagnosis. It lends itself more to this than to any phase of medicine. The interest is held and stimulated, and in addition to this there is the very great advantage that the student is led by the study of the cases presented to approach his problems at the bedside in the same spirit. Dr. Cabot continues in this volume the use of statistical studies—a field in which he has contributed much that is important and useful in medicine. The new volume is to be commended to all engaged in the practice of medicine, including the fourth-year student, the general practitioner and the surgeon.

LEMANN.

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**Abdominal Operations**, by Sir Berkeley Moynihan. Third edition, revised. W. B. Saunders Company, Philadelphia and London.

The third edition of this well-known book is now presented to the profession. From the appearance of the first edition, it has been one of the most popular works on abdominal surgery, and owing to the additional text and numerous illustrations, it has been found necessary to make the present edition into two volumes of five hundred pages.

One of the special advantages of Sir Berkeley's book is that you are

given the personal view and preferred technic of an operator famed for his perfect surgical methods and knowledge of living pathology.

The present edition, like the former ones, needs no recommendation to those who have had the pleasure of reading Sir Berkeley's numerous contributions to medical literature. It is a model work in its arrangement and classification, and again displays the author's ability to present surgical technic in a pleasant style, owing to his exceptional literary ability.

The first volume is devoted to the discussion of the various operations and technic adopted in his clinic in stomach, intestinal localization, intestinal suture, enterectomy, colostomy and anastomosis. The second volume is devoted to the large intestine, appendix, perforation, exclusion, liver, pancreas and spleen. To one who has kept abreast of the discussion on the indications and contraindications for gastro-enterostomy and the excision of ulcer, it would be natural to turn to this chapter. Here will be found expressed in a conservative, clear-cut manner the status of this question that will be acceptable to the majority of the leading authorities of the day.

The chapter on surgery of the large bowel is decidedly the best of the second volume, for Sir Berkeley has for several years contributed illuminating articles on this subject.

If any criticism could be offered of the book, it would be that the author has omitted discussion of all operations partly intraperitoneal, such as the kidney, bladder, rectum and hernia operations. Radical operations for carcinoma of the rectum still offer a vast field for discussion, and bladder and kidney surgery should find a place in subsequent editions, especially since it is so generally believed that Sir Berkeley has had exceptional opportunities in these fields.

The division of the text into two volumes will meet with general approval.

MILLER.

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**A Laboratory Manual and Textbook of Embryology**, by Charles W. Prentiss. W. B. Saunders Company, Philadelphia and London.

This work consists of excellent descriptions of the vertebrate embryos most available for and usually studied in the laboratory work of courses in embryology combined with an account of the processes of human embryology. In the preface the statement is made that it is adapted especially to the medical student. Since knowledge of the essential facts and chief processes of development are equally important to all students, the work is equally well adapted to all courses in embryology forced to be briefer than should be by a crowded curriculum. In its preparation, immediately following the appearance of the extensive and classic *Human Embryology* of Keibel and Mall and coincident with the publication of an unusual number of investigations of important phases of development, the book is peculiarly fortunate. Dr. Prentiss has shown excellent choice in the selections of illustrations from these original sources as well as in basing descriptions of processes upon the results recorded. Of the considerable number of new illustrations, most are of most excellent teaching value, and those made for the book by Katherine Hill are especially beautifully done. In text, Dr. Prentiss' sentences are short and his expression remarkably clear and concise. Altogether, considering its extent of only 400 pages, including the illustrations, the book suggests itself as the best text of its size now available.

The arrangement is in part according to the usual procedure in the



laboratory work of the classes. Studies of the cell, the ovum, ovulation, maturation, fertilization and segmentation precede, followed by the usual stages of chick embryos and the study of the formation of the germ layers and histogenesis and organogenesis as shown in these. Then the study of the fetal membranes of mammals, including man, is studied, followed by the study of various stages of mammalian embryos and fetuses, using pig material chiefly. The hints for laboratory work and the directions for the dissection of pig embryos, results of Dr. Prentiss' own experiences, comprise one of the useful features of the book. The organogenesis of the different functional apparatuses of the body is taken up in succeeding appropriate chapters.

IRVING HARDESTY.

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**Student's Manual of Gynecology**, by John Osborn Polak, M. D., F. A. C. S.  
Lea & Febiger, Philadelphia and New York.

This excellent manual from the pen of one who is so well known to many through his numerous papers on this dual branch of medicine is welcome.

The article on dysmenorrhea is interesting, but it is regrettable that such an indefinite term as "rheumatism" should be used to attribute as a cause of such a symptom. His descriptions of treatment of laceration of the vagina are clear and well illustrated. The use of the vulvar pads after such operations is disapproved of, under the belief that they encourage infection.

In the treatment of retroversion of the uterus attention is given to the pessary, but surgical methods seem to be preferred, preference being given to the Baldy-Webster, Gilliam-Montgomery & Kelly methods. The different steps of these operations are well illustrated.

Much effort is made to assist the reader to make a correct diagnosis of most gynecologic conditions. The book will prove a great help to the student, and even to many gynecologists.

MICHINARD.

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**Local Anesthesia**, by Prof. Heinrich Braun, M. D., translated by Percy Shields, M. D. Lea & Febiger, Philadelphia and New York.

The English translation of Braun's *Local Anesthesia* by Dr. Percy Shields, of Cincinnati, should need no special introduction to the medical profession. Professor Heinrich Braun, of Zwickau, Germany, stands foremost among a galaxy of famous names which have placed local and regional anesthesia in the position which it occupies to-day; the safest of all anesthetic methods.

Among the pioneers in this field have been such men as Schleich, Matas, Halstead, Crile, Corning, Cushing, Barker, Reclus, Bier and many others, but to Braun particularly belongs the credit of placing local and regional anesthesia upon the pinnacle of success, by developing and perfecting the combination of the various local anesthetics with adrenalin, which has been the most important factor in bringing forward as a method suited to major operations.

Braun deserves particular credit for having published the first thorough treatise on this subject and for having established order out of chaos at a time when the student in this field had to search a voluminous literature in at least three languages to obtain the best ideas from the leading workers. Much experimentation establishing certain impor-

tant facts was done by Braun and his staff, often upon themselves, with a thoroughness of observation and technic which leaves nothing to be added, even at this date.

In his own language (German) Braun's book has had three editions, the English translation being from the last, which brings the subject up to date in an attractive volume of 385 pages, with 215 excellent illustrations, many of these from photographs and drawings made by Braun himself.

If surgery is an art, then local anesthesia is a fine art, and involves the thorough understanding of many fundamental principles not necessary with general anesthetics. These essential principles are thoroughly presented in a masterly way in the preliminary chapters, and should be well understood by all who would perfect themselves in this field.

The technical part of the book covers the entire field of surgery with few exceptions and is thorough and concise.

It is, however, to be regretted that spinal analgesia is omitted, and the use of quinin and urea only mentioned, but these omissions can be overlooked in the wealth of other information which place this volume as a monument to the foremost worker in the field of local and regional anesthesia.

CARROLL W. ALLEN.

**Nursing and Care of the Nervous and the Insane**, by Charles K. Mills, M. D. Third edition. Revised by the author, assisted by N. S. Yowger, M. D. J. B. Lippincott Co., Philadelphia and London.

In the present third edition of this manual the author has endeavored to bring the subject more nearly up to date, and he has not failed in this task.

So much depends on the nurse proper in the care of the nervous and the insane that a great deal of stress is laid on the qualities and qualifications of a good nurse for nervous patients. This is proper, because the care of these patients is in some respects one of the highest forms of nursing.

Of particular interest to the reader will be found information regarding the management of hysterics, epileptics and those found in a state of insensibility, whether due to alcoholism, apoplexy, uremia, narcotic poisoning, sunstroke, fainting, etc. Every one knows that much can be done other than drug administration for the relief of those suffering from chronic nervous disorders, as ataxia, hemiplegia, paraplegia, etc., but the author gives here a splendid description of how and when this can be done; the prevention and treatment of bed sores, the most disagreeable and troublesome complication in these cases receive due attention.

In the chapters on massage, hydrotherapy and electrotherapy valuable adjuncts in the care of this class of patients, careful and thorough description is given of the various procedures in their application.

In the last chapter, devoted to the care of the insane, the physician and nurse will also find much valuable information.

L. L. CAZENAVETTE.

## **Publications Received.**

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**W. B. SAUNDERS COMPANY**, Philadelphia and London, 1915.

**Medical Electricity, Röntgen Rays and Radium**, by Sinclair Tousey, A. M., M. D. Second edition, thoroughly revised and greatly enlarged.

**Nervous and Mental Diseases**, by Archibald Church, M. D., and Frederick Peterson, M. D. Eighth edition, thoroughly revised.

**Principles of Hygiene**, by D. H. Bergey, A. M., M. D. Fifth edition, thoroughly revised.

**Clinical Diagnosis**, by James Campbell Todd, Ph. B., M. D. Third edition, revised and enlarged.

**The Clinics of John B. Murphy at Mercy Hospital**, Chicago, February, 1915.

**LEA & FEBIGER**, Philadelphia and New York, 1915.

**Progressive Medicine**, edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. March 1, 1915.

**PAUL B. HOEBER**, New York, 1915.

**Lectures on the Heart**, by Thomas Lewis, M. D., F. R. C. P., D. Sc.

**THE YEAR-BOOK PUBLISHERS**, Chicago, 1915.

**The Practical Medicine Series. Volume 1, General Medicine**, edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D.

**G. P. PUTNAM'S SONS**, New York and London, 1915.

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### **MISCELLANEOUS.**

**Fourteenth Annual Report of Mortality Statistics (1913).** Department of Commerce, Bureau of the Census. (Wm. J. Harris, Director.)

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## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for March, 1915.

CAUSE.	White	Colored	Total
Typhoid Fever.....	1	2	3
Intermittent Fever (Malarial Cachexia).....	1		1
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	1	2	3
Diphtheria and Croup.....	6	3	9
Influenza.....	28	15	43
Cholera Nostras.....			
Plague.....			
Pyemia and Septicemia.....			
Tuberculosis.....	42	59	101
Syphilis.....	1	1	2
Cancer.....	29	14	43
Rheumatism and Gout.....			
Diabetes.....	1	1	2
Alcoholism.....			
Encephalitis and Meningitis.....	3		3
Locomotor Ataxia.....	3		3
Congestion, Hemorrhage and Softening of Brain.....	28	20	48
Paralysis.....	2	3	5
Convulsions of Infancy.....		2	2
Other Diseases of Infancy.....	8	3	11
Tetanus.....		1	1
Other Nervous Diseases.....	4	3	7
Heart Diseases.....	60	57	117
Bronchitis.....	6	5	11
Pneumonia and Broncho Pneumonia.....	42	57	99
Other Respiratory Diseases.....	4	3	7
Ulcer of Stomach.....		1	1
Other Diseases of the Stomach.....		1	1
Diarrhea, Dysentery and Enteritis.....	13	6	19
Hernia, Intestinal Obstruction.....	5		5
Cirrhosis of Liver.....	8	1	9
Other Diseases of the Liver.....	1	1	2
Simple Peritonitis.....		1	1
Appendicitis.....	3		3
Bright's Disease.....	29	15	44
Other Genito-Urinary Diseases.....	15	6	21
Puerperal Diseases.....	4	1	5
Senile Debility.....	7	3	10
Suicide.....	3	4	7
Injuries.....	17	18	35
All Other Causes.....	25	18	43
<b>TOTAL</b> .....	<b>400</b>	<b>327</b>	<b>727</b>

Still-born Children—White, 20; colored, 19. Total, 39.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 17.64; colored, 38.35. Total, 23.39.

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

Mean atmospheric pressure .....30.06  
 Mean temperature .....55.  
 Total precipitation .....2.31 inches  
 Prevailing direction of wind, northwest.

# *New Orleans Medical and Surgical Journal.*

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## Original Articles.

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

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### THE PATHOLOGY AND BACTERIOLOGY OF HODGKIN'S DISEASE.\*

By J. A. LANFORD, M. D.,  
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(From the Laboratories of Pathology and Bacteriology, Tulane University of Louisiana and Touro Infirmary, New Orleans.)

The clinical symptoms which we now regard as Hodgkin's disease were first described by Hodgkin<sup>1</sup>, in 1832, when he published the records of seven cases, and, although subsequent study of his descriptions showed that several of these were not pseudo-leukemia, we owe our first knowledge to him. It was Wilks<sup>2</sup>, in 1856, who again drew attention to the condition, calling it Hodgkin's Disease in acknowledgement of the previous writer.

Our knowledge of the clinical evidence of the disease was for a long time much greater than our knowledge of the pathological histology because of the vast amount of confusion which was occasioned by the efforts of some writers to class the condition as

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\* Read before the Orleans Parish Medical Society, August 24, 1914. [Received from the author for publication, April 29, 1915.—Eds.]

tuberculosis, lympho-sarcoma, etc., and it is only in recent years that the histological picture has been satisfactorily and accurately described. Before Virchow's work on the histology of the blood Hodgkin's disease was not separated from the leukemias and was called pseudo-leukemia, a synonym which unfortunately is used to-day.

Fischer<sup>3</sup>, in 1897, was among the first to draw attention to the characteristic histological changes in the lymph nodes, and in 1898 Sternberg<sup>4</sup> reviewed the literature and added a series of cases in a certain number of which the lymph glands showed either the tubercle bacilli or the changes characteristic of tuberculosis. He therefore concluded that the condition was a peculiar form of lymphatic tuberculosis and his writings created a great amount of confusion which was not cleared up until Dorothy Reed<sup>5</sup>, in a carefully studied series of eight cases, proved that it was a distinct histological picture not in any way connected with tuberculosis. She inoculated rabbits and Guinea pigs with portions of the glands and in only one instance did the animal show tuberculosis. The case afterwards died of tuberculosis and the glands showed both the histological picture of Hodgkin's disease and tuberculosis. Longcope<sup>6</sup>, in 1903, emphasized the work of Reed and reported the results of his cases, four of which came to autopsy.

The disease occurs most frequently before the fourth decade, about 80 per cent. of the cases being under 35 years. Males constitute the majority of cases and in 156 cases reported by Fischer<sup>7</sup>, Longcope<sup>8</sup> and Bunting<sup>9</sup> 70 per cent were male.

The duration of the disease is usually from three months to three years and very rarely do the patients survive more than four or five years. It is practically always fatal, although Billings and Rose-now<sup>10</sup> have recently reported a case which is clinically well. Death results from some intercurrent disease or from anemia and cachexia. One case of death from suffocation has been reported.

The first sign of the disease shows itself usually as an enlargement of some of the lymph glands, as a rule, in the neck, but occasionally glands in the groin and axilla are the first to attract the attention of the patient. The growth may confine itself to one group of glands, but usually there is a gradual progressive enlargement of all the superficial glands, one group after another being involved. These are followed by involvement of the deeper glands.

The enlarged glands at first give rise to no discomfort and on

palpation are discrete, firm and unattached to the skin. This condition continues unless there is a secondary infection, and it is the rule in most cases to find that one can, by palpation, distinctly distinguish the component glands of the mass. The patient is usually apparently in excellent health, but the increase in the size of the growth frequently causes pressure symptoms, due to a mechanical interference with some vital organ. In the neck the pressure symptoms may arise from pressure on the nerves as paralysis of the recurrent laryngeal or upon the great vessels of the neck, producing edema of the face. Difficulty in swallowing is frequently complained of and extreme dyspnea is quite common when the mediastinal glands are involved. Edema of the feet and legs are frequently noted. In the abdominal cavity the masses of glands may press upon the bile ducts, producing jaundice.

The disease does not confine itself entirely to the lymphatic glands, but may give rise to secondary growths in most of the other organs of the body. The spleen is most frequently secondarily involved and may attain a relatively enormous size. The growths are usually confined to several distinct areas, although the enlargement of the gland is general. Occasionally the spleen is the first organ involved and Wade<sup>11</sup>, working in the Tulane laboratory, has recently reviewed the literature and finds that there are thirty-seven primary splenic Hodgkin's cases reported. He rightly concludes that the condition was probably commoner than some of the reports indicate, as some of the reported cases of primary sarcoma of the spleen could have easily been unrecognized Hodgkin's Disease. The liver, lungs and bone may all show secondary growth and frequently the pleura and peritoneum. The skin may become involved usually by direct extension and auto-infection, as observed in a recent case in which the gland has broken down. Occasionally the new growth may invade the musculature of the stomach and intestines, giving rise to gastro-intestinal symptoms.

Next to the glandular enlargement the progressive anemia is the most striking symptom. The anemia is of the secondary type and is probably due to some form of toxin in the blood stream. A deviation from the normal leucocytic count has been noted by Bunting<sup>12</sup>, who claims to be able to diagnose the condition by total and differential white cell count. He draws particular attention to the increase of the so-called transitional cell and cites results in twenty-five cases. He finds that the cases can be divided into two

distinct groups; the more recent ones which show a practically normal leucocyte count, and the other cases which show a definite leucocytosis sometimes as high as 100,000.

The enlargement of the glands is due to a hyperplasia of the lymphoid cells with proliferation of the germinal centers, an increased vascularity and a proliferation of the reticular endothelium. The glands are usually regular, round and oval, and even in the largest masses each gland is discrete, being held together by loose connective tissue. Occasionally, as the result of secondary infection, this interglandular tissue is increased. The cut surface, as a rule, offers but very little resistance to the knife and presents a gray semi-translucent, more or less lobulated, glistening surface. Occasionally small opaque or yellow foci of suppuration are noted and here and there an occasional zone of hemorrhage. In very old cases connective tissue bands dividing the gland into irregular divisions are very marked. Microscopically the normal relationship of the histology is destroyed and we find many endothelial cells, both single and multinucleated. These seem to come either from the germinal centers or from the endothelium of the lymph channels. They show a pink-staining protoplasm, and a pale blue-staining nucleus, quite rich in chromatin network, which takes a dark blue stain. Mitotic figures are quite frequently seen. Some of these cells show several nuclei and occasionally these nuclei arrange themselves around the periphery. In the most of instances they can be distinguished from the giant cells of tuberculosis. A striking cell is the eosinophile which is nearly always present in large numbers. The lymph sinuses are distended with leucocytes, lymphocytes and endothelial cells. Fibroblasts are occasionally noted and in the old lesions definite bands of connective tissue infiltrated with lymphoid cells, eosinophiles and an occasional endothelial cell are seen. The capsule of the gland is always infiltrated with these cells. Occasionally a small area of necrosis is noted, this being present usually in rapidly growing masses.

The etiology of the disease is still obscure. In many of its features it is very suggestive of a neoplasm and it is thought by some that the secondary growths in the liver, spleen, etc., are true metastases. Langhaus,<sup>13</sup> however, pointed out many years ago that these metastases did not show all the properties of a secondary growth. He considered them to be simply a growth arising from the part itself and not resulting from cells brought from a focus



elsewhere. Longcope<sup>14</sup> is also of the same opinion, saying that these growths cannot be traced by deposits of cells brought from the lymph glands by the blood stream or lymphatics, but that each nodule appears as a distinct new growth which apparently has for its starting point lymphoid tissue normally present in the organ. He, however, has traced by serial sections the growth pushing its way into the lumina of the blood vessel which would indicate the probability of growing cells being broken off and lodging in distant organs, giving rise to true metastases. Despite this fact, however, he is rather inclined to the view that the condition is a peculiar chronic inflammatory process, due to some toxic substance, either of bacterial or cellular origin, which is capable of giving rise to the peculiar proliferative changes in the lymph glands and lymphoid tissue of various organs.

Mallory<sup>15</sup> and others regard the growths as purely neoplastic and in his recent book he classes it as a lympho-blastoma. Oliver<sup>16</sup>, in a recent article, has drawn attention to some of the properties observed in the early stages which convince him that Hodgkin's should be classed with lympho-sarcoma and endothelioma as a neoplasm. The facts on which he bases his opinion are: the similarity of the histological process, early and constant development of malignancy, as shown by invasion of capsule and veins, and ultimate formation of true metastases, partly at least through the blood stream.

The probability of the condition being of an infectious origin has been considerably increased lately by workers in various parts of the world, reporting the finding of diphtheroid organisms in the glands of Hodgkin's disease. Frankel and Much<sup>17</sup> found them in twelve cases treating the glands with anti-formin and examining the sediment. Negri and Meiremet<sup>18</sup> successfully cultivated an organism answering the description of Frankel and Much from two cases and their report was shortly followed by Bunting and Yates<sup>19</sup>, who reported the cultivation of a similar organism from three cases of Hodgkin's disease and their observation in two others. Since then Billings and Rosenow<sup>20</sup> have grown an organism from twelve cases, Steele<sup>21</sup> from one case, Kusunoki<sup>22</sup> from sixteen cases, and the author from four cases of Hodgkin's disease. The description of all these organisms from the various writers show that they are similar in each case and indicates that the glands of Hodgkin's disease very frequently, if not always, are the focus of bacterial growth. An etiological role has been claimed for them particularly

by Bunting<sup>23</sup>, who by repeated injection of one of his organisms into the axillary region of a monkey has produced lesions in the gland which he considers similar to the histopathology of true Hodgkin's disease. A study of the leucocyte count in this monkey shows a similar condition to that found in early human cases of Hodgkin's disease. Although experimental evidence seems to indicate that he has produced the lesions, it must not be forgotten that a lesion of the chronic proliferative and inflammatory nature can be produced by the inoculation of many well-known saprophytes and until further proof we must look upon his claims with skepticism, especially in view of the fact that the diphtheroid organism is of widespread distribution throughout the pathological tissues of the body.

Stimulated by the successful cultivation from the glands of Hodgkin's disease of an organism which is culturally and morphologically identical with the organisms described by other writers, the author extended his studies to other pathological processes of the lymph-adenomatous structures of the body with the result that from the gland in two cases of tubercular adenitis, the gland in one case of lympho-sarcoma and the spleen in one case of splenic anemia an organism was obtained which is identical with the organism from the Hodgkin's cases. Furthermore, Steele<sup>24</sup> succeeded in growing a similar organism from one case of lympho-sarcoma and Harris and Wade<sup>25</sup> have recently obtained pure cultures of diphtheroid organisms from various normal and pathological organs.

Yates<sup>26</sup> considers it very highly probable that the condition is first of a purely inflammatory nature, but that the exciting cause persisting over a longer period of time causes a disturbance of the equilibrium of the tissues with the result that some cases show neoplastic properties. This would serve to explain the presence of these bacteria in cases of lympho-sarcoma, as well as in other pathological conditions. He considers that these organisms most probably gain entrance through the lymphoid structures of the alimentary tract, particularly the tonsils, but Longcope<sup>27</sup> reports in the autopsies which he held that the tonsils were negative in every instance, and a study of the tonsils removed from cases of Hodgkin's disease showed only a small proportion with an active inflammatory lesion.

The author has attempted some experimental work with the organisms obtained from the splenic anemia case and the Hodgkin's case by inoculating Guinea pigs into the axillary spaces and study-

ing the lesions over various periods. While a marked inflammatory reaction is present in every instance in the surrounding adipose tissue, in no instance has any change been produced in the lymph gland which suggests Hodgkin's disease.

The course of the disease with gradual involvement of the lymph structures of the body with secondary growth elsewhere resulting in a marked anemia finally ending in death leads one to believe more in the neoplastic origin of the condition than in the inflammatory or infectious.

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## MALINGERING.

By HOWARD D. KING, M. D., New Orleans, La.

Act No. 20, Sessions Acts of 1914, of the General Assembly of the State of Louisiana, also known as the Burke-Roberts Employers' Liability Act, which became effective January 1, 1915, is a law prescribing the liability of an employer to make compensation for injuries received by an employee in performing services arising out of and incidental to his employment in the course of his employer's trade, business and occupation in certain trades, business and occupations, abolishing in certain cases the defense of assumption of risk, contributory negligence and negligence of a fellow-servant in actions for personal injury and death, establishing a schedule of compensation, regulating procedure for the determination of liability and compensation thereunder, and providing for methods for payment of compensation thereunder.

From the standpoint of both employer and employee the above law is, indeed, the most constructive piece of social legislation ever enacted in Louisiana. However, the provisions made by the Lou-

isiana Legislature for securing benefits to its working people will undoubtedly give rise to a large number of cases of malingering, and it is with this phase of the question that this paper shall deal.

Malingering is the feigning of disability from injury or disease. Every age, every country, and every class of society has had its malingerers. Malingering may be traced to that primitive instinct which causes the spider and the caterpillar to assume, when frightened, the appearance of death. The instinct which incites the female partridge to flutter, apparently with broken wing, in front of an enemy in order to lure him away whilst her brood escapes, is the truest sort of malingering. In the Bible, in the First Book of Samuel, otherwise called the First Book of Kings, Chapter XXII, we are told how David "changed his behavior before them, and feigned himself mad in their hands, and scrabbled on the doors of the gate, and let his spittle fall down upon his beard." The classical stratagem of Ulysses to escape military duty needs but little comment, save to say that, in the present day, neither his artful trick in ploughing the sands, nor the ruse of placing his infant son in the line of the furrow to detect his imposture, would be deemed conclusive evidence of or against insanity.

Lovers of Sir Walter Scott will recall that in "Peveril of the Peak" that brilliant novelist of English literature brings out very strongly and with a tinge of almost human realism the discovery that Fenella was malingering when she essayed the rôle of a deaf mute. The passage referred to is well worth quoting. Said the King:

" 'I will instantly convince you of the fact, though the experiment is too delicate to be made by any but your ladyship. Yonder she stands, looking as if she heard no more than the marble pillar against which she leans. Now, if Lady Derby will contrive either to place her hand near the region of the damsel's heart, or at least on her arm, so that she can feel the sensation of the blood when the pulse increases, then do you, my Lord of Ormond, beckon Julian Peveril out of sight. I will show you in a moment that it can stir at sounds spoken.'

"The Countess, much surprised, afraid of some embarrassing pleasantry on the part of Charles, yet unable to repress her curiosity, placed herself near Fenella—as she called her little mute—and, while making signs to her, contrived to place her hand on her wrist.

"At this momnt the King, passing near them, said: 'This is a horrid deed—the villain Christian has stabbed young Peveril!'

"The mute evidence of the pulse, which bounded as if a cannon had been discharged close by the poor girl's ear, was accompanied by such a loud scream of agony as distressed, while it startled, the good-natured monarch himself. 'I did but jest,' he said; 'Julian is well, my pretty

maiden. I only used the wand of a certain blind deity called Cupid to bring a deaf and dumb vassal of his to the exercise of her faculties.'

" 'I am betrayed!' she said, with her eyes fixed on the ground—'I am betrayed! and it is fit that she whose life has been spent in practising treason on others should be caught in her own snare. But where is my tutor in iniquity? Where is Christian, who taught me to play the part of spy on this unsuspecting lady, until I had wellnigh delivered her into his bloody hands?' "

The writer fully realizes that sympathy is naturally with the sick and suffering, and anything which may appear to deny that feeling is liable to misinterpretation. In order that no misapprehension may exist as to the writer's object, this apologetic foreword is penned. A great many deserving cases do not receive proper consideration, because unworthy and fraudulent persons have had bestowed upon them the sympathy and aid which are the legitimate right of the true victim. Those who are legally responsible for the results of accidents, in the causation of which they are blameless, should not be subjected to greater burdens than those which their ill-luck has imposed, and this, despite the fact that frequently the loss is made good by an insurance company. It is a well-established fact that the cost of insurance against accidents to industrial workers to-day exceeds the actual estimates upon which the earlier compensation laws were based. A review of the statistics in relation to non-fatal accidents shows a marked increase in the number of those accidents since the advent of this type of social legislation. It might be answered that this increase of accidents was due to the speeding up of machinery and the conditions of modern labor, but we know this to be untrue. Malingering and dishonesty are the responsible factors for the increase of non-fatal accidents. It can be readily appreciated that the amount of compensation paid is reflected in the premiums demanded; therefore, unless dishonest claims are vigorously combatted the tax upon the community will be greater than it legitimately should be.

At the outset it will be well to consider the different factors which aid in the creation and developments of the malingerer. To-day the psychology of the fraudulent mind offers a most interesting study. Malingering is much more frequent in connection with accidents than with disease—this, because of the legal liability involved. There are quite a few people who are liable to exaggerate symptoms when in so doing same may redound to their advantage or excite sympathy. The exaggeration of symptoms is always more or less

influenced by the question of the financial standing of those responsible for accidents. Even the educated classes, who in all other matters exercise a strict probity, do not stop at a gross exaggeration of symptoms when claiming damages from a wealthy person or large corporation. For illustration, pain in the back following an accident, is a condition the underlying cause of which is suggestion—auto-suggestion. This does not in all cases mean malingering—but pain in the back after an accident, be it caused by a jolt in the car of a wealthy railway corporation or by a fall on one's own waxed parlor floor, is, much more frequently than not, accompanied by no serious pathological disturbance. The pain is often psychic.

It is worthy of note that closely similar injuries attributable to like accidents present one kind of clinical picture, and pursue one kind of course, amongst those who make no claim for compensation, but present a very different picture and run a very different course amongst those who are after money. Is not this difference highly significant of the influence of money in magnifying pain and perpetuating inability to work? That introspection and subjective sensations are unwittingly cultivated admits of no doubt.

Thus the problem with which the medical man is frequently confronted: Is the patient a wilful malingerer, or the victim of psychical conditions following an accident?

We are often told by psychologists that we (medico-legal experts) conceive only that partial aspect of a thing which the individual regards, for *his* purpose, as its essential aspect. The essential varies, of course, with the perspective of the individual. To be brief, the essential quality of a thing is its ultimate worth to the individual, and its value lies in its power to serve certain ends.

It would be wrong to think that all malingering is the outcome of preconceived fraud. In truth, our sympathy should be bestowed upon those victims of an accident who, by morbid introspection of their condition, have magnified their subjective consciousness and make of themselves slaves of abnormal sensation. It is unwise to assume because a man does not return to work as early as one thinks he ought that he is a fakir. This view is not alone unjust, but denotes a poor knowledge of human nature. Every case has its individuality, and great allowance has to be made for the personal equation. Moral responsibility, even amongst the most intelligent, is a variable quantity. Even as physicians we cannot always fully

appreciate the mental workings of each individual mind, and, as long as unregenerate human nature is the factor, so long are we forced to consider carefully all the circumstances of each case, if we wish to be fair. The mental viewpoint of the laborer with regard to recovery after an injury is indeed a most perplexing one, and it is only through study and experience that such cases can be successfully coped with.

It has often been my experience to be thrown into most intimate contact with robust, hearty individuals who are absolutely normal and able to work, and suffering from no pathological condition, but who have become self-centered or *egotized*, and, possessing a keen zest for unearned money, have become victims of the operation of benefit-conferring laws.

Let us consider briefly the circumstances directly affecting the laborer when he is incapacitated through accident. Time and space preclude me from considering the sociological aspects of this most important question, and I shall, therefore, restrict myself solely to the injured man's mental influences and environments.

Sight must not be lost of the fact that the great majority of injured workmen belong to a class whose education is woefully deficient, and that they are, therefore, peculiarly unfit to take an impartial survey of themselves—and this especially when injured. The essential and sole factor of *their* case is the value unconsciously placed upon their abnormal sensations in so far as they influence monetary benefits. In the case of a workman's compensation claim, the value of a symptom to a claimant is regulated by the power to obtain a certain amount of money—whether it be a lump sum or weekly payments.

With a knowledge of these incontrovertible facts before us, it becomes absolutely necessary that all facts concerning the injured individual should be closely inquired into. The following is illustrative of what I mean: John Doe is in receipt of \$10 a week, under the Workmen's Compensation Act, \$5 a week from his labor union, and in addition thereto receives \$5 a week from the Druids, Woodmen of the World, Knights of Pythias, each, making an income of \$30 a week when sick, as compared with his wages of \$20 a week when hard at work. But this is not all; his wife may be engaged in dressmaking or midwifery, and two or three children at work. In addition to the \$30 a week he is drawing when ill, he is relieved of the cost of doctor, drugs, etc. Now, if all the foregoing facts be

carefully considered, is it unreasonable to draw the deduction that, so long as a man's circumstances are more comfortable when he is on the sick roll, he will have no inducement to return to work? The real stimulus for work is the necessity of earning one's daily bread. It is this, and this alone, which keeps many men at work to whom labor is abhorrent. This applies to all classes of a community, and includes not only those engaged in hard manual labor, but mental workers.

Now, under such conditions as just described, is it to be wondered at that workers in necessitous circumstances become self-centered, exaggerate functional disturbances, and harp upon slight pains following accidents, as a means of temporary avoidance of manual labor? It must be borne in mind that the concentration of attention upon the viscera, or upon a supposedly strained back, does induce, if it does not actually produce the condition desired. At all events, it certainly increases abnormal sensations. The busy practitioner is familiar with that type of cases where a fixed purpose and sturdy determination to take his place in the activities of life enables a patient to combat to a successful issue a critical illness, and then, again, who does not know of cases where loss of all interest in life, and a general apathy to material affairs, either from mental, emotional or physical causes, has precipitated death?

The great majority of us are frequently oppressed by minor disabilities, despite which we pursue our usual callings, and by ignoring them prevent their getting the mastery over us. Under normal conditions man is entirely unconscious of the vital processes of circulation, metabolism and secretion; but through an overdegree of sensitiveness, through introspection, through a cultivation of physical consciousness, he may render many of these into conscious acts. During periods of wakefulness or mental stress, who has not heard the arterial thunder of the carotids? And it is beyond dispute that these clock-like mechanisms suffer seriously as the result of undue attention or self-observation. There is a most intimate connection between mind and body, and there is always going on a constant reaction of one upon the other.

It is the common experience of most physicians that neurotic individuals, who are generally given to self-examination, unconsciously foster subjective sensations, which the stronger and more equally balanced individuals ignore. The idea of an injury and its possible consequences becomes with them an obsession. Their pains



are real, but often only psychic. These people are the victims of an improperly balanced nervous system. They never combat introspection.

The subjective symptomatology, and often the physical signs which follow trivial injuries, are, in the majority of cases, the results of auto-suggestion, or of suggestion transmitted by the medical man during his examination. Through repeated medical examinations at the instance of a third party the injured man's attention becomes fixed on the condition of his body. It is absurd to ask an injured man of litigious tendencies if his back still hurts, if he is sleepless, and similar questions. Through such proceedings a desire for compensation is encouraged. In fact, therein lies not the only danger. There is gradually created in the mind of the injured man a vague feeling of having been wronged. Gossiping with individuals who have found themselves in similar circumstances, frequent rehearsals of the details of the accident, and the constant iteration of sensation, all act as coöperating factors in producing the condition of auto-suggestion.

If a hypersensitive, self-centered workman is unfortunate enough to find himself, when injured, entitled to the material benefits previously mentioned, he is to be sympathized with—for he is now subjected to temptation. He cannot think of or review his case impartially. Consciously or unconsciously, he is influenced not only by his immediate environment, but by his individual mental perspective.

When the poor working man is idle, and in consequence is denied the benefits of labor, he is looked upon as merely vicious. However, the vicious idle man does not come within the reach of the law; but when, in addition to being idle, he enjoys normal health, and claims compensation under legislative acts, it is manifest that his conduct tends to cause a certain amount of social disintegration. This in itself is ample reason for dealing harshly with the malingerer. The malingerer not only eats the bread of idleness, but does so at the expense of his fellow-man, some of whom will resent, while others imitate his vicious conduct.

Aside from the inherent evil of malingering, there exists another peculiar condition, which affects all classes of a community, and that is that so many people do not consider it wrong to defraud or rob a company. There are a great number of people who do not consider it dishonest to give a street car conductor a counterfeit

coin, and others actually gloat over such an incident as overcharge. True, as many reason, in the matter of workmen's compensation, the loss is made good by an insurance company; but, though corporations may have "no soul to be saved or body to be kicked," it is to be remembered that they are composed of individuals, to whom the ultimate loss becomes a serious consideration. The prevalent idea among all classes is that an insurance company is legitimate prey for the cheat.

The methods of the malingerer are so ingenious, and the mental viewpoint of the unconscious exaggerator so difficult to reckon with, that it will be necessary for physicians doing workmen's compensation practice to be on the constant lookout for deceit and exaggeration in the cases coming before them. Aside from deliberate malingering, there are many workmen who put off the return to work merely because they do not realize that complete recovery is a gradual process, and that stiffness and pain seldom entirely disappear until an injured part has been subjected to a certain amount of movement and exercise. The difficulty in handling cases which really should be labeled "fraudulent" is not so much in recognizing the fraud as of determining its gravity in relation to each individual concerned. What would amount to a fraudulent statement, if made by a newspaper linotyper, must be treated as a mere exaggeration when proceeding from the mouth of a negro teamster.

The cases are most numerous where a laborer is in receipt of compensation from a liability insurance company, and in addition thereto is receiving benefits from other sources, such as lodges and labor unions. It is among such cases where one has to be vigilant for the detection of malingerers. Malingering is, however, always a difficult matter to prove, and a medical man should always have incontestable proof before making the charge.

In connection with malingering there is one phase of the matter which the malingering workman does not seem to take into consideration—and that is the coming into conflict with the criminal law in obtaining money under false pretenses. Then, again, if the matter of compensation needs adjustment in the Civil District Courts, the making of false statements renders the malingerer liable to charges of perjury.

The penal clause of the new Louisiana Workmen's Compensation Law reads as follows:

"Section 37. 1. Be it further enacted, That if, for the purpose of obtaining or defeating any benefit or payment under the provisions of

this act, either for himself or any other person, any person wilfully makes a false statement or representation, he shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding five hundred dollars or imprisoned not exceeding twelve months, or both, in the discretion of the court; and an employee from and after such conviction shall cease to receive any compensation under this act."

In reference to the above, the writer cannot conceive that the lawmakers intended that a workman might victimize an insurance company, or even commit perjury, and be held guilty of only a misdemeanor. If this be so, the penal clause of the Louisiana law needs revision. The question whether a laborer could be convicted for perjury arising out of evidence given in the course of proceedings under the Workmen's Compensation Act remains to be determined. The legal end of the matter does not concern the medical man and will not be discussed in this paper.

Before considering the preventive measures of malingering it might be well to consider certain of the causes which are responsible for laborers postponing their return to labor. To physicians who are thrown in daily contact with laboring men it is a matter of common knowledge that there are certain persons who deliberately pit man against man, class against class, who day by day breed discontent, who prolong the period of incapacity, and debase honest toilers—but with these social disorganizers the writer shall not deal.

Foremost among the causes of malingering may be mentioned the "society doctor," or the "association doctor." The "society" or "association" doctor is dependent on the industrial classes themselves, and the society and association officials for the security of their office, and, so long as these conditions prevail, so long will gross exaggeration of symptoms and malingering prevail. It is most unfortunate that medical men doing this type of contract practice are dependent upon their popularity with the working men for retention in office. It is only too well known that a doctor who freely certifies for sick relief is looked upon as a "nice, kind gentleman," and his appreciation by the laboring classes is evidenced by annual reelection. The position of the medical man is rendered more uncertain if he resides in the immediate vicinity of his working-class patients and restricts his practice solely to work amongst laboring unions, guilds and associations. While the rule is not absolute, it is generally found that the better a man is paid, the better he does his work; to this rule the physician is no exception. However, it is always true, and to this there can be no exceptions

that the more independent the position of the physician the less biased is his judgment. Nor is the "society doctor" alone responsible for injured laborers prolonging their return to work. Medical certificates of unfitness for duty are too easily obtainable from medical men enjoying affluent practices. To the majority of medical men, feigning illness, shamming pain, or malingering, presents a most vexatious and perplexing problem. The reason is simple. In every-day routine practice, simulation of disease seldom occurs; but the physician doing workmen's compensation practice has to be forever on his guard. Where recovery has taken place, and where work is not resumed, the cause can invariably be traced to the absence of an independent and reliable certificate. In a considerable number of cases undue absence from work might be obviated if the employer manifested a more personal interest in that of his employee who met with an accident at his plant or factory. With the advent of the Workmen's Compensation Act, employers have been forced to insure against legal liability for accident claims, and thus the human interest of employers for their injured employees has been displaced, and in its stead we have the purely economic interest of the liability insurance company—a purely business proposition from first to last.

The difficulties which liability insurance companies have in refuting unjust or exaggerated claims are beyond estimate. The injured workman always assumes that the medical officer of the insurance company will minimize or not regard very seriously his alleged injuries, and he, therefore, consciously or unconsciously, is led to exaggerate them. Then, to whom does the injured man look for substantiation of his story? As a rule, he looks to his "society doctor" to support him against what he assumes to be a large, wealthy and heartless insurance corporation. It is under circumstances such as these that a little firmness on the part of the certifying physician would do an immense amount of good. Such a procedure in the incipient stages of malingering would be the truest kindness to the workman. The toiler would be saved that moral degradation which follows misspent time and unearned income.

It is only through self-observation, and the encouragement of every fanciful sensation, that the toiler loses his better *ego*. Laborers who manifest a tendency to malingering should be impressed with the fact that to master their distorted sensations means self-

control and self-respect—and with these two conditions come happiness.

Let us briefly consider the patient's welfare and see what is really the best treatment for him when he is disposed to malingering or exaggerate. Undoubtedly, a little plain speech by his family physician or "society doctor". But what is the attitude of the family medical adviser or the "society doctor"? Can they speak their minds freely? Unfortunately, in too many instances, they cannot, as it would mean their dismissal from many cases.

One of the very many reasons why insurance companies fail to receive fair and impartial reports is because the medical man giving same is not sufficiently protected by laws governing privileged communications. Insurance companies obtaining reports from physicians should state that the report is to be regarded as a privileged communication, and also contain a proviso that the company will indemnify the physician against any action arising through such report. In this way, reports would be fuller and more complete. Again, there are scores of physicians who are rather chary of committing themselves to writing.

In compensation States the employers insure themselves against financial loss in case of accident by paying a premium to an insurance company to cover the risk. But the time is coming, and it is not a long way off, when the premium will be in progressive ratio to the workman's age. If the employer wishes to retain the services of older workmen he will have to pay an increased premium. This means the supplanting of older men by younger men. It is a matter of record that in many compensation States that workmen of advanced years, but by no means inefficient, are compelled to join the ranks of the unemployed. In this connection it may be stated that statistics are valueless as to whether old men are or are not more liable to accident than their younger brothers, but there can be no question that, with increasing age, the more serious are the consequences likely to accrue from even minor injuries.

Many difficulties would be eliminated if prospective employees were submitted to a rigid medical examination before entering employment. The advantages of medical examination for employees are so obvious that they need no comment at my hands. If such a system were inaugurated the liability insurance companies would be able to offer more favorable rates to employers. Preëxisting physical infirmities could not be worked in to increase the severity

of a trivial injury. Public bodies, such as police and fire departments, demand medical examination before employment; and there is no reason to prevent a contract of service for private persons and firms being made subject to proof of physical fitness.

Periodic and systematic medical examinations of injured employees, which is provided for in the Louisiana Workmen's Compensation Act, is also of value in reducing malingering.

The various liability companies operating in New Orleans should have a medical bureau, with a competent physician as its medical director at its head. This bureau should have on its staff a number of lay inspectors who would assist the physician by visiting workmen suspected of malingering at their home, and otherwise obtaining information about them. Such inspectors, in the shape of relief and sick committees, do excellent work for lodges and societies. In fact, the phenomenal showing of the Firemen's Charitable Association, the membership of which is of advanced age, is due to the rigid investigation by committee of all cases of sickness.

It must also be borne in mind that the examining physician is often entirely unacquainted with the claimant. The examiner has to rely for the history of the injury almost exclusively on the claimant's statements, or that of interested friends. Such histories are usually unreliable.

In recapitulation, the best means of checking malingering may be briefly summarized:

- (1) Organized lay inspection through an exchange or bureau.
- (2) Repeated periodical, independent medical supervision.
- (3) Complete independence of medical attendants.
- (4) A system of registration which shall reveal the full amount of benefits that the injured workman is in receipt of.
- (5) A clearing-house of information dealing with claimants.
- (6) Making workmen's compensation practice a specialized branch of medical endeavor—the same as otology or gynecology.

In another communication I shall take up the question of *The Negro as a Malingerer*.

**CONCERNING THE COMPENSATION OF WORKMEN AND  
OTHERS FOR "NEUROISIS" FOLLOWING AN ACCIDENT,  
AND HILL VS. CHICAGO, MILWAUKEE AND ST.  
PAUL RAILWAY COMPANY.\***

By TOM A. WILLIAMS, M. B., C. M., Edin.,  
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Hospital, etc., Washington, D. C.

The principle that employees who have become disabled at their work should not therefore become paupers is becoming established in this as in foreign countries.

Efforts to award to workmen thus injured the means to live until able to return to work have resulted in a large number of claims for traumatic neurosis. In Germany, workmen's compensation costs more than the army; and 75 per cent. of it is paid for traumatic neurosis. This illustrates the importance of an acquaintance with the etiology and prognosis of this form of disability.

Many of the cases recovering after compensation are malingerers merely; but the disease occurs quite apart from lawsuit, and, therefore, compensation for industrial nervous diseases, including sinistrosis, which is the desperate determination in sickness against all conviction of error, should only be made after a due appreciation of the individual's makeup. There are recorded cases quite unbenefited by compensation. Psychotherapy cured one of these who wore a leg brace for months even though at once indemnified, firmly believing that she was hemiplegic. In a few days she was cured. Another who remained paraplegic for seven years after a successful lawsuit for \$17,000 recovered in a few days when proper persuasion was undertaken.

It should be better known that accident itself does not cause neurosis, for this is merely an emotional reaction originated and perpetuated by a patient's own notions, the result of suggestions. This constitutes the predisposition erroneously attributed to neurotic constitution. A mechanic without any question of lawsuit abstained from work for two years after an injury to the spinal centers of the right hand muscles. In spite of this physical incapacity he was enabled to return to work by removal of his hysteria.

Precisely similar syndromes are produced irrespective of trauma, and the rational treatment and prophylaxis of all is psychological purely, as is their genesis. Emotions experimentally induced in

\*From an Address to the St. Paul Academy of Medicine, delivered by invitation July, 1914.

animals demonstrate how psychological stimuli can modify reactions even to cause death. Neurosis is merely a reaction of this kind, a persistent recollection of distressing circumstances. (See *Am. Jour. Med. Sc.*, October, 1914; also *Int. Cong. Med.*, 1913; *Cleveland Med. Jour.*, June, 1914.)

The incident which originally aroused the disagreeable emotions may (*New York Med. Jour.*, January, 1915), in human beings, be revived and reproduced through the activity of memory, and the corresponding emotions may thus also be reproduced.

In this way the psychological stimulus continues the rôle of exciting cause; and the emotions of fear, apprehension, horror and anxiety are present almost continuously.

Cultivation of fortitude or the gaining of good sense are equally preventative, and persons whose imagination has never been thus controlled are especially subject to the injurious results of this process. Individuals of this type are beset by fears of permanent bodily harm and are unable to shake off the feeling of dread because they are ignorant of its real origin; and they usually magnify in their own consciousness the extent of the danger. Filled with the idea of their own disability, they become inattentive to the matters of everyday life, and the capacity for work is consequently diminished. These conditions are convincing to the patient that his injuries are serious and permanent, and lead him to search further for corroborating symptoms.

The thought that he may be mistaken may finally lead him to deliberate self-deception in an effort toward an appearance of consistency before his friends and himself.

An illustration of this is the case elsewhere\* reported in full of the railroad brakeman who was injured in falling from a train, and whose disability continued three months because of the common belief that an accident can cause permanent nervous disease, and his doctors were not able to assure him that he was not injured for life. Probably the comments of his friends helped in the establishment of his fixed idea that his disability was permanent, and worry and want of money added to his difficulties.

The anesthesia found at the examination he had grown to know would be looked for, and it did not deceive the examiner, as its boundary was not constant. His motor power was good, and re-

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\* See author's report to International Congress on Industrial Accidents, Rome, and *Medical Record*, 1909; and *International Journal of Surgery*, July, 1909, "A Case of Traumatic Neurosis, Illustrating Successful Psychotherapy"; also in *Wisconsin Medical Journal* of later date.



flexes were all active, and it was clear that there was no disease of the spinal cord. It was a case of hysteria, the basis of which was psychic, and the man returned to work in a month as a result of one interview which enlightened him about the psychology of his affection.

The feasibility of instructing the public, and especially the legal profession, about the mechanism of traumatic neurosis is illustrated by the Hill case, where it was made clear to a jury of farmers and tradesmen, even in the unfavorable circumstance of cross-examination in this particularly "dangerous" case examined for the Chicago, Milwaukee and St. Paul Railway Company.

Mr. C. L. Hill complained of pain in the right lumbar region behind, which, it was claimed, interfered with motion. From my report:

"THE MOTILITY. In testing the motility, it was found that he was able to stand and incline backwards to the full normal extent, without pain, but complained of severe pain in the back while straightening up from this position. In bending forward with straightened knees, trying to touch the floor, flexion was restricted by his complaint of pain, his hand reaching only a little below the knees. But the restriction of movement was less in the spine itself than in the flexion of the hip. "However, on passive movement while recumbent, there was no restriction of the hip; and it was indeed possible to straighten the whole limb to an angle of 80 degrees.

"While lying on his back or his face, he could raise either limb or both limbs at once from the couch without pain, though the lumbar muscles and vertebræ were thus pulled upon. Either thigh could likewise be abducted without the elicitation of pain in the back.

"The deep reflexes were over-active, including those of the arm; both sides alike. Ankle clonus absent; reflex of pupil to light present, also the cutaneous reflexes, although the reflex on stroking the sole of the foot was very slight.

"There was thus no sign of disease of the motor tract, and motility was not impaired except when interfered with by his complaint of pain.

"THE SENSIBILITY. Tenderness was complained of in the right lumbar region, and was provoked upon pressure on the fourth and fifth lumbar vertebræ and the sacro-iliac joint.

"On pricking the skin with a pin the whole right side was declared to be tender, the left side dull. The answers, were, however, contradictory on repeating the pin pricks.

"On pinching the tendo achilles on each side, he said that the right was tender, but not the left.

"Stroking the sole of the sub-malleolar region brought forth no complaint, yet during my examination of the sensibility he declared that a prick in those regions was very painful. This proves that the tenderness of which he complained is present only during the patient's attitude of expectant attention towards it. It is psychogenetic hyperesthesia.

"Lateral pressure upon the crest of the ilium or lower ribs of the right side, and also tapping the spine with a soft percussion hammer, was followed by shrinking away and contraction of the gluteal and spinal muscles.

"His frequent response, 'I can conscientiously say that it is dull,' referring to the pricks on the left side, was significant, because superfluous, as his sincerity had not been questioned, and his reply implied a doubt in his own mind. It was the index of a mental attitude anxious to feel corroboration of a feeling less than sure.

"His replies concerning both sides were purely the product of an erroneous attitude about himself, whether this is honestly believed or not.

"I interpret these sensory changes as in part due to the conditions of the examination, which in themselves were such as to powerfully suggest a difference of feeling on the two sides. His reactions indicated this, for his replies to pricks on the right side were markedly prompt and staccato, and the jerks and twitchings which his muscles gave there were not the simple reflexes of a muscular group stimulated by irritation of the sensory nerve which commands them, but were the movements such as occur in the intentional shrinking from an unpleasant stimulus. Besides this, they did not occur when pressure was made without the patient's attention being arrested. For example, when I manipulated his limbs on the couch, while placing them in position to test his motive power, no shrinking took place, although I exercised considerable pressure on the calf, which later jerked wildly from giving it a slight squeeze.

"It was evident, therefore, that the hyperesthesia if not feigned, was at least mental in origin; that is to say, it arose from the patient's active preoccupation by the notion that he was indeed hypersensitive upon that side of the body.

"The symptoms did not correspond to those occurring in strain of the sacro-iliac joint in which there is no anesthesia, such as was complained of, and no hyperesthesia in the same parts, nor does it so markedly vary when the patient's attention is distracted. The restriction of movement, due to the pain of sacro-iliac strain, was not present, but there was a restriction of movement, such as would occur in a person who believed that his back could not move freely.

"The possibility of a crushed or dislocated vertebra irritating one of the nerve roots was considered; but none of the symptoms corresponded with the nerve distributions, and no motor fibres were affected.

"Some radiographs showed an apparent asymmetry of the fourth and fifth lumbar vertebræ, and a scoliosis of the sacral spine; but these were not shown on the patient himself nor upon a radiograph taken by another radiographer, and might have been due to an asymmetrical position of the patient during exposure, but I cannot affirm this positively.

"During the trial it was observed that he sat in a chair leaning somewhat towards a table on his left, thus putting strain upon the ligaments which hold the right sacro-iliac joint in position.

"Had there really been pain in this joint he would have been compelled to lean to the right in order to relax these ligaments.

"The above facts show clearly that there is no organic disease of the nervous system accountable for the hyperesthesia on the left side; for these, if due to organic changes, would necessitate severe destruc-

tion of roots or central nervous system, and this would necessarily be accompanied by atrophy of the muscles, weakness, spasmodicity and inequalities of the reflexes, none of which are present. Besides which, the fact that there are differences in the upper part of the body is inconsistent with the effects of an injury confined to the lower part of the back.

“The fact that strapping relieved the pain was a presumption against an imaginary pain, but the X-ray appearance cannot account for the distribution of the pain; for crushing of the left side of the spine would cause pain on the same side.

“Therefore, I am compelled to believe that the pain and stiffness in the back may be of the same nature as the right-sided tenderness, purely mental. In that case all the present symptoms may be the effects of an insistent imagination that a serious injury to the right side of the back has taken place.

“The treatment would then consist of the patient’s re-education into a correct belief concerning his real condition, accompanied by exercises designed to teach him that he is not incapacitated as he believes. This would be a gradual process, although some cases recover quite rapidly.”

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## SYMPOSIUM ON LEPROSY.\*

### I.

#### Sanitary Control of Leprosy.\*

By PAUL GELPI, A. M., M. D., New Orleans.

The subject which is about to be presented to you is entirely foreign to the specialty of genito-urinary and rectal diseases which I have recently embraced. But, having been requested to prepare this paper by our chairman on Scientific Essays, I gladly consented to do so.

Leprosy was known in Egypt and India as far back as 1500 years before Christ. The disease has always been dreaded by the human race. For centuries the unfortunate victims were not only shunned as unwholesome and unclean, but were considered as the accursed of the Lord.

To-day we are no more guided by the religious and the esthetic in the disposition of lepers. It is true that our knowledge of its transmission is not so satisfactory, and the impression prevails that leprosy is only feebly contagious. But modern science has established certain facts which make it imperative to lend our best efforts to sanitarily control this disease. The bacillus of Hansen has been proven the causative agent of leprosy. It is known that

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it abounds in the nasal secretions and in the skin lesions. The recently reported work of the British Commission tends to show that infection can take place through the skin by blood-sucking insects. Again, cases of leproma of the meatus and leprous urethritis have been reported where the presence of the specific organism was demonstrated. All of this certainly tends to show that the avenues of infection may be varied and that the unfortunate victims must be isolated to arrest the spread of the disease.

The salutary efforts of isolation have repeatedly been demonstrated, and notably so in Europe after the Crusades when the disease spread with appalling rapidity and the number of the afflicted was estimated at 19,000. The establishment of leprosaria was followed by a prompt recession of the disease.

The isolation of lepers presents a complex problem. There are many factors that militate against the apprehension of these cases. To the patients it means imprisonment and banishment from home; to the relatives, breaking of family ties and friendships, and eventually death far from the consolation and sympathy of dear ones. The disease develops slowly and insidiously and frequently many years elapse before the symptoms are well defined. In consequence, some cases remain concealed and spread infection, which accounts for recurrent cases in the same family.

Legislation is the first condition necessary for prophylaxis. If appeal be made to the law for the confinement of insane persons, it stands to reason that the sanction of the law must be obtained to detain those whose only transgression is affliction with a dreadful malady. The Congress of the United States has long ago passed laws against the admission of lepers from foreign countries. Unfortunately the course of the disease is such that it readily evades ordinary inspection.

As far back as 1883 the City Council of New Orleans passed an amendment to the then existing health ordinances, making it mandatory on all persons to report cases of leprosy to the Board of Health. The Legislature of Louisiana in 1892, recognizing that leprosy existed in the State and that persons afflicted with the disease were at large, very wisely passed an act providing for the isolation and treatment of lepers. The act specifically states that "it shall be a misdemeanor for any one to harbor a leper or lepers," and further imposes the penalty of a fine or imprisonment on any one guilty thereof. It imposes on the district judge the duty of

committing lepers to the State institution. It must be noted here that this law applies not only to physicians but to all citizens of the State.

In 1894 a Board of Control for the Leper Home was created by an act of the Legislature, but it was not until 1900 that the said board was authorized to purchase a site suitable for the establishment of a permanent leper home. The credit for the passage of these bills must be given to our esteemed colleague, Dr. Isadore Dyer, as it was at his instigation and through his untiring efforts that the matter received favorable action. Up to this date it had been the custom to place lepers in the wards of the Charity Hospital, separated from the rest of the patients. Subsequently they were sent to what is now known as the smallpox hospital, where they were kept in quarters separated from other patients.

The City of New Orleans has likewise enacted laws for the control of leprosy. In 1902, an ordinance was passed very similar in its verbiage to that of the State law. It also made it mandatory on physicians and laymen alike to report suspicious cases. Since then, one of the functions of the City Board of Health has been to have all reported cases in which the symptoms are positive committed to the Leper Home. Recently the question of dealing with lepers has been submitted to the Congress of the United States and a bill has passed the House making an appropriation for the establishment of a national leprosarium. This is a move in the right direction, for leprosy exists in many of the States and can easily gain admission through our seaports. We have had a recent example of this in New Orleans. An immigrant was admitted and was later found to have leprosy. He was detained for four months by the local authorities awaiting the action of the Department of State, and finally had to be sent to the Home to relieve the city of the unjust burden. Such cases demonstrate the necessity of a national institution.

The mere enacting of laws is not sufficient to control leprosy; it is necessary to enlist the assistance of the medical profession and to educate the public to the necessity of active cooperation. The early report of cases would not only diminish infection but would also increase the chances of recovery. We know to-day that leprosy is curable, and it is gratifying to note that Dr. Isadore Dyer and Dr. Ralph Hopkins have contributed to establish this fact, having a number of recoveries to their credit. The public should be in-

formed of the benefits of isolation and impressed with the fact that it is their solemn duty to report to the proper authorities all cases where there is the slightest suspicion of the disease.

There is one important question that suggests itself to us—it is whether all lepers should be isolated. Opinion is undivided as to the disposition to be made of those of the tubercular type. As to the anesthetic cases, the situation is different. They are considered only very feebly contagious, and some even believe that they are rarely a menace to their surroundings. We are of the opinion that these cases could be treated at home under proper hygienic conditions and that they should not be confined in an institution unless bacteriological findings justify it.

The requirements for an ideal isolation place are many. The buildings should stand on a large reservation, far from centers of population. The system of cottages, such as obtains at the Leper Home, is preferable. They should have ample air space, be well ventilated, furnished with modern bathing facilities and be constructed so as to be easily sanitized. The ground should be spacious so as to permit of open air exercises and freedom to the inmates. They should be made into attractive parks and gardens where the able-bodied could find recreation in such light occupations as horticulture, botany and the like. Amusements should be provided. In fact everything should be done to divert their minds and lighten their burdens. They should have warm clothing and an abundance of wholesome food. Such conditions would be calculated to make them comfortable and happy and to reconcile them to their compulsory detention. If the institution is to fulfill its mission, all precautions must be taken to prevent the escape of the inmates.

It would be interesting to know the number of cases of leprosy in the United States, and particularly in Louisiana. We regret that anything like accurate figures cannot be procured. Some time ago it was reported to Congress that there were 278 cases in continental United States. This no doubt falls very much short of the true facts and would probably better apply to Louisiana alone. There are now 104 cases in the home in Iberville Parish. It is generally known that the disease is prevalent in many of the parishes and that in some sections like the shores of Lake Salvador there are many lepers at large. The disease appears to be on the increase, and in recent years the number of cases apprehended and committed to the home has been much greater.

We believe that much of the prejudice existing against the detention of lepers would disappear if such names as lazaretto, leprosarium, leper home and the like would be discarded. Such terms convey the idea of asylums, detention for life and certain doom. Since we know that leprosy is curable, let us have leper hospitals just as we have cancer and tuberculosis hospitals, and when the unfortunate victims learn that theirs is not a forlorn hope they will eagerly seek to go where a chance of recovery is open to them.

It is estimated that there are 3,000,000 lepers in the world. This gives us an idea of how huge the task must be to successfully cope with the condition. No doubt much can be accomplished by legislation and the co-operation of both the public and the medical fraternity. But this, like all sanitary measures of great magnitude, if conducted in a proper way and with a view not only to the protection of the healthy but also to the comfort and happiness of those afflicted, calls for the expenditure of vast sums of money. This is a golden opportunity for the wealthy individuals inclined to great philanthropic works and the endowment of great hospitals for the care and cure of lepers would surely entitle them to the everlasting gratitude of the human race.

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## II.

### Pertinent Remarks Upon the Bacteriology and Pathology of Leprosy.\*

By CHARLES W. DUVAL, M. D., New Orleans.

Leprosy is a disease caused by a specific micro-organism whose morphology and tinctorial properties are indistinguishable from *B. tuberculosis*. The germ was first discovered by Hansen, who described it as an acid-fast bacillus belonging strictly to the intracellular parasites.

Its widespread distribution throughout the body, particularly the skin where the lesions literally seethe with the bacilli, renders a diagnosis comparatively simple. There is no disease that we know of in which the lesion contains so many of the causal agents. The bacilli usually exist all over the body in every case of the disease, and commonly make their exit in the nasal secretion, tears, saliva,

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sputum, milk, semen, urine and feces. Its natural habitat is man, with whom it apparently enjoys a complete understanding, since there is little or no attempt on the part of the host to interfere with its wellbeing. Very often the healthiest appearing individuals have been harboring the lepra bacillus for years without any appreciable discomfort. As a matter of scientific fact rarely do we see any internal body defense undertaken by the host.

The symptoms in leprosy are referable directly to newly formed tissue or to the absorption of the products of its distinegration. The latter being due not to any toxic action of the bacilli but to lack of nutrition brought about by the newly formed tissue advancing too far from its base of food supply, resulting in necrosis and subsequent autolysis.

As to the port of entrance for the specific bacillus of leprosy there are many different theories. The skin, mucous membrane of the nasal pharynx, respiratory tract, genital and intestinal tract, all have their strong advocates. It is noteworthy in this connection that there is a total absence of selectiveness for special organs once the germ has entered the body and infection has been established, which would indicate that it could enter by any of the portals above mentioned. In itself a particular entrance could not possibly determine infection; other factors undoubtedly play a far more important role. Of these I will have more to say later.

Outside of the human host the specific germ of leprosy has not been found except in the dirt, dust, air, water or food in the immediate environment of the leper. The bacillus is not known to propagate outside the human body except under special conditions prepared by the laboratory investigator. Even here there is considerable doubt expressed, though I am convinced that *B. lepra* is cultivatable in vitro; however, with great difficulty with the best methods known to medical science. Successful experimental inoculation is all that remains to prove the identity of the culture. While the Hansen bacillus will not propogate outside of the tissues of the host it will remain viable under adverse conditions for months and perhaps years.

Leprosy in some way is the direct transfer of the bacilli from man to man. In support of this view there are many well known facts, such, for example, as the spread of the disease, the individual cases of infection by residence among lepers and the prophylactic success of isolation. There is no proof that sexual intercourse is a



means of infection, nor is there any evidence that heredity plays a part. Furthermore, it is not likely that the germ is conveyed by air, otherwise it would surely spread to the attendants and nurses in leper homes. Water and foodstuffs as a vehicle of conveyance are hardly to be considered.

It is not only possible but highly probable that insects of the blood-sucking species act as the means of transfer. Many excellent authorities admit that the possibility of such transmission cannot be denied. We have many facts in favor of the insect spread of the disease. I need only mention the infection in families, all cases cited in the literature as examples of contagion can be easily explained by the action of an insect; and the same holds true for the effect of isolation in preventing the disease. The intra-cellular nature of the specific bacillus, its difficulty of cultivation, the history of the disease, all indicate that leprosy must be carried directly from man to man, and under ordinary conditions it is impossible to exclude the insect. We cannot believe, in view of the history of the disease and in consideration of the facts arrived at through experimental work, that one inoculation by the bite of an insect determines infection. If this was the case we might all have leprosy. The germ enters through some break in the skin or modified skin, but this is not sufficient to precipitate the infection even though considerable numbers of bacilli enter simultaneously. If this were so attendants upon lepers, who beyond question are constantly taking in the bacilli, would in the course of time contract the disease. We know to the contrary that it is rare to have any one of them develop leprosy; and there is no reason to believe that they have become immune.

The insect is simply a link in the chain of circumstantial evidence. Everyone will admit that it is first essential to have an abrasion in the skin, or modified skin, in order that bacteria may enter the body; and the most likely agent to abrade the skin and at the same time introduce to a proper depth the virus of leprosy is some blood-sucking insect. This, however, would not account for the superficial abrasions that may occur to the mucous membranes of the alimentary, respiratory and genital tracts. Therefore, one naturally asks if the above premises are correct why not infection, through these breaks as well as through those of the skin. It cannot be denied that leprosy infection could take place through mucous membrane, but it must be the exception rather than the rule.

In the first place abrasions in these situations are usually superficial, which militate against the entrance of the specific germs as they pass over them; and, secondly, and by far the most important, it would be rare indeed to bring about through such portals the necessary interval between the sensitizing and infecting inoculation. *It is my opinion that the determining factor in leprosy infection is hypersensitiveness, a condition established in the human host accidentally, for only in this way can we account for the disease and the protection enjoyed by so many of those intimately associated with lepers.*

If hypersensitiveness is the method through which leprosy infection is established the insect as a transfer agent must be an important consideration. However, I do not mean to imply that *B. lepræ* requires an intermediate host in order to complete its life cycle or render it receptive for man, the insect acting merely as a mechanical carrier. These agents are more likely instrumental in the production of the proper balance and interval between the sensitizing and infecting inoculation than any other agent we can conceive of.

In nontoxic or weakly toxic living germ matter, in which group the leprosy bacillus surely belongs, and also but to a less extent the tubercle bacillus, the primary inoculation seems incapable of infecting no matter how many germs are introduced. In certain instances the amount received, however, is just sufficient to produce a hypersensitive state which precipitates infection upon the individual receiving, after the proper interval, a second inoculation. Where the injurious agent is of a low grade toxicity, exciting a reaction, the nature of which is proliferation, infection is determined by the establishment of a balance between the bacteria and the blood constituents, resulting in hypersitiveness. After localization has been established generalized invasion of the body must await the striking of such a balance, and it is this which accounts in greater part to the so-called incubation period. In infections due to virulent pyogenic micro-organisms the determining factor is quite different. Here the resistance of the invader is due to the direct reaction with active lytic substances in the serum.

The pathology of leprosy is essentially proliferation of tissue which results in the formation of the lepra nodule or tubercle, and is analogous in many respects to the lesion of tuberculosis and syphilis. The lesion is always intimately associated with the lym-

phatic and vascular system, whether it be a leproma, ulcer, erythema, neuro-lepride, etc. It differs only from the tubercular and syphilitic lesions in the absence of necrosis and changes to the parenchyma of various organs, such as albuminous, fatty, hyalin and amyloid. This is explained on the basis that the excitant of leprosy is a milder injurious agent than either the tubercle bacillus or the *Treponema pallida*. Again proliferation is so much slower than in tuberculosis or syphilis that the resultant tissue reaction is correspondingly slow. This permits of a new blood supply forming *pari passu* with the new tissue which minimizes the possibility of necrosis and retrograde changes so common in the lesions of tuberculosis and syphilis. Necrosis in the leprous lesion is the exception rather than the rule.

The initial lesion in leprosy, if it occurs at all, is microscopic, and in consequence totally escapes notice. I believe it is the exception to have resulting in leprosy infection an initial lesion at the entrance port. The ulcerations noted in the mucous membrane of the nose and pharynx or the erythema and other skin eruptions are all secondary manifestations and occur weeks or months after infection has been established.

Occasionally localized abscesses, usually subcutaneous, develop in the course of the disease. These histologically are like the ordinary pyogenic abscess, and composed chiefly of polymorphonuclear leucocytes. This would lead one to believe that *B. lepræ* under certain conditions is capable of exciting pus. On the contrary the Hansen bacillus is at no time capable of exciting an acute inflammatory reaction. The polymorphonuclears called forth in these instances are the result of the absorption of tissue cell products. Large areas of proliferated cells which constitute the leprous lesion, in disintegrating attract the elements of an acute exudate. The lepra fever is also the result of absorption of cell products rather than due to any toxin elaborated in the Hansen bacilli. I shall always remember my first experience with the microscopic study of the lepra abscess. So numerous were the polynuclears I naturally thought that they were the result of a secondary pyogenic infection until cultural study convinced me that they were sterile with respect to all germs except the Hansen rods. The pus collection constituting subcutaneous abscesses in leprosy is the result of tissue autolysis and subsequent absorption.

Some authorities believe that leprosy is primarily a septicemia;

however, I do not believe that this is the case. That the organism is distributed over the body by way of the circulation there can be no doubt, but it is questionable whether at any time it multiplies in the plasma constituent of the blood. Leprosy is no more a septicemia than is tuberculosis. In fact there is even less likelihood that the organism of leprosy multiplies in the circulation since it has proven that this takes place almost entirely within certain cells.

Once infection has been determined the bacilli are carried by the lymphatics and blood vessels to all parts of the body. En route they enter the lining endothelial cells and here multiply in great numbers. This, in turn, causes dilatation and nodulations of the vessels through the enlarging of the lining endothelium. At no time in the course of the disease do we have exudation which can be attributed to the direct action of the bacilli. It is true that we do see lymphoid and plasma cell infiltration in the well advanced leprous lesion, but this is entirely due to the stimulation by the products of tissue cell disintegration.

Perhaps the most striking histological feature of the leprous lesion is the lepra cell and the so-called globus. These were first described by Virchow, and their histogenesis have ever since been the occasion of much controversy. Unna's view is that the lepra cell is the plasma element which after invasion by Hansen bacilli undergoes amitotic division. Marchoux holds that the lepra cell is one of the mononuclear cells of the circulation. There is no longer any doubt that the lepra cell is an endothelial element whose nucleus has divided without a division of the protoplasm. This results from purely mechanical irritation to the cell by the ever-increasing number of its intra-cellular parasites. Hansen always maintained as a reason for his failure to cultivate *B. lepræ* outside of the host that the organism was strictly an intra-cellular parasite. Recent experimental work carried on in our laboratory certainly tends to support this contention.

The Hansen bacillus undoubtedly has a selective affinity for the endothelial leucocyte. Careful study of various tissues of the body reveals the Hansen bacillus always within these cells and most numerous where these cells occur normally, namely the lining of the capillaries, lymphatics, peri-vascular and peri-neural spaces. Epithelial, connective tissue, muscle and nerve cells are rarely if ever invaded by the Hansen bacillus.

Connective tissue proliferation constitutes a part of the leprous

lesion sooner or later; however, the part played by this tissue has to do with repair and is not proliferation the result of the action of *B. lepræ*.

The erysipelatous eruption in leprosy is the result of small vessel occlusion by embolic Hansen endothelial carrying cells. The disappearance of such skin lesions and their reappearance is explained by the fact that these emboli disintegrate and in consequence the local skin lesion vanishes. Nerve lesions are the result of the pressure from endothelial carrying cells lying in the peri-neural spaces.

### III.

#### Medical Aspects of Leprosy.\*

By RALPH HOPKINS, M. D., New Orleans.

With your permission, I would like to present, first, some facts gathered from the records of the Lepers' Home that I think show the importance of sex and consanguinity as etiological factors in leprosy in Louisiana.

*Sex.*—Up to the present time there has been admitted to the home a total of 240 cases. Of these 78 were females and 162 males, more than twice as many males as females (in the Philippine Islands the proportion of females to males is slightly larger). This proportion as to sex holds true also to young children, and is interesting because of the possibility of greater immunity on the part of the female.

*Consanguinity.*—The occurrence of leprosy transmitted in certain families through a number of generations has long been noted in Louisiana. Statements from lepers as regards their family history are for obvious reasons more likely to be negative than positive. The following tabulation of consanguinity was obtained from cases actually admitted to the Lepers' Home, and does not include other relatives who may have been leprous:

Case	1	—Brother to case 18.
Case	14	—Uncle of case 127.
Case	20	—Mother of case 21.
Cases	22	} —Sisters, daughters of case 122; cousins of case 28.
	23	
	24	
	26	
Case	27	—Brother to 121.

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- Case 33—Cousin to 51 and 52.  
 Case 44—Mother of 45.  
 Case 48—Brother of 216.  
 Case 51—Brother of 52.  
 Case 53—Aunt of 54.  
 Case 54—Mother of 156.  
 Case 56—Son of 89.  
 Case 61—Relative of 27 and 121.  
 Case 69—Brother to 107.  
 Case 80—Mother of 81.  
 Case 92—Brother of 173.  
 Case 98—Uncle of —.  
 Case 99—Brother of 106.  
 Case 124—Sister of 193.  
 Case 136—Son of 186.  
 Cases 166 }  
       167 } —Brothers and sisters; related to 232, 233 and 234.  
       168 }  
       169 }  
       170 }  
 Case 177—Cousin of 92 and 173.  
 Cases 69 }  
       107 } —Brothers and sisters.  
       204 }  
       224 }  
       225 }  
       226 }  
 Case 232—Brother of 234; nephew of 233.

An analysis shows one family of six brothers and sisters, one family of five brothers and sisters, one family of four sisters and their mother, which, in addition to the other thirty cases, makes a percentage of about twenty, of cases who are as closely related as parent and child, or brother and sister.

Though leprosy apparently is not transmitted directly from parent to child, yet there is a strong conviction among those whose families have been afflicted through a number of generations that leprosy is hereditary, and perhaps they are right as regards the transmission in their families of an abnormally low resistance in this infection. It is noteworthy that among the total number of cases admitted to the Home there has not been one instance of husband and wife both affected. If the intimate association of domestic life be sufficient to explain infection in those nearly related, it is difficult to understand why among so many cases no husband has contracted it from his wife, and no wife from her husband.

*Prevalence.*—The number of admissions to the Home show an increase year by year with a maximum of twenty-five new cases in the year 1913. This increase can be attributed to two causes: first, leprosy is spreading in Louisiana; and, second, a greater pro-

portion of the cases are sent or go voluntarily to the Home. The admission of many new cases in the incipient stage is rather strong evidence of spreading.

*Incubation Period.*—There were admitted to the Home in 1895 four sisters, in 1902 an adopted daughter of one of these sisters, and in 1908 their mother, whose father and two of his brothers had been lepers. The history of the adopted daughter is of interest in showing an incubation period more probably correct than can usually be obtained. The child, who was not a relative, was adopted early in life by one of the four sisters, who was married, and whom we will call Mrs. C. Mrs. C., her husband and the child lived together in a house apart from the rest of the family. In 1890 Mrs. C. noticed the first signs of leprosy on her body. The adopted child remained with her, and the disease progressed until 1895, when she had an attack of lepra fever, during which she was nursed by the adopted daughter, now grown to girlhood. Shortly after this outbreak of fever Mrs. C. went to the Lepers' Home. The girl up to this time had shown no evidences of leprosy, and went to live in a family in which there was no leprosy. She continued in good health until the latter part of the year 1901, when a typical macular eruption appeared, and in the course of three or four months she was advised to go to the Home. The period of her greatest exposure was undoubtedly during her residence with Mrs. C., during the years from 1890 to 1895. Subsequent to 1895 (after Mrs. C.'s removal to the Home) the girl came in contact with no leprosy, and to the best of her knowledge saw none. The probability is that she was infected some time during the period between 1890 and 1895; her first symptoms showed in 1901. The shortest probable incubation period is six years.

It is also of interest to note that the mother of the four sisters developed leprosy eight years after separation from her daughters, and that the date of her admission to the Home was thirteen years after her daughters' admission.

*Lepra Fever*—An important phase in the history of almost every case of nodular and mixed leprosy is the occurrence periodically of febrile attacks of variable duration and severity, accompanied by the appearance of a marked eruption very different from the type of the characteristic chronic lesions. This type of fever referred to as lepra fever is not the fever usually described as one of the prodromal symptoms of leprosy, but may occur at any stage

of the disease. The elevation of temperature may be slight, or as high as 106. The attack may last from a few days to three or four months, the intervals between being irregular, and as many as four attacks may occur during one year. The temperature is characterized by sudden rises and falls, and the most marked characteristic of the chart is its irregularity. Coincident with the appearance of the fever, which may be preceded by a chill, is an outbreak of new lesions, consisting of nodules or of marked inflammatory reaction in some of the old chronic nodules. The new nodules may occur on almost any part of the body except the scalp, appearing either in the seat of some old macule or on skin which previously appeared normal. The face, hands, arms, legs and trunk may be involved, flexor and extensor surfaces; the number of nodules varying from a few to possibly fifty or more. The lesions are disseminated with a tendency to bilateral symmetry, and the individual nodules are bright red in color without the brown discoloration found in older lesions; when they fade away they leave no trace of pigment unless the inflammation has been unusually severe. In size they vary from a split-pea to a hen's egg, being elevated, deep-seated, usually oblong in shape, and distinctly limited, in area, and firm to the touch. The inflammatory reaction in some cases in these nodules is so great that vesicle and bullæ may develop over them, or suppuration and abscess formation may occur. Even with lesser degrees of inflammation these nodules are always painful, differing from the older chronic lesions which are anesthetic and less highly inflamed. Very characteristic of these lesions is their evanescence, the average duration of an individual nodule being not more than a few days, one crop succeeding another as long as the fever lasts. During attacks of lepra fever inflammatory reactions similar to those occurring in the new lesions just described may also be observed in chronic tubercles that may have been of years standing. The severity of attacks is very variable. Two cases of lepra fever have been observed which were fatal. The nodules of erythema nodosum bear the closest resemblance to those of lepra fever both in appearance and in their evanescent character. Improvement after an attack is usually noted in the old lesions, as also occurs after crysipelas. The line of treatment that has given the best results has been the administration of arsenic in the form of Fowler's solution in increasing doses. The eruption has been found usually to fade under this treatment more rapidly than



under any other, and with the disappearance of the nodules the fever subsides.

*Insanity.*—About 6 per cent. of the cases at the Home have become insane. Many others are merely queer, neurasthenic or hysterical.

*Treatment.*—Up to the present time the best results have been obtained at the Home from the internal administration of chaulmoogra oil according to the methods of Dr. Dyer, which consists in giving large doses in connection with strychnin and daily hot baths. Cases not too far advanced that can tolerate sufficiently large doses of the oil have been found almost uniformly to improve, but such as are in the terminal stage must be regarded as hopeless; but little can be expected from medication, except the alleviation of pain, in such cases as are extensively mutilated, blind, deaf, of unbalanced mind, with large areas of ulceration, muscular atrophy of the limbs, loss of the vocal cords and general anaesthesia. Such cases would be hopeless from destruction of tissue alone, even if it were possible to rid them of the presence of all lepra bacilli.

The administration of chaulmoogra oil is commenced with a small dose—three to five drops—gradually increased until about 100 drops are being taken three times daily. Strychnin is given in 1/60 grain doses three times daily, and a daily bath as hot as can be tolerated.

Two disadvantages of this treatment consist in an intolerance for the oil in a number of cases and the slowness with which improvement takes place in others. Good results have been reported from the Philippines from the hypodermic use of chaulmoogra oil in combination with resorcin and camphorated oil. An attempt at the Home to give hypodermically an emulsion of the oil did not meet with success. All the cases that have been discharged as cured from the Home have been treated as outlined above, other lines of treatment have been experimentally tried on series of cases that could not tolerate large doses of oil with negative results in the majority of instances.

*Prognosis.*—Of the 240 cases treated 11 have been discharged as cured. Of these eleven one has relapsed. Cases are discharged when no clinical evidences can be found, and no acid-fast organisms from the seat of previous lesions, or from the nasal secretions. In cases progressing towards a cure, the acid-fast organisms are often found in scrapings from the nasal septum, long after they have dis-

appeared from other parts of the body. The small percentage of cured cases is in a measure due to the absconding of patients who had improved sufficiently to be presentable, and who might have been discharged had they waited until all evidences were entirely removed. It is only in the last year that the Home has been able to establish a system of guards to prevent absconding.

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V.

**The Surgical Aspects of Leprosy.\***

By RUDOLPH MATAS, M. D., New Orleans.

The policy of segregation and isolation of the lepers which has been consistently maintained in Louisiana since 1894, especially since the establishment of the leper colony or home in Iberville Parish, where all or the majority of the lepers of this State are practically segregated, has limited the opportunity for the observation and treatment of this disease, in Louisiana at least, to the medical staff of the Leper Home. Therefore, whatever I may have to say on the surgical aspects of leprosy must be based upon my earlier experiences with this disease as it came under my observation when I was a resident officer (intern) at the Charity Hospital in 1878-79-80 when the lepers were isolated in a special ward in that institution (as many as 112 patients of this class having been isolated in special leprous wards in the hospital during that time). I also had opportunities to observe the patients who not infrequently applied for relief at the outdoor clinics of the hospital and in my private practice in subsequent years, before segregation became a law. Since 1894 I have only on rare occasions examined leprous patients, and then only casually or for diagnostic purposes, and without any responsibility for their treatment. While every phase of this dreaded infection is of interest to the surgeon on account of the objective, demonstrable and usually accessible character of its most distinctive lesions, its study has only an academic and sociological interest to the practising surgeon—even in this State, where leprosy obtained a foothold from the earliest period of its colonial history (1750) to the present time. While I am not in any position to make an authoritative statement in regard to the

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opportunities offered by leprous lesions for surgical intervention, I presume, from the report of the physicians in attendance at the Leper Home, that operative or surgical treatment is seldom required except for the need of some minor palliative operations which are indicated in necrogenic, ulcerative disease in which foul, offensive and dead parts caused by mixed and saprophytic infections frequently require something more than topical applications for their removal or elimination. In this respect the present treatment of leprosy has not changed very materially from that which was in vogue in the days of my internship when, in common with many of my associates of the indoor staff, I was brought in frequent and close contact with the lepers housed in the Charity Hospital. At that time chaulmoogra oil, internally and externally, was the chief therapeutic agent, as it is at present, and the surgical dressings applied to the ulcers were practically limited to carbolized oil, chaulmoogra oil, permanganate lotions, charcoal poultices, etc. The general hot baths that are now so beneficially applied in established leper centers were seldom if ever resorted to, except possibly as a matter of common cleanliness and not as a mode of treatment. The only surgical treatment that was ever exhibited was limited to amputation of the toes or fingers for ulcerated or necrosed bone and an occasional laryngotomy for leprous stenosis. This insignificant and minor role of surgery in the treatment of a disease with such manifest and manifold external lesions is accounted for, perhaps, by the fact that we seldom, if ever, saw any cases in their incipiency when the lesions were isolated and discrete, all the patients admitted to the hospital showing well-marked and generalized lesions, which precluded all possibility of obtaining curative results by any method of extirpation.

But even under the most favorable conditions of prevalence in endemic foci, it is well known that the opportunity for observing primary, early or discrete lesions is extremely rare, and for this reason the abortive treatment of the disease, by the extirpation of primary lesions, as may be done in other infections, is rarely applicable to leprosy. At that time (about 1880) the first notice of Hansen's discovery of the *Bacillus lepræ* was beginning to attract attention, and occasional excision of lepromas or leprous nodules were made for purposes of diagnosis. While the operative side of leprous therapeutics was scarcely worth mentioning, on the other hand the differential diagnosis of some of the earlier disguised

lesions of this disease with other surgical conditions are well remembered, and they frequently exercised the critical faculties of many of my hospital contemporaries who, like myself, were deeply impressed by the mystery, as well as appalling ravages, of the disease. I well remember watching the gradual development of the leonine facies of Father Boglioli, the chaplain of the hospital and probably the most conspicuous and heroic victim of the disease in Louisiana. Father Boglioli was a Catholic priest of Italian birth, who, like his world-renowned contemporary, Father Damien, in Molokai, contracted the disease from the unfortunate people to whom he had consecrated the greater part of his existence. Dr. Joseph Jones, who was a very learned student of the disease, especially as observed in Louisiana, made a special study of Father Boglioli's case, and I recall the period of doubt which preceded the full and awful confirmation of the diagnosis. The recollection of the remarkable case of this devoted, courageous and pure man, and my observation of the progressive evolution of the most typical and fearful manifestations of the disease, as it appeared in his person, and the fact that he had contracted the disease in the hospital in the course of his ministrations to the leper patients, made a most lasting and indelible impression on my early professional life.

Among my early experiences I also remember the case of an intelligent washerwoman, a bright mulatress who for a long time visited our clinics for the treatment of constantly recurring blisters on the palms of her hands. These were at first thought to be pemphigus, then merely accidental burns, but on investigation they proved to be burns caused by the poor woman's habit of testing the heat of the laundry irons with her anesthetic hands. The anesthesia of the palms of the hands was one of the first manifestations of a leprous neuritis as was subsequently made evident by an eruption of the macules, and lepromatous nodules in the substance of the ulnar and median nerves. In a similar way I learned in two other cases to suspect the true nature of the painless whitlows of the fingers, which were supposedly associated with syringomyelia, and had been at that time grouped into a special type of peripheral anesthesia, which in France had received the designation of "Morvan's disease." Then there were some cases of that peculiar scar-like strangulation and spontaneous amputation of the little toes in negroes, known as *ainhum*, which perhaps exists as an independent form of a localized digital tropho-neurosis in tropical

climates, but which is much more likely to prove, in many cases, only an insidious form of neurotropic dactylitis or scleroderma, with amputating tendencies—of leprous origin. On this point I am convinced that Zambaco Pacha's contention that Morvan's painless whitlows, which seem to exist so frequently among the peasants of Brittany, and the ainbum which prevails among the negroes living in the leprous countries of South America, are, after all, only masked or attenuated forms of leprosy.

In connection with the surgical aspects of leprosy, we find a good deal in the literature of the subject relating to the opportunities of ophthalmic surgery in the treatment of the eye lesions of this disease. If these opportunities exist they do not appear to have suggested themselves to the oculists who attend the patients at the Charity Hospital, probably for the good reason that the lesions were all too far advanced in the patients admitted to the hospital, to justify any form of operative treatment. I have never known of a case of leprous keratitis treated by Brœckmann's incision of the cornea to protect the pupillary area when the extension of the lepromas threatens to obstruct the field of vision. According to this author and others, the bacilli do not traverse a cicatrix, and, in this way, the progress of the leprous invasion of the cornea is arrested. I have not heard of a tarsoraphy for ectropion of the lower lid, or iridectomy for iritis or synechia, or nerve stretching or neuro-transplantation, as suggested by McLoed (Manson), for the cure of leprous neuralgia, anesthesia, muscular atrophy and other trophic lesions, and all probably with good reason, not only because of the lack of opportunity for the application of such methods of treatment, but because, when taken as a whole, the class of lepers who came under our observation at the Charity Hospital were so profoundly and hopelessly submerged in the pathology of the disease that any attempt at palliation in such a limited way would have appeared to have been almost a travesty upon their sufferings.

In contrast with this limited and supplemental role of the surgeon, as we recall it, in our experience, it is refreshing and encouraging to read of what surgery has been able to accomplish in other surroundings where the immensity of the clinic permits of a more systematic and timely application of the knife for the relief of these sufferers. In this respect the experience of Dr. W. J. Goodhue, the medical superintendent of the Molokai Leper Settlement in the Sandwich Islands, is striking. Under the direction of Good-

hue and McVeigh we find that, in 1912, new and commodious buildings were erected in Molokai, which are provided with adequate surgical and dressing rooms and modern equipment for surgical work. In this place, bi-weekly surgical clinics have been installed. In these clinics—where contractions, ulcerations, necrosed and mutilated fingers and toes, and, in fact, all the disfigurements, due to the ravages of leprosy, are treated—some conception of the surgeon's part in the therapeutics of this disease may be obtained when we realize that 6,000 patients have been surgically treated by the attending surgeon. Dr. Goodhue's knowledge, skill and enthusiasm have overcome all obstacles. Koch, who visited the settlement a few years ago, and many other distinguished physicians and scientists, have spoken highly of the work done there and have expressed surprise at the results.

As a result of his experience, Goodhue writes (*N. Y. Med. Rec.*, July 19, 1913):

“However unusual the statement may seem to those not clinically familiar with every phase of leprosy, I boldly assert that in the unsuspectedly large numbers of incipient cases where the disease is localized (peripheral and neural) these or any other treatments which remove the then circumscribed area or focus of infection, without opening up new channels for metastatic dissemination, will cure the disease in from six to twelve months' time. Ferruginous and nutritive tonics, “emunctorial eliminants” (chaulmoogra), including hydrotherapy (hot baths), are here of more than ordinary importance.”

He reports several cases which appear to emphasize the correctness of his conclusions. The convictions which have grown upon him as the result of his experience in 6,000 surgical operations in the course of ten years of uninterrupted clinical observation, are expressed as follows:

“(1) Leprosy is more frequently than otherwise primarily a localized disease. (2) As such it may be eradicated by the judicious application of suitable topical remedies or careful surgical interference. (3) The whole period between infection and development of the primary lesion (incubation) may be as short as five days. (4) The initial focus may remain localized anywhere from a few weeks to a year, even a lifetime, through (a) natural, physiological and economic phenomena; (b) artificial circumscription or falling in of the primary focus, as by subcutaneous injection of a five per cent. solution of carbolic acid; (5) leprosy rhinitis or “snuffles,” is very infrequently a primary infection or manifestation, but is usually secondary to general systemic invasion, and occurring only for a longer or shorter (more commonly the former) period of localization. Left undisturbed, unrecognized, or untreated, systemic infection and general dissemination of the bacilli may occur from autoinfection through (a) natural proliferation of bacilli and

toxins generated; (b) traumatic injuries, such as lacerations, contusions, luxations and fractures; (c) intermittent fevers; (d) intemperance, debauches, with the usual concurrent exposure; (e) natural susceptibility, or the same acquired through the loss of body resistance; (f) in woman, pregnancy."

Goodhue has simply emphasized the older teachings of Manson, who states:

"If only one tubercle or one limited lepra macula is present and there has been no constitutional sign of a general invasion, it is advisable to excise the affected spot. It is just possible that in this spot we may be dealing with the primary lesion of leprosy, the point of invasion, and that as yet the disease is limited to this. At all events, to excise this lesion does no harm; and in the face of the trouble which is otherwise in store for the victim of this infection, it would be wrong to withhold any probable chance of escape, however small, that such a trifling operation might afford. A case has been recorded (*Arch. de Med. Exp., Par.*, January 1, 1895), and others, in which a child 27 months old, presented on one temple a minute, red anesthetic spot, which a microscopic examination proved to contain lepra bacilli. The child's mother was a confirmed leper. Six months after the discovery of the spot it was excised and the wound healed. This was done in October, 1893; in April, 1894, the child showed no signs of leprosy." (Manson.)

The burden of this discussion is that the resources of surgery deserve more consideration than they have received in the treatment of leprosy lesions, and while in the majority of cases, as they come under the observation of the clinician, operative interference can only prove of palliative value, the good effected by judicious and early intervention will not only redound to the great benefit of these miserable sufferers, but will, in a limited number of cases, actually arrest and cure the disease. At any rate, efforts should be made to provide means for systematic surgical relief in asylums and institutions for lepers, where, in addition to the most advanced and progressive therapeutic methods, they may receive the benefit that is possible by the systematic application of surgical treatment.

#### DISCUSSION.

DR. L. J. GENELLA: I practice in a section of the city where leprosy is fairly common. I can recall twelve cases during the last few years. One feature in leprosy that has often struck me as calling for more than passing notice—it is the tendency that great physical exhaustion has to bring to the surface any latent leprosy. This, of course, applies particularly to the dermachromes of leprosy. One case appeared in a tramp after walking from Memphis to New Orleans, another in a negro after prolonged railroad work, another in a lady after prolonged nursing. If this has any practical bear-

ing on the subject, I believe sensitized children should be watched to avoid their unduly exerting themselves.

DR. E. S. LEWIS: I have almost forgotten all I ever knew regarding leprosy and my experience is limited to but a few cases. These were treated with chaulmoogra oil, but without permanent benefit. I recall a case treated by some vegetable decoction, suggested by some one from Cuba, with marked improvement in local and general symptoms. The benefit was temporary. I do not regard it as very contagious. I knew a leprous woman whose children were free from the disease and also the husband, although occupying the same sleeping apartment for years.

DR. J. N. ROUSSEL: I don't know anything about leprosy, and don't think anybody else does. I think the gentlemen lay too much stress on the fine points of its diagnosis. The diagnosis is usually the least of our troubles. I have seen many cases with multiple neuritis. The cases I have seen make one think that the disease is disseminated by insects. Several years ago I told Dr. Duval that the beg-bug possibly carried the disease, but he did not think so. I am opposed to isolation of lepers. I don't think that lepers should be interdicted. I think they should be taught hygienic measures. If the same amount of money was given Dr. Dowling to teach these people more good would be accomplished. I don't think chaulmoogra oil of any special value. I have seen leprosy lesions disappear without treatment, or where the patient did nothing more than spit on them. I think the best treatment, if any, is cacodylate of soda,  $7\frac{1}{2}$  grains, every two days, with the old tuberculin in increasing doses.

DR. ALLAN EUSTIS: Dr. Hopkins has said nothing about the severe pain. This is greatest in the macular form, and a case which I recall of this sort had a temperature of  $104^{\circ}$ - $105^{\circ}$ , with severe pain in the limbs, which might have been mistaken for rheumatism. The general practitioner might easily confuse these cases. The patient mentioned had one or two macules. I wish to ask Dr. Hopkins if chaulmoogra oil in larger doses could not be given directly into the duodenum, by a duodenal tube, 100 c.c. could thus easily be given, with no gastric symptoms.

DR. T. J. DIMITRY: I had the privilege of being an assistant to Dr. Bruns when he removed a cataract in a leper. I have seen a few cases of the disease and have observed many of the ocular lesions.



In April, 1910, I contributed an article in the *Annals of Ophthalmology*, "Two Cases of Successful Extraction of Senile Cataract From the Eyes of Lepers."

Dr. Karvin, of Norway, tells us that two-thirds or even three-fourths of the lepers have ocular lesions. I would like to ask Dr. Hopkins if any special consideration is shown the eyes at the leper colony, and should not a few receive special care at the hand of the ophthalmologist?

DR. HOPKINS (in closing): Replying to Dr. Eustis, I wish to say that we have not used the duodenal tube, but have used a method of getting oil through the stomach quickly. I think the pain referred to is due, in a large measure, to the nodules of inflammatory character, which are usually very painful on pressure.

I think that chaulmoogra oil is of great benefit. Similar good results from its use have been reported from the Philippine Islands and Dr. Dyer has reported a series of cases cured by its use.

The only cases which have been discharged from the home have been treated with the chaulmoogra oil, strychnin and hot baths. I think that one reason that the oil is not in better local repute is that it takes a long time to obtain results with it. It is fortunate to see the beneficial effects in two or three months. Some of the cases discharged were treated for as long as four years. Many patients have absconded from the Lepers' Home in an improved condition who might have been discharged if they had persisted in their treatment. Only lately a system of guards has been established, until then many absconded as soon as they got rid of conspicuous skin lesions. This naturally has decreased the percentage of cases cured.

The law for the isolation of lepers does not contemplate holding in confinement cases that present no evidences of leprosy; cases progressing favorably to such a point must be discharged.

DR. C. W. DUVAL: I would like to have Dr. Hopkins' opinion of isolation?

DR. HOPKINS: The only hope of eradicating leprosy is by isolation. Leprosy is probably spreading in Louisiana.

DR. H. E. MENAGE: The diagnosis of typical leprosy is very easy, but the diagnosis of difficult cases is a hard problem. One of the most important points of diagnosis is anesthesia of the skin, and if the general practitioner would stick a pin in doubtful cases, more cases would be diagnosed earlier.

## THE VALUE OF THE STRING TEST IN THE DIAGNOSIS OF GASTRIC LESIONS.\*

By S. K. SIMON, M. D., New Orleans.

The employment of a swallowed thread or string as an aid to diagnosis in lesions of the upper digestive tract is a clinical discovery of comparatively recent origin. It may be recalled in this connection that already as early as 1881, Edinger had suggested, in lieu of the stomach tube, the use of a sponge, attached to an ordinary thread, for obtaining small quantities of stomach contents for analysis.

The principle involved, though ingenious, did not seem to win much favor however, until the introduction of the stomach bucket by Einhorn, in 1890. This simple little contrivance consisted of a metallic capsule, suspended upon a corded silk thread, and while its field of usefulness proved small, it served as the forerunner of the more ambitious and practical duodenal bucket, which was modelled upon the same lines. The principle purpose of these so-called bucket devices, as originally conceived by Einhorn, was merely the obtaining of the respective digestive juices for direct examination and analysis. It was not until a later date that the thought occurred that valuable and trustworthy knowledge might be gained from an inspection of the string itself. This idea, coming as an afterthought, followed logically the more or less extended use which the duodenal bucket has enjoyed in the varied types of digestive disturbances in which it has found employment.

It is upon this particular phase of the subject, that is, the knowledge which might be gained from an examination of the string itself, that I would like to dwell to-night.

In a previous discussion before this Society, I had occasion to exhibit and demonstrate the duodenal bucket outfit and shall ask your indulgence for a brief review now of the simple technic of its administration to the patient. The metallic bulb is best incased within an ordinary No. 00 capsule, to facilitate swallowing, and is suspended upon a silk thread of about No. 5 thickness. The length of the thread is made to correspond to the distance from the incisor teeth to the duodenum, measuring about 70 c.m., with a lead outside of the mouth to allow of anchoring to a garment. Thus pre-

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pared, the capsule is fed to the patient, preferably after night-fall, preceded by a few hours' fast, and is withdrawn the following morning, allowing a period of at least twelve hours, which has been found quite sufficient for the passage of the weighted bulb into the duodenum. It is a rare exception to find, after this time, that the pylorus has not been passed, unless, of course, some physical obstruction should be present at this outlet. Upon inspection of the thread after its withdrawal, a green discoloration is usually found, extending about three inches from the distal end and corresponding to that section above the bucket, which has found its way into the duodenum. The section which has traversed the stomach itself should be without discoloration. This represents the picture presented under normal conditions. Should, however, there exist upon the gastric or duodenal mucosa a break in its continuity, such as occurs in a single fissure or ulceration, either benign or malignant, there might be found upon the thread a blood imprint corresponding to the definite area of ulceration in contact with the thread.

Since the thread comes into most intimate contact with the mucosa at the tightly closed pyloric end of the stomach, it is in this region where the most striking information from the test may be observed. It is a fortuitous circumstance in this connection that there exists a marked predilection for ulcer formation in the neighborhood of the pylorus, as high as 90 per cent. of peptic ulcers occurring there. As the thread lies for many hours upon the ulcerated area, bathed freely in the digestive juices, a stain upon it would not appear as one freshly made, or bright red in color, but rather as a dark brown imprint, and in some instances even black. It is upon this point that I wish to lay special stress, because, at the time of the withdrawal of the string, through the stomach orifices, it is easily possible, even from moderate tension, to inflict slight hemorrhages upon the mucosa. Under such circumstances a stain thus produced would naturally be of bright red color, and what is equally as suggestive, would show itself as a mere streak or a series of interrupted streaks, rather than as a continuous whole. On the other hand, the stain from an ulcer is usually found to occur on a section of the thread, corresponding exactly to a definitely measured distance from the incisor teeth and gives the impression of a deep imprint in marked contrast to the unstained portions of the thread.

With a view of obtaining an insight into the behavior of the string, when swallowed by individuals presenting no digestive symptoms at all, I have recently conducted a series of experimental tests, using the regulation Einhorn duodenal bucket uniformly as the weight in preference to shot. In all, thirty-five of these controlled tests were made, the results of which I shall present in detailed form under the tabulation shown on page 1031.

An examination of this table will show a positive blood stain in four of the tests, or about 11 per cent of the whole. Such an apparently high percentage of positive finds in individuals, presenting no evidence of ulceration in the stomach or duodenum, would, on its face, seem to discredit the reliability of the string test as a clinical method. A closer analysis of these results, however, would lead one, I think, to a more hopeful and favorable attitude. In each instance, the discoloration observed, was relatively faint in outline and presented a series of streaks, rather than a deep, distinct and continuous imprint. It is my impression that these stains were most probably produced by slight tension upon the string, incurred unconsciously during the patient's sleep. That there was not a larger number of bright red stains is due, I believe, to the special care taken in withdrawing the bucket in the morning.

In conjunction with the above experimental observation, I wish to present another series of results obtained with the string test in cases exhibiting undoubted dyspeptic disturbances. These tests were made in the course of a regular clinical routine and are selected at random from my records. See page 1032.

A review of the results in these cases, I think, will offer at least food for reflection and should tend to stimulate further observations, I believe, in this field. The material has not been sufficiently large as yet to permit of positive conclusions. At best, it must be admitted that a diagnosis of peptic ulcer, which has not been submitted to the acid test of the operating room or of autopsy, is always open to some doubt.

The impression I have gained from the string test, however, with experiences extending back now over a period of about two years, is that it offers a valuable addition to the other methods employed in the diagnosis of benign and malignant ulceration of the upper digestive tract and with particular reference to those situated in the region of the pylorus. As with other tests, the results must

TABLE No. 1.

Case No.	Age.	Date.	Residence.	Race.	Dyspeptic Symptoms.	Diagnosis.	Results With String Test.
1	29	Jan. 14	City	White	No	Amebic Dysentery.	Negative
2	24	Jan. 15	City	White	No	Plastic on Eye.	Negative
3	43	Jan. 16	Mexico	White	No	Inguinal Hernia.	Negative
4	40	Jan. 17	Louisiana	White	No	Fistula in ano.	Negative
5	37	Jan. 19	St. Louis, Mo.	White	Few	Fractured Tibia.	Negative
6	37	Jan. 20	Louisiana	White	No	Retro Displacement.	Negative
7	18	Jan. 25	City	White	No	Inguinal Hernia. A faint markedly streaked dark brown stain about $\frac{3}{4}$ inches long, just above the stain of the bile from the duodenum at the pylorus.	Negative
8	23	Jan. 26	City	White	No	Inguinal Hernia.	Negative
9	39	Jan. 27	City	White	No	Amebic Dysentery.	Negative
10	22	Jan. 28	Louisiana	White	Occasion	Deviated Septum.	Negative
11	26	Jan. 30	City	White	No	Amebic Dysentery. Interrupted brown stains, each $1\frac{1}{2}$ inches apart and 4 inches above bucket.	Negative
12	26	Feb. 1	City	White	No	Hernia.	Negative
13	26	Feb. 4	City	White	No	Malaria.	Negative
14	17	Feb. 5	Louisiana	White	No	Cataract.	Negative
15	33	Feb. 7	Louisiana	White	No	Trachoma.	Negative
16	26	Feb. 9	City	White	No	Mental Case. Two stains, 1 inch apart; not striped, dark brown at upper edge of green stain.	Negative
17	35	Feb. 10	City	White	No	Amebic Dysentery.	Negative
18	18	Feb. 11	City	White	No	Inguinal Hernia.	Negative
19	38	Feb. 12	City	White	No	Inguinal Hernia.	Negative
20	58	Feb. 14	Louisiana	White	No	Inguinal Hernia.	Negative
21	45	Feb. 15	City	White	No	Tertian Syphilis.	Negative
22	28	Feb. 17	Mississippi	White	No	Trifacial Neuralgia.	Negative
23	26	Feb. 17	City	White	No	Mental Case.	Negative
24	33	Feb. 18	City	White	No	Lobar Pneumonia.	Negative
25	36	Feb. 19	City	White	No	Necrosis Os Calcis.	Negative
26	21	Feb. 23	S.S. Van Dyke	White	No	Fracture of Toe.	Negative
27	37	Feb. 24	City	White	No	Inguinal Hernia.	Negative
28	28	Feb. 25	Louisiana	White	No	Mitral Regurgitation.	Negative
29	48	Feb. 27	Louisiana	White	No	Hemorrhoids.	Negative
30	54	Mar. 8	Louisiana	White	No	Banti Disease.	Negative
31	30	Mar. 9	Louisiana	White	No	Trifacial Neuralgia.	Negative
32	27	Mar. 10	City	White	No	Prob. General Paresis.	Negative
33	33	Mar. 11	Louisiana	White	No	Hernia.	Negative
34	34	Mar. 15	City	White	No	Endocarditis. Bright red stain stress the length of string from mouth to cardiac.	Negative
35	26	Mar. 18	City	White	No	Inguinal Hernia.	Negative

TABLE No. 2.

Case No.	Age.	Residence.	Race.	Sex.	Clinical Diagnosis.	Remarks.	Results With String Test.
1. D. C.	20	Florida	White	Male	Chr. Appendicitis—Sus. peptic ulcer.	Operation: Adherent appendix found. No ulcer attacks.	Negative.
2. J. McM.	—	City	White	Male	Gastric crisis; tabes.	Blood vomitus during attacks.	Negative.
3. A. M.	41	City	White	Female	Splanchnoptosis with Chr. Dyspepsia.	Recovery under treatment in epigastrium suggestive of pylorospasm.	Faint red stain, section near cardiac.
4. C. M.	23	Mississippi	White	Female	Functional Dyspepsia.	Pain in epigastrium suggestive of pylorospasm.	Negative.
5. C. S.	38	City	White	Male	Chr. Appendicitis.	Dyspepsia for five years. Operation. No ulcer found.	Negative.
6. H. P.	40	Louisiana	White	Male	Peptic Ulcer.	Medical treatment with recovery.	Brown stain, 2 inches long, region pylorus.
7. Dr. J. L. G.	29	Mississippi	White	Male	Probably Chr. Appendix. Suspectious pyloric ulcer.	Refused operation. Diagnosis peptic ulcer made.	Negative.
8. J. K.	38	City	White	Male	Chr. Appendicitis.	Many years a dyspeptic. Appendectomy performed. No ulcer found.	Negative.
9. E. F.	38	Nicaragua	White	Male	Duodenal Ulcer.	Typical case with occult blood and X-ray confirmation.	Positive—Faint continuous stain about 2 in. above bucket.
10. L. C.	38	Louisiana	White	Female	Alcoholic Gastritis.	Occasional blood streaks in morning vomiting.	Negative.
11. A. R.	23	—	White	Female	Peptic Ulcer.	Clinical picture complete. Pregnancy at time of examination.	Positive—Stain, 1 in. long, 4 ins. from bucket.
12. D. G.	21	Louisiana	White	Male	Functional Dyspepsia.	Medical student.	Negative.
13. J. E.	42	City	White	Male	Pyloric Ulcer.	Suggestive of peptic ulcer. Symptoms very characteristic.	Deep brown-black stain, 3 ins. long, region pylorus.
14. L. S.	21	Louisiana	White	Female	Gastric Neurosis.	Continual vomiting, at times blood. Operation: Negative; abdomen.	Negative.
15. M. P.	54	Louisiana	White	Female	Pyloric Stenosis—Chr. Ulcer Scar.	Dyspepsia, twelve years' standing, with blood vomiting.	Negative. Bucket did not pass pylorus.
16. C. E.	42	City	White	Male	Peptic Ulcer.	Symptoms, five years' standing. X-ray confirms diagnosis.	Positive — Faint stain, 2 ins. long, 3 ins. above pylorus.
17. P. M. G.	60	City	White	Male	Pyloric Ulcer.	Ten years' duration of dyspepsia, although pains and occult blood.	Positive — Deeply stained area, 2½ ins. in length at pylorus section.

always be judged with a due measure of caution and in proper perspective to other clinical findings.

In conclusion, I wish to extend my thanks to Dr. Levy, of the Touro intern staff, for valuable assistance rendered in conducting the control tests and to the various members of the visiting staff, who generally allowed the use of their material for the purpose.

#### DISCUSSION.

DR. ALLAN EUSTIS: I had hoped that Dr. Simon's statistics would show a greater number of cases in which the test had been positive. I have not used the bucket test, but used the string with a shot, and if I got bile stains on the string, presumed it was in the duodenum. In these cases there is always more or less sup-puration going on in ulcer. By testing the stained portion of the thread in dilute acetic acid, pus cells can be found under the microscope.

DR. A. L. LEVIN described the failure of the string test in the experience of Dr. Frank Smithie, of Chicago, in 318 cases of gastric ulcer. In seven cases there was blood stains. In gastric ulcer of the chronic type there is intermittent bleeding, and one cannot be certain that the string reaches the duodenum.

DR. J. B. ELLIOTT, JR.: I can testify personally to the simplicity of this test, but have reached no definite conclusions as to its real value. Before declaring positively that the stain on the string is from an ulcer in the duodenum I should like to study the case with a fluoroscope or have X-ray plates made while the bucket is in the duodenum. I fear also that the taut string across the pylorus might cause an abrasion where there was none previously. This test is certainly not as valuable as occult blood in the stools.

I would like to know if Dr. Simon's cases were examined with X-ray?

DR. SIMON: I have tried to make clear that these tests were undertaken simply in an experimental way, and that I am still looking for more light on the subject. I, too, read Smithie's paper and admire his experimental method, but cannot abide by his results in this instance. There are one or two points in the discussion that I should like to focus particular attention upon. First, as regards the diagnosis of peptic ulcer, we have learned to place a large degree of confidence in the occult blood tests. If the test be negative, the

use of a cellulose, rich diet may occasion bleeding from an indolent ulcer, where a too bland diet would not. The use of the stomach tube or the bucket, it should be remembered, may cause a positive blood reaction in the stool several days following the administration. If a distinct blood imprint is found on the thread, there should be a blood reaction present in the feces.

Blood streaks on the thread, especially if bright red in color, are insignificant and should be disregarded. The length of the thread should be carefully considered, otherwise peristalsis will carry the bucket at the jejunum and too great a tension will become necessary upon withdrawing the thread. In two instances, X-ray examinations confirmed the presence of the bucket in the duodenum. It should be remembered, however, that a bile stain on the thread does not necessarily mean that the bucket has passed the pylorus, since in the fasting stomach, bile frequently regurgitates into the stomach.

DR. GROETSCH: Would like to know the length of thread used in these experiments?

DR. SIMON: About 34 inches from incisor teeth, which will allow the bucket to reach the duodenum in practically all cases. The difference in different individuals is not great. The bucket and string travels along the lesser curvature of the stomach.

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## PROSTATECTOMY UNDER LOCAL ANESTHESIA.\*

By CARROLL W. ALLEN, M. D., New Orleans.

I wish to present to-day a procedure which, in my experience, has much to commend it, that of prostatectomy under local anesthesia.

For the intelligent presentation of a subject of this kind many factors should be considered which do not deal directly with the technical performance of the operation, yet may be of vital importance in the results, consequently, I feel should not be omitted in this discussion.

In the operative relief of hypertrophy of the prostate we have, in the great majority of cases, to consider certain factors which are not, as a rule, involved in other surgical procedures, particularly that of age, as most of the cases requiring surgical relief for this condition have reached or passed middle age, and many of them are infirm or weakened by suffering and infection.

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In the old and feeble, prostatectomy is a formidable operation, though not attended by a greater mortality than that following any other major operation in the same class of patients. However, it may even show a more favorable comparison by observing certain methods in the handling of these cases.

Surgical technic has reached such a stage of perfection that in the more commonly performed operations it would seem difficult to suggest improvements in the recognized methods of procedure in typical cases. Improvements will come, but I believe that they will be more in the preparatory treatment, general handling of the case and refinement in details, rather than in the general principles involved in the operation.

One of the notable advances recently introduced as a general surgical procedure is the anoci-association of Crile. This, I believe, to be a factor of great consequence, particularly when applied in old and feeble patients, as it prevents shock-producing impressions from the field of operation from reaching the higher nerve centers.

The method which I now follow is the result of a process of gradual evacuation and improvement in handling these cases. Beginning with the two stage operation and the adoption of the anoci principles to control shock, and the logical addition of adrenalin for the control of hemorrhage, it has gradually progressed to the point of complete elimination of all general anesthetics, which are now never necessary, but which, however, should be preferred in undoubted malignancy of the prostate in which methods of infiltration should be avoided.

The two great factors in the production of shock are trauma and hemorrhage, and to these, in the great majority of surgical procedures, is added that of the general anesthetic. In the recent more improved methods of general anesthesia this may be practically eliminated as a shock producing factor, yet it nevertheless has its dangers in the deranged stomach, possible pulmonary and particularly in prostatectomy renal complications.

These cases present another danger fully as great as any of the above, and, I believe, is responsible for a large proportion of the mortality, a danger peculiar to these cases.

Few patients requiring prostatectomy present themselves for operation before they have seriously felt the inconvenience of this condition, many have probably already been initiated into catheter life, some have had one or more attacks of acute retention of urine

from prostatic congestion and practically all will show considerable residual urine and possibly some renal complications and nearly all are disturbed frequently at night by having to arise to urinate. The kidneys have gradually accustomed themselves to this condition and are working against considerable back pressure, and the sudden relief of this pressure at operation completely upsets the renal equilibrium leading to congestion with diminished excretion or probably anuria, and here lies the particular danger in these cases, and in avoiding it forces upon us the necessity of first relieving the bladder and permitting the kidneys to recover by performing these operations in at least two stages in all cases that show much residual urine or are suffering from retention at the time of operation. The danger, too, of suddenly relieving a distended bladder cannot be overestimated, vesical hemorrhage may occur, associated with renal suppression, and in my observation this procedure alone has caused as great a mortality as prostatectomy.

In extreme cases such bladders should never be opened at once, unless badly infected, and the danger of general infection too great for delay, but should be gradually evacuated by catheter, removing but a portion of the urine at a time at two or three-hour intervals, and this gradual emptying process consume from 24 to 48 hours before the bladder is opened.

Rarely a case is met with in which there is considerable distention and the passage of a catheter too painful, difficult or even impossible of accomplishment, in such cases, if the suprapubic incision is carried down to the bladder, this can then be emptied by a gradual process of aspiration at intervals of several hours, gradually withdrawing more and more at each successive aspiration and the difficulty overcome in this way, during these intervals the suprapubic wound is kept packed. After 24 to 48 hours the bladder which is now fairly collapsed can be opened with safety.

The method of performing the cystotomy and of dealing with the bladder afterwards is of some consequence. It may be opened with a free incision with the introduction of a tube or catheter to its base and the attachment of some syphoning apparatus, or the escape of urine may be effectively controlled by making a small button hole opening into which is passed a Pezzer catheter, the ends of this incision are then infolded and held by two stiches; such a valve-like closure will leak very little, if at all.

The advantage of this last method is quite apparent as it permits

the collection of all urine and in this way the functional activity of the kidneys can be accurately gauged. It will usually be found that the urinary excretion for the first two days diminishes considerably following the cystotomy, gradually increasing from the third to the fifth day and is about normal by the end of the first week, by this time, if the patient's general condition is good, as shown by normal appetite, with good digestion, free bowel movements and after a few nights normal restful sleep, free from the annoyance of frequent urinations, the removal of the prostate can be undertaken.

If any question exists regarding the condition of the kidneys, a further delay is necessary or their capacity may be tested by phenol-sulphone-phthalein, and under no conditions should the prostatectomy be attempted until they have reached a fairly normal condition of elimination. By handling patients in this way many risks and feeble individuals may be safely carried through the surgical ordeal.

During the interval between the suprapubic cystotomy and the prostatectomy, the bladder should be washed once or more daily with warm boracic solution and the suprapubic wound kept lightly packed, and any infection in the cellular planes which may have occurred, but which, however, is rare, should be well under control before the final operation is attempted.

It is usually noticed that the prostate diminishes decidedly in size, following the cystotomy, due to the relief of the congestion, and this diminution in size facilitates its later removal.

For the suprapubic cystotomy the bladder is first irrigated freely through a catheter with boracic acid solution and left moderately distended. For this and most other operations one-half per cent. novocain in four per cent. sodium chloride solution is used, adding fifteen drops of adrenalin solution 1 to 1000 to three or four ounces of solution.

It is usually preferred to complete the injection of the field with the local anesthetic solution before the incision is made, infiltrating the skin and subcutaneous tissues in the middle line for a distance of three or four inches and then passing a long, fine needle down through the skin to the anterior rectal sheath, this is recognized as the first plane of resistance which the needle encounters after the skin is passed, this is gently penetrated injecting as the needle is advanced for about one-half to one inch further and the interval between the recti infiltrated, this is repeated at several points along

the proposed line of incision, near the pubis the injection is carried a little deeper into the prevesical space, always injecting as the needle is advanced.

If any uncertainty is felt regarding this last deep injection, it can be omitted until the recti are separated and the deeper parts brought into view. After the incision the parts are gently retracted, progressively advancing until the bladder is reached, the cellular tissue over it divided and pushed up with the peritoneum out of the danger zone.

In making this suprapubic incision it is advisable not to approach too closely to the pubis, but to keep one or two inches away from this point, depending upon the size of the bladder, and yet not too close to the peritoneal fold; this has the advantage of avoiding the possible danger of suppuration in this space and facilitates the more rapid closure later of the fistulous opening, for the nearer these openings to the peritoneal reflection the quicker seems to be their closure and those suprapubic fistulæ which have been difficult to close have always been close to the pubis.

The superior bladder wall is not, as a rule, very sensitive, but it should be lightly infiltrated before being incised, one stitch on each side fixes the upper part of the bladder to the posterior rectal sheath, the bladder is then freely irrigated and its cavity explored, determining the size and shape of the intra-vesical projection of the prostate, removing calculi, should they exist, and obtaining any other information which may be necessary. If a direct visual inspection is desired in cases in which complications are suspected, this can be easily accomplished by evacuating the contents of the bladder and by placing the patient in the Trendelenburg position, air will enter and dilate the bladder when its interior can be freely inspected by gently retracting the incision, or, if preferred, a short proctoscope with light attached may be passed within the cavity.

If much intravesical examination is necessary, or it is desirable to examine the vesical cavity digitally, some form of intravesical anesthesia then becomes necessary.

For this purpose I have found it both inadvisable and unnecessary, as well as ineffective, to attempt to anesthetize the interior of the bladder for cystotomy and suprapubic manipulations within it by first filling it a short time before with anesthetic solution, this procedure is now resorted to only for cystoscopy; for all manipulations

and operations within it direct injections are made into or around the field to be operated or explored.

The particular sensation with which the bladder is endowed and which is felt upon any abnormal contact with its walls, either internally or externally, is that feeling which we term the desire to urinate; this feeling is more easily excited by manipulation from within and always more acutely towards the vesical neck and prostatic region. Pain is only complained of when these manipulations have been rough or when actual trauma has been inflicted.

The introduction of a finger within the bladder for purposes of exploration excites a desire to urinate, and this desire may become particularly urgent and always so when the parts near the vesical neck are touched; it is not a pain, but still may be quite unbearable and demands some effective method to control it; this is accomplished in but a few moments of time. The bladder is first well irrigated and then emptied, with the patient in the Trendelenburg position to dilate the cavity and bring its base into plain view, the anesthetic solution is injected with a long, fine needle at four or five points around the vesical neck, injecting about one-half dram at each point, the needle is advanced just through the mucous membrane with a quick thrust, injecting the solution as the needle is advanced. Unlike the skin and most other tissues, the bladder is tardy in recording its sensations and anesthesia results before any sensation is felt from the punctures. Ordinarily these injections around the vesical neck are sufficient for all intra-vesical manipulations which can now be undertaken with the greatest freedom, but in complicating conditions, where the lateral walls are to be operated upon, further infiltration around the field becomes necessary, however, as most nerves reach the bladder near its base and around the vesical neck the injections made here are most effective in controlling its sensation.

If the case is one that does not come within the class requiring a two-stage operation, but is in fairly good physical condition, with good kidneys and with but little residual urine and no bladder infection, the prostate may be anesthetized and removed at once. Whether this be done in one or two-stage operation certain preparatory measures are advisable. One hour before operation a suppository, containing ten grains of anesthesin, is placed in the rectum to anesthetize this region and prevent any discomfort when the finger is introduced here in elevating the prostate; at the same time,

one hour before operation, a hypodermic of morphin  $\frac{1}{6}$  grain and scopolamin  $\frac{1}{150}$  grain is administered to lessen psychical disturbances.

If the case is one in which a cystotomy has previously been done the Pezzer catheter or tube is removed from the suprapubic opening. The wound is found presenting a granular surface, sloping down towards the vesical opening; this is most effectively and quickly anesthetized by passing a fine needle through this granular surface and injecting just beyond. By beginning these injections above under the skin margin the needle can be advanced obliquely in several directions, creating a zone of anesthesia, just external to this wall of granulation tissue, which will diffuse in all directions, blocking nerve fibres which come into the field. This is done on both sides and carried down to the vesical opening. Injections are similarly made above and below the limits of the wound in the subcutaneous tissues in the median line, as the wound has probably contracted and will have to be enlarged. The passage of a fine needle through this granulation tissue causes no pain and is preferred for that reason to passing the needle from the skin down. A finger is now passed into the bladder to outline its upper limits and determine the proximity of the peritoneal cavity above. Additional injections are now made into its upper wall with the finger within, guiding the point of the needle.

The bladder opening is now enlarged and the patient placed in a moderate Trendelenburg position. The bladder well irrigated and then emptied, either with a large syringe or sponges; its walls are then retracted by long, deep, narrow retractors, bringing into view the field of the prostate. Depending upon the size and shape of the prostate, several points are selected for injection on the vesical surface, usually one below the opening of the urethra, near the base of the gland, and one on either side. The needle is passed through the mucosa, with the idea of making the injection between the true and false sheath of the prostate, as it is in this plane that the solution must diffuse around the gland, and it is in this plane that its enucleation is effected, it is here where the large venous plexuses are situated and where the nerve filaments are more easily reached as they pass through to the prostate.

Two or three drams of a one-half per cent. novocain solution, containing ten minims of adrenalin to the ounce, are injected at each of the above points. The needle is then passed into the ure-

thral opening and the lateral wall pierced first on one side and then on the other, and similar injections are made at these points. During these injections the finger is kept within the rectum to better guide the passage of the needle around the prostate where its point can be felt passing between the gland and its false capsule; it also facilitates these injections by elevating or manipulating the gland and guards against the penetration of the false capsule by the needle. Following these injections a catheter is passed through the urethra into the bladder.

The enucleation of the gland can now be undertaken by any method preferred by the operator and will be absolutely free from all pain or other discomforts. If the intra-urethral method is chosen the passage of the catheter can be omitted until later, but I have always found its presence a convenient guide to the location of the urethra during the different stages of the operation. A most striking feature is the absence of all bleeding, only a few sponges being slightly soiled, the loss of blood not amounting to more than one or two drams at most, and there is no blood to swab out of the bladder afterwards. The catheter which has been left in the urethra is now utilized to draw through the urethra from the bladder outwards a Mikulicz pack, which consists of a stout piece of silk which has been doubled and passed through a plug or pad of iodoform gauze, arranged somewhat cone shape and about the size of the cavity left by the removed gland. The silk thread is long enough to reach beyond the glans penis and when pulled upon draws this plug effectively into this cavity, thus insuring against any possible secondary hemorrhage. This plug in passing into this cavity also has the effect of turning in any free edge or shreds of mucous membrane against the raw surface of the capsule. One end of this pack is left long enough to protrude through the suprapubic opening to facilitate its removal later. This is a most effective and simple method of providing against possible secondary hemorrhages, which is impossible when this pack has been properly placed; as it is entirely under your control, it can be forced in tighter by drawing upon the urethral string or loosened by manipulating the suprapubic end.

A drainage tube placed in the suprapubic opening and a few approximating sutures complete the operation.

The pack is removed in 24 to 48 hours when danger of hemor-

rhage is past and the case handled by the usual methods following these operations.

A notable feature is the absence of all shock or depression, the pulse showing very little change after operation, often there is not enough pain to justify a hypodermic. These cases are usually up in a chair in a few days and on their feet by the end of a week. The nourishment is usually restricted to liquids for the first day, after which they are permitted to eat what their appetite calls for.

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## AMPUTATIONS.\*

By HERMANN B. GESSNER, M. D.,

Local Surgeon, Louisiana Railway & Navigation Company, New Orleans, La.

The importance of this subject is shown by the fact that in recent papers statements appear placing the proportion of satisfactory end results at two out of ninety-six leg and thigh, one out of thirteen thigh amputations.

It would appear that the attention of surgeons, for a time unduly diverted from the limbs to the visceral cavities, is being turned in proper degree to the consideration of amputations. On the other hand, the *indications* for amputations are fewer, owing to the development of conservative procedures. Among these may be mentioned sutures of arteries and veins for injuries, which would formerly have indicated removal of the limbs involved, as well as transplantation of vessel segments and the substitution of foreign segments (rubber). In simple bone tumors and in myeloid sarcoma, excision and transplantation are employed for the preservation of limbs; in tuberculosis of bone, Rotter's heliotherapy renders valuable services. Arterio-venous anastomosis succeeds in a certain proportion of cases of gangrene from endarteritis; when gangrene compels amputation, the Moskowitz and Sandrock tests indicate with a degree of precision the necessary level of ablation.

A difficult matter is the *decision when to amputate* in cases of sepsis. Every surgeon of considerable experience has had to blame himself on the one hand for losing patients whose limbs he was trying to save, and, on the other hand, for removing limbs in patient who might have stood the strain a little longer. What

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\* Read at the Fourth Annual Meeting, Louisiana Railways Surgeons' Association, Lake Charles, La., April 19, 1915.



shall be our guide, our index of the fact that the patient has been left exposed to the slowly shocking process of septic absorption long enough? I suggest that the blood pressure be the guide, 100 mm. of mercury being adopted tentatively as the minimum below which the systolic pressure should not be allowed to descend before amputation is resorted to. Estes lays down the proposition that, in cases of injury, amputation should not be attempted when the blood pressure has fallen to 80 mm. or lower. If this be true of previously well patients, it appears plausible that 100 mm. should be the minimum in patients suffering, not from an acute disturbance of nerve-cell action, but from a process of gradual and thorough exhaustion, that leaves no reserve on which to fall back.

Under *anesthesia*, one must consider the regional method, nerve-blocking, especially as a means of diminishing shock. The sub-arachnoid is available for the lower extremity, a half grain of stovain or a grain of tropacocain, introduced between the last dorsal and the first lumbar vertebræ, giving satisfactory anesthesia of the lumbar plexus for lower limb amputations. To this may be added ether, by inhalation, in small quantity—enough to dull consciousness and lessen psychic shock.

In the matter of *control of hemorrhage*, attention is again being paid to the elimination of the circular constrictor, where possible by ligation, preliminary to and incident to operative work. This is due to recognition of the fact that the circular constrictor causes troublesome oozing, a fact well brought out by Frederick Treves, besides being actually in the way in thigh work. At the roots of limbs, nothing can be more sure than the control of hemorrhage secured with the Wyeth pins. Their use is sometimes objected to as involving avoidable traumatism in the transfixion of the tissues, but, in this day of dependable asepsis, this transfixion with a smooth clean pin is of small importance. The postero-intestinal transfixion track, from adductor longus tendon to below the ischial tuberosity, suggests the possibility of infection from the bowel, which is not proven important by actual experience. In the absence of suitable pins, it is feasible to employ constrictors, kept in situation by manual traction, either directly on their ends or indirectly by means of bandages, until the vessels have been divided and ligated before disarticulation.

*The choice of site* is affected by the purchasing power of the patient. If of a class unable to buy artificial limbs, such amputa-

tions as the Syme transmalleolar and the Guyon supramalleolar leave a good, serviceable limb to stump about on. On the other hand, such a stump would be too long for an artificial limb, affording, it is true, a long lever, but leaving insufficient room for an ankle-joint mechanism; here an amputation at the junction of the middle and lower thirds of the leg would be preferable.

In the actual *technics* of the amputation, the deep fascia is preserved in skin coverings, its conservation avoiding the fixation of skin to bone. Where muscle enters into the coverings, this is cut obliquely from the surface toward the bone, the deep fascia being also preserved as a matter of consequence. The management of periosteum and bone is in process of development. The tendency is to avoid section of bone through the marrow canal. If this is cut across, one of the following methods may be employed in its treatment: Bier makes an osteoplastic covering with a chip of bone from the segment to be removed, this chip attached by a periosteal hinge. Binnie covers the bone with a free transplant of bone. Hirsch removes a strip of periosteum 1 cm. wide from the end of the bone. Bunge scoops out  $\frac{3}{4}$  cc. of bone marrow. Ritter covers the bone with fascia, Wilms with tendon.

The handling of the nerve stump is not without variety. Witzel practices high division; Cushing, union of pairs of nerve trunks; Ritter, removal of the center of a nerve, with joining of the edges (wedge-shaped excision, with a suture on each side, would correspond to this), while Bardenheuer turns up the end of the nerve and sews it into the trunk (wedge end into slit).

Blood vessels are generally secured with catgut, usually not chromicized. Muscles and tendons are united with sutures which bring together opposing units—e. g., tendons are sutured over finger-stumps. Vanghetti teaches the fashioning of skin button-holes, which correspond to muscular and tendinous loops; through the button-hole and the loop a cord is passed, by means of which an artificial limb is controlled.

*Drainage* is not direct, but is of the kind termed automatic, or negative, provided for by sewing up with considerable intervals between sutures.

*Aftertreatment* is best conducted along the lines of Hirsch's medico-mechanical method. Under this method, as soon as the wound is healed, massage is applied twice daily, with the application after each treatment of two per cent. salicylic acid in olive oil;

at night the part is bathed in warm sodium carbonate solution. The stump is kept covered with cotton-wool. At the foot of the bed is placed a box, against which the stump is pressed at first for five to ten minutes three times daily, then four times daily, and finally every hour. After each treatment the joints are freely flexed and extended. Later come standing exercises, and at the end of a week a peg is put on.

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## Miscellany.

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### BY THE WAY.

We have had enough of April, and are glad to escape into the depth and quiet of spring's fulness, carrying a handful of books. And before we read let us remember the strikingly appropriate lines of drowsy spring-time and the blooming of the lotus-flower, for

“We have had enough of action, and of motion—clanging fights, and flaming towns and sinking ships and praying hands—some suffer endless anguish, others in Elysian valleys dwell” (have they sought Paris, and the Champs Elysées?) “resting weary limbs at last on beds of asphodel. Propt on beds of amaranth and moly, how sweet (while warm airs lull us, blowing lowly) with half-dropt eyelid still, to watch the long bright river drawing slowly his waters from the purple hill—to hear the dewy echoes calling from cave to cave, and watch the emerald-colored water”—vision which also to Botticelli recalled the beauty of Smeralda Bandinelli! “Surely, slumber is more sweet than toil, the shore than labor in the deep mid-ocean, wind and wave and oar; oh, rest ye, brother mariners, we will not wander more.”

The sensation of nervous satiety, of spring fever and the collegiate cessation of the major rhythm of gaining knowledge gives this time of year a charm, and, at the same time, a suggestion. For all knowledge knows its spring time. And we are aware of moments of unrest in science, and moments of reflection. Therapeutics has always, for us as practitioners, the signal magnitude of both phases. With every epoch, its science has reflected the historical and the psychological, and it has endeavored to interpret, on physical lines, the desire of the ideal. No wonder, then, that among pagans as logical as the Greeks, the medicine invoked deity. Nor that to-day, deity alone is besought to effect cures. The naturalism of the Greek, according to plant and mineral, earth and sky, humanity and

divinity, found nature-study and nature-worship harmonious. The Roman could not abide Greek medicine, and severely returned its science to the repository of slaves, at least during the virile period of Roman government. The life of medicine and its element of love (of the gods) faded, and Galen instituted a series of tinctures whose materials were severely and absolutely regulated by law and the effects of Roman system. To break this down required the double onslaught of the remnant of Greek superstition and logic, and the spiritual perceptions of scholasticism, which represented the recoil of the middle-age passion for heaven as opposed to earth. But just as disease and pain do not belong to heaven, so the disregard of earth was the flaw in charms, incantations, and mystery-play. The categories were dissimilar. And here at least the dictum *dissimilia dissimilibus curantur* was discovered fallacious. It was thus that the eighteenth century, with Lavoisier, began chemical research, and led to Hahnemann Schuessler, the active principle, *la dosimétrie*, and the study of antigeny, antibody and vaccins.

It was in the 1800's, however, that the timid outreachings of this reasoning first came into second conflict with a second trend, the renewal of a spiritual spring-tide in therapy. Not alone in the pure mysticism which characterizes the developments of Jacob Bøhme, but in the outflow of Swedenborg, and all the *decrecendo* to Strindberg, the echoing chords of Norway and Sweden tell their late renaissance in a scientific midnight sun of psychic medicine. It was as natural that New England should react to a similar passion, and this it did in its own way and in the sober pietistic application of natural objects we find the *materia medica* of the aborigines drawn on as God's gift suitable to the ailments which he created with the soil and the climate.

Such a system of therapeutics we possess in the form of a monograph. Lydia Capwell wrote in 1835. In her life as a resident of Massachusetts, in that section known as Cape Cod, where, as a friend and nurse, she had treated and advised neighbor and family for a long while, she had become known with the *réclame* of a successful physician. Her remedies were believed to be exact and dependable, and all united in a demand for her to write down what she knew and give her knowledge to those about her. This generalized sentiment is always significant of the self-loss which looks at the success in another who is perceptibly aging; and we can almost see her gentle but capable face surmounted by graying hair,

and her kind, helpful hands slightly thinned and sunken between the metacarpals, as her associates pressed her to go to the desk and prepare the pages which they wanted to possess.

To us, there is probably no funnier reading than the grave, religious manner of her choice of an herb, given to the Indian, and by him to her, for the "cure" of a cancer.

But Lydia Capwell is never funny. One can only admire the vigor and the intellect which endeavored, in the bleak uncultivated land of Cape Cod, during the days when Beaufort, Charleston, New Orleans, Port Royal, and the brilliant society of inter-European acquaintance flourished, to find in its own way and by the rude, but present means, some control of disease in the destiny of mankind. The characteristic of her mental as well as geographical region was its aloofness from the rest of the world. She knew no use for the "trading-posts" of New Bedford, as Lisbon, Canton, or Calcutta were. Cape Cod was with Boston the universal center, and in reading her monograph one can see that her very simplicity and unaffected decision is that of a ruler (of at least one section of the visible world). The name of the little treatise is the

#### VEGETABLE MEDICAL ASSISTANT.

(prepared for the use of families.)

This she begins with a chapter entitled, rules for Health and Disease. "Being anxious that persons should understand how to avoid the many ills that afflict humanity, and to show them how to proceed with themselves and others when they are afflicted, I have prepared this book. Having had much experience in regard to sickness, and been very successful in the treatment of diseases, I can say with confidence that the course I recommend, if properly followed, may be relied on.

"In the first place, it is very important, in the selection of Herbs or Roots for making medicine, that they should be gathered at the proper season and kept clean. They should be steeped in an iron pot, which should be kept covered while steeping, and then they should be used according to the directions in this book. I feel assured there are roots and herbs sufficient, in this country, if rightly selected and compounded, to cure all curable diseases.

"There are thousands of people now buried under the cold clods of the earth who have been put there by taking too much mineral medicine" (do we remember the antimony and the calomel of her times?). "No morphin, mercury, or laudanum ought to be taken in any case except Quinsy, for they injure the blood—and the blood is the life of mankind."

The "bilious medicine" described in this book will cleanse the blood, and give it its right motion and action. Bleeding is wrong in any case, for it draws off the best of the blood. Emetics ought

not to be taken at all; they weaken the patient. The bilious medicines will be found to answer a much better purpose in removing the bile from the stomach, and will regulate the bowels.

“Food, air, and blood are the life of mankind. It is just as necessary to take fresh air as it is to take food. A feeble person ought to walk or ride every day in the morning, and their food ought to be such as nature requires. Fresh meats are not very healthy during warm weather; sweet ham, salt meat, salt fish and vegetables in small quantities are preferable in summer. A little lamb may be taken. Nothing that is cooked in hog fat should be eaten while hot. Rye hasty-pudding is very good for costive people. Corn-bread is preferable to flour, except in case of diarrhea, in which case no beef-steak should be eaten. Strong tea or coffee must not be drank if you wish to enjoy good health. If any tea is taken, black tea is preferable; if any coffee, let it be rye or barley. No spirits of any kind ought to be taken except as medicine. Worm seed should never be given to children, for it creates worms instead of killing them. Children should not take new milk, for it makes worms and causes humors in the blood.

“In the case of fevers no cold drinks should be given, unless it is first boiled and then cooled (pretty good for 1835). Persons who have a cough should spit out what they raise from the lungs and stomach instead of swallowing it.”

She warns us that humors may break out on the skin, after taking her treatments. She refers to a cure for cancer, and says, guardedly :

“It will cure all that it is recommended to cure in this book. If all persons should take the bilious medicine in the spring of the year they would never have a fever or a cancer. Some do not approve of taking physic; they say it weakens the system. It is not so. In the first place, the stomach and bowels must be cleansed to effect a cure. After taking physic aplenty of water gruel should be taken, and this will keep up the strength. If it operates too powerful, check it with a few drops of peppermint or pargoric. When it has operated sufficiently, the stool will look yellow. Never check it when the stool looks black or green, but keep up the strength of the patient by taking water gruel.”

She warns about gas in sleeping-rooms (charcoal or hand coal vapors) and closes her preface :

“I have been requested by my friends and acquaintances to write this book and leave it behind me for the good of mankind, before I depart this life, and as my long experience in doctoring in my own family, and advising with others, may be of benefit to others, I have complied with their wishes.”

She modestly adds :

“I do not pretend to be learned, but have written this book as nature and experience has taught me.”

But after the fifty pages constituting the body of the work, given to explicit methods of treatment, therapy and pharmacognosy—pages devoted to items of one pound Prince's pine; one pound pine buds, two blood beets, speckled alder, etc., she adds several paragraphs.

“I have now done with the complaints most material to be spoken of in a work of this kind. I think I have laid down a course of treatment for each disease which will be found effectual in curing them; and which will commend themselves to men of common sense; also are satisfied with matters of fact instead of visionary theories and old doctrines that have been worn thread bare and become useless. I have written in plain language rather than in high-sounding words. Technical terms are excluded as unnecessary. I had intended to speak of the various passions associated with humanity, but time and space are wanting; into the remote causes of many diseases; but suffice it to say that excess of fear, joy, anger, jealousy, love, religion (!) grief, gluttony and drunkenness are fruitful sources of disease and death among men and women. Excess in every desire and passion should be avoided. All our desires and aversions become passions when they become too strong to be controlled and moderated by moral sense and reason. Too many medical works have been written which are unintelligible to the common understanding of the people, terms placed by the learned between the reader and the reality of things to conceal the naked poverty and barrenness of the sciences professed by literary (lettered) men. If our education consisted of things and less in a knowledge of mere words than it does, and if the great mass of the people knew how much pains were taken by scientific men to throw dust in their eyes by the use of ridiculous and high sounding terms which mean very little (was Lydia Capwell right?) the learned professor of science would soon lose much of their mock dignity.” (Read the pages of the London “Lancet” in 1840-50. The description of the wards in hospitals in Paris are germane.) “I am the more particular on this subject, not because I wish to lower public opinion respecting the real value of medical knowledge, but because the quackeries which have so long disgraced the practice of medicine ought to be scattered to the four winds of heaven.”

One must admire her rhetoric and justice—two strong forces when combined.

“Medicine is not the only science into which those evils have diffused themselves. Fashion and hypocrisy have attached themselves to religion; pettifogging and dissimulation have crept into the science of law. . . .

“The really valuable materials in medicine, and which are the most powerful in the cure of diseases, are few and simple, and easily to be procured in all countries. My belief is that every country produces, or can be made to produce, whatever is necessary to the wants of its inhabitants. It is by no means probable that an all-wise Creator would create man with wants he could not supply, and subject him to diseases for which there was no remedy to be found in Nature's garden, and in the country and climate of which he is an inhabitant. If such were the

fact, how miserable would be the condition of the human species, constantly harassed by the calls of want which could not be satisfied and afflicted with diseases for which they could find neither the means of alleviation or cure. How did the Indian nations of this country become so populous and powerful, unless from finding the means of supplying their wants, and of mitigating and curing their diseases, on the soil and in the country which gives them birth?"

The author considers botanical and pharmacological objects, and criticizes the tendency of the young to careless regard for the sufferings of man and, especially, of women. And closes with a typical expression in the verses:

“Consider all my sorrows, Lord,  
And thy deliverance send;  
My soul for thy salvation pants,  
When will my sorrow end?”

I know thy judgments, Lord, are right,  
Though they may seem severe;  
The keenest sufferings I endure  
Flow from thy faithful care.”

Even a captious reader cannot find sarcasm in the concluding sentence, although in the Puritanic positiveness he may see a narrowing of the highest in its intellectual subservience.

Before briefly analyzing the *materia medica* of this student, we may feel that, that aside, the author deserves justly a place in the ranks of human philosophers. In plain but exact language, she, as well or better than any of her time and place, has formulated a theory and practice of life. When, to this, we add the science which she has compiled, no one ought to deny to Lydia Capwell a place in the anthology of physicians and natural philosophers. No history of philosophy contains only names of those who founded great systems. She has given freely of much that was useful, and is yet in a historical and critical sense.

The body of the work is divided into practice, with diagnosis and treatment, and a chapter of recipes.

The latter include: Salves for cancer, corns and for lame back; syrups of various sorts; injections and infusions for fevers, dysentery and colic; powders for worms and for piles; etc., etc.

For *cramp*, camphor gum in brandy, marsh turnip added. For a *felon*, weak lye of wood-ash. For hemorrhage, a powder of charcoal and salt, on a cloth wet with rum. For a “child born apparently dead”: First take a shoe from your foot and hold to its nose. Rub the pit of the stomach with your warm hand; blow



lightly into its mouth with a pair of bellows, then put some warm water in a tub and place the child in, back downwards, holding the head out of the water; rub it until it breathes, then take it out and wrap it in a flannel cloth. Give it a teaspoonful of castor oil (! rather a dose). *Insomnia*, nerve-root, valerian, motherwort and hops. *Heart burn*, magnesia and a wineglassful of mullein syrup t. i. d. Avoid charcoal or chalk. *Gout*, bilious medicine, t. i. d., red pepper pads and brandy as a local application. Mullein syrup. Laxatives and diet. *Proud flesh*, burn the sole of an old shoe to a crisp, and pound it fine as flour. Wash the sore with castile soap suds, and spread the powder all over it. Dress the sore, t. i. d., and it will be cured without pain. (Here is one form of epithelial tissue, oxydized, used in treatment of another.) *Cancer wart*, it must be eaten out. To do this pound pigeon berry leaves fine, squeeze out the juice and set in sun until it becomes a salve (they cooked strawberries to a syrup, in this way). Put the pigeon berry salve on a rag and dress the wart; keep there until it all comes out. Then dress with mutton tallow. (Adeps lanæ?) If you are careful it will heal up, is added. Cure for *Red-gum*, elder blows and saffron, to which is added a special gin. Castor oil. In case of *Miscarriage*, the patient will be cold and shivering, attended with faintness at the stomach. If flowing much, wrap in a sheet wet in new rum. Cinnamon in wine. Later, mullein syrup and syrup for universal weakness. *Gravel*, heart-seeds, bitter sweet root, wintergreen. Also syrup for stoppage of water, black birch twigs, wintergreen, Prince's pine, pine buds, pitch-pine, fever bush, blood beets, speckled alder, sweet bay bush, sugar and gin. Hemorrhoids (called *male weakness*), if the parts come down, produced by heats and colds and overworking, apply steeped white oak bark and milk, or motherwort, may-weed and tanzy, also bathe with brandy. Worms, whooping-cough, measles, sore-throat, mumps, chicken-pox, consumption, coughs and colds in males, consumption in females, teething, dysentery, humors in blood, milk-leg, sore breast, sore nipples, rheumatism, lame back, females at turn of life, bilious colic, quinsy, peripneumony, pleurisy, cholera, cholera morbus, ear-ache, sore eyes, corns, enlarged prostate (male weakness), jaundice, white swelling of throat, dropsy on brain of child, fever, cancer, foreign bodies in ear, nose or throat, heart-ache, these are described and treated.

One condition "when the wheel rolls too fast" and several forms of weakness are delicately, even obscurely referred to, but the

treatments are clarifying. The dangers of sequelæ in pertussis are given. Pettamorrel is used.

The materia medica includes, licorice, life-everlasting (for phthisis), may-weed, peach-tree and cherry-tree gum, sweet fern, camomile, sassafras, yarrow, white beans, senna, and molasses.

Cancer is treated with a simple method: use olive oil on periphery and drops of turpentine in center, until it falls out: Then apply soft *beeswax*, according to the Indian method described. Wash clean frequently as it runs, with a lotion of *catnip*. If near the eye, use a tea of sweet-bay as a drink. Pound a piece of green copperas and "wet it with the spittle"; place in a cloth and apply at night. Then use narrow dock leaves. A tar dressing is later given.

To cure decline in females (if black-eyed, on the change of the moon; if blue-eyed, on the full) put the feet in hot water on going to bed. Then may-weed syrup. Riding and walking is desirable.

The quaintness of all these *minutiæ* cannot be described, only the original could be enjoyed as it should be.

What do we care, if a tinge of astrology, of theology and of Galenical philosophy is seen as a streak in the solid vein of good sense and native humor. Time does not allow a more extended reference, and at the door of May let us conclude with the treatment of her May-weed.

Among the "originals" of this civilization along the Atlantic, surely one such as Lydia Capwell deserves some niche (if not that of Poe's Helen, classic, too) which she may dignify with her lamp of science! [R.]

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## CORRESPONDENCE.

To the Editors NEW ORLEANS MEDICAL AND SURGICAL JOURNAL:

Gentlemen—Your May number (p. 947), reporting the meeting of the State Medical Society, in my discussion of Dr. Hatch's paper on the treatment of sclerosis, makes me claim to have brought the "Abbott method" to New Orleans. As this is entirely at variance with my discussion, which did claim the introduction of the "*Forbes method*," am sending you an abstract of what I did say, and request its publication. Yours truly,

J. T. O'FERRALL, M. D.

"This is a subject that is of intense interest to me, because I am doing that sort of work entirely, and I want to claim credit for having intro-

duced the Forbes method in New Orleans. At the same time, as Dr. Hatch told you, this work has been done for four years, and it is now an appropriate time for us to make a few comparisons and see really what has been accomplished in regard to this new treatment.

“Dr. Adams, of Boston, with whom I had the pleasure of working for over a year, and of doing quite a number of cases with him, has during his investigations found that the average case of scoliosis is due to a malformation of the articular processes, especially of the inferior processes of the last lumbar vertebra, whether it be the fifth or sixth. His theory is that of a tripod. We have the body of the vertebra and the two inferior articular processes as a tripod, on which the body rests, and at the age of puberty the angle of lordosis of the girl, especially, is increased considerably. Normally it is about thirty degrees of the horizontal, and when they attain this age it usually increases to forty or forty-five, and at that time this farformed articular process slips forward. In other words, it is similar to a short, a long or a loose leg of a camera. It slips forward and dislocates itself partially on the sacrum, which gives us the lumbar curve and compensatory curve.

“In one case Dr. Adams and I went in on this last lumbar vertebra and resected a part of a very wide articular process, and then, by putting the patient in a Forbes jacket, she was very easily corrected, showing that there was a bony block there to the tortion of the spine.

“The committee which Dr. Hatch mentioned, in regard to the investigation of these methods, was made up of three of the best orthopedic men in this country—Dr. Freiberg, Dr. Silver and Dr. Osgood. And, after investigating all these cases, they found that Dr. Abbott’s method was the better one in his own hands, and that all the other investigators had failed, but that the Forbes method, in the hands of Forbes and Adams and others, had certainly accomplished a larger percentage of improvement than Abbott, and that the method in his his own hands had not given all complete cures.”

# N. O. Medical and Surgical Journal

## Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

### COLLABORATORS.

- H. D. BRUNS, M. D., Surgeon-in-Charge Eye Department, Eye, Ear, Nose and Throat Hospital, New Orleans.
- E. M. DUPAQUIER, M. D. (Paris), Prof. of Contagious Dis., Tulane Univ. of La.
- A. G. FRIEDRICH, M. D., New Orleans, La.
- J. T. HALSEY, M. D., Prof. of Pharmacology and Therapeutics, Tulane Univ. of La.
- JOSEPH HOLT, M. D., Ex-President Louisiana State Board of Health, New Orleans.
- FELIX A. LARUE, M. D., Prof. of Operative Surgery, Tulane Univ. of La.
- E. S. LEWIS, M. D., Emeritus Prof. of Obstetrics and Gynecology, Tulane Univ. of La.
- OTTO LERCH, M. D., Prof. of Medical Diagnosis, Tulane Univ. of La.
- R. CLYDE LYNCH, M. D., Prof. of Diseases of Ear, Nose and Throat, Tulane Univ. of La.
- E. D. MARTIN, M. D., Prof. of General Surgery, Tulane Univ. of La.
- RUDOLPH MATAS, M. D., Prof. of General and Clinical Surgery, Tulane Univ. of La.
- AUGUSTUS McSHANE, M. D., Lecturer on Diseases of Ear, Nose and Throat, Tulane Univ. of La.
- PAUL MICHINARD, M. D., Prof. of Obstetrics and Gynecology, Tulane Univ. of La.
- C. JEFF MILLER, M. D., Prof. of Obstetrics and Clinical Gynecology, Tulane Univ. of La.
- F. W. PARHAM, M. D., Prof. of Surgery, Tulane Univ. of La.
- A. W. DEROALDES, M. D., Surgeon-in-Chief, Eye, Ear, Nose and Throat Hospital, New Orleans.
- E. A. ROBIN, M. D., Prof. of Diseases of the Eye, Tulane Univ. of La.
- EDMOND SOUCHON, M. D., Curator Museum of Anatomy, Tulane Univ. of La.
- J. A. STORCK, M. D., Prof. of Diseases of the Digestive System, Tulane Univ. of La.
- ROY M. VAN WART, M. D., Lecturer on Diseases of the Nervous System, Tulane Univ. of La.

### THE LEPROSY PROBLEM.

The consideration of leprosy by the local medical society is opportune. Just twenty-one years ago the same Society, the Orleans Parish Medical Society, discussed Louisiana leprosy, and so effectively that the voice of its membership forced a legislative action which brought about the Louisiana Leper Home, not only the first modern provisions for leprosy in the United States, but, in its organization and operation, a model for the rest of the world.

The work with leprosy in Louisiana created a general interest in the subject in the United States, and has indirectly occasioned more

or less scientific discussion at various gatherings of medical men, meeting during the past twenty years.

Brinckerhoff studied the Louisiana Leper Home before beginning his researches at Molokai, and Heiser has repeatedly credited the Louisiana institution and its medical staff with the ideas which have governed his administration of leper colonies in the Philippines; more than this, Heiser has declared that the treatment inaugurated at the Louisiana Home has been productive of better results in the Philippines than any other, and, further, that the latest treatment successfully essayed by him (Chaulmoogra oil, resorcin and camphorated oil by subcutaneous method) was inspired by the good results by the above treatment, expediency alone dictating a modification.

It is a grateful reflection, in reviewing the leprosy problem in the world, to know that Louisiana has set the model for human care, successful therapy and adequate legislation, and that these attributes have received credit everywhere.

We are not much advanced in either the bacteriology or serology of leprosy. Hansen's bacillus remains as the *causa morbi*, but as yet of doubtful cultivability. The sera and vaccins have gone the way of all such early essays, and as yet no treatment has reached the point of specificity.

The segregation of leprosy now, as in medieval times, offers the present solution to its control, and in segregation there is always afforded the opportunity to work out new lines of investigation, aimed at a cure.

The Federal Government of this country will more than likely take over the whole question for the United States, as soon as the bill now before the Senate may have been passed.

The importance of leprosy among reportable diseases owes its main interest to the popular and traditional horror of a disease which makes such grotesquely awful victims, and which in so large a percentage goes to fatal issue, the terminal stages of the disease presenting types which are hardly recognizable as human beings. When leprosy is universally treated, more and more cases should be cured; when a specific remedy for the disease is found, effective in most cases, then segregation will not be necessary.

**JUNE IN SAN FRANCISCO.**

June will be a great medical month in San Francisco. The calendar for meetings is pretty well filled and the physician who will leave home for a medical review could do no better than take these in and incidentally include the Expositions at San Francisco and San Diego.

June 14-16, The American Society of Tropical Medicine meets.

June 18-19, the Climatological and Clinical Association meets.

June 17-21, the Pan-American Medical Congress meets.

June 20-21, the American Proctologic Society meets.

June 21-25, the American Medical Association meets.

June 25-28, the American Academy of Medicine meets.

The diversity of pabulum can hardly be estimated, and the interest must be great in figuring out just what particular part of each of these meetings will apply to the individual who may attend.

A large effort is being made by each association to have an attractive program and on every hand there is the assurance that the Exposition itself is well worth a visit.

The usual summer hegira to Europe will fail this year for obvious reasons and the physician with scientific inclinations yearning for travel can have an excellent chance to see America first, going and coming from the Pacific coast and ad interim.

It is appropriate, too, that there should be a medical program during the Exposition period. There was projected a rather ambitious celebration for the medical side of the Panama Canal achievement, which fell through, but even the gathering of medical men in force, like the "silent toast," may convey some idea of tribute to those who have died martyrs to tropical medicine and of honor to those who have accomplished as much, and who yet survive. The memorial exercises planned by the A. M. A. during a part of one day's session will additionally dignify the occasion.

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**THE PELLAGRA OUTLOOK.**

Already the annual outbreak of pellagra has commenced and views and reviews are now in order. The last two years has developed more confusion than ever, for, prior to two years ago, the corn theory was rather prevalent and while the burden of proof rested with the zeists, they nevertheless had the most votes. Theories of various sorts have come up and Goldberger's Savannah experiments

have been somewhat contradictory of the findings of the McFadden Commission at Spartanburg, South Carolina. The latter certainly should carry more weight, for the reasons that the observations were made over a longer period and they were made in the field. Coincidences are common with endemic diseases and there may be much more than mere feeding to account for Goldberger's results. Already some physicians, inclined to follow his lead, have observed disastrous consequences by abandoning all medicines and depending almost entirely on feeding pellagrins.

There now stand out the diet theory of Goldberger, the colloidal mineral water content of Alessandrini and Scala, and the insect borne contagium of Sambon, supported by the laboratory work of Harris and others, who have reproduced the disease in monkeys from successively derived filterable viruses, apparently carrying an ultra microscopic organism or organisms.

The progressive nature of the disease, leading from the mucous membranes to the serous membranes of the body, with a catarrhal process, argues for the initial focus of the disease in the intestinal tract and probably associated with, if not due to, the intestinal flora. We have no similar, so far, due to the intestinal toxins of chemical origin, if we except erythema multiforme, which runs a different clinical course.

Besides, aside from Goldberger's and Alessandrini and Scala's contentions, the results in treatment all point to the retirement of a toxin before antiparasitic remedies, among which arsenic, hexamethylenamin, vaccin, quinin, the citrates, etc., stand in favor. The periodicity of the disease is a factor of some importance in contravention of a diet theory, and particularly when the disease occurs among those able and accustomed to indulge in a liberal provision of food.

The rank and file of the profession are yet unsophisticated in pellagra and many of them grasp at any new suggestion offering a way out of a growing problem. The very diversity of opinion among those who should have the right to an authoritative opinion makes matters worse. It would seem wisest at this juncture to coördinate all of the treatments so far advised and let the patient survive if he can. Anyway, it is best to meet the indications, and leave the theorists to bear the final responsibilities of their opinions.

## THE PLAGUE STATUS.

It should be a matter of pride to the profession and to the people of the United States that it possesses a health service which is able to demonstrate such magnificent efficiency as it has done in New Orleans within the twelve months just past.

The brief summary shows an unequalled achievement.

Not only has plague been checked, but New Orleans has been largely proofed against another visitation and incidentally the city has been cleaned up in such a fashion as to educate every citizen in the necessity for continued pride in his premises.

Up to May 1, 1915, 32,924 buildings has been ratproofed, representing some fifty per cent. of the whole city and the work is still going on.

The last case of human plague was reported on October 4, 1914, and the last case of rodent plague was recorded on May 6, 1915. A grand total of 334,664 rodents had been captured and of these 243,079 were examined for plague with a finding of 236 rodent cases (*Mus musculus*, 4; *Mus rattus*, 16; *Mus norvegicus*, 208; *Mus alexandrinus*, 8).

This only presents some phases of the undertaking of the Public Health Service, for all ingoing and outgoing vessels were subject to inspection and sanitation as well as all freight and the carriers thereof.

With all of this operation, there was a quiet discipline which overcame all local prejudices, bearing the usual captious critics, and the support of all classes of citizenry was afforded throughout.

Meanwhile there was at no time any interruption in traffic or travel and the ancient panic in times of epidemic was notable for its absence.

The State of Louisiana and the City of New Orleans have purchased an improved sanitary State at a minimum of cost and at an expenditure which when summed up will be seen to be a small fraction of that paid in final accounting in any one year of former yellow fever experience, when in life and business the tax was always fearful and almost beyond calculation. We may be slow to realize and to appreciate the value of the service rendered by the Public Health Service, but our debt will only grow as time passes and until we are made to see what has been done. Even now we may, for ourselves, say a word of thanks, knowing how little this expresses the obligation laid.



## Medical News Items.

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THE AMERICAN PROCTOLOGIC SOCIETY will hold its seventeenth annual meeting at San Francisco on June 21 and 22, 1915. The headquarters will be at the St. Francis Hotel and the place of meeting the Civic Auditorium. The profession is cordially invited to attend all meetings.

AMERICAN UROLOGICAL ASSOCIATION.—The annual meeting of this association was held in Baltimore on April 13, 14 and 15, under the presidency of Dr. William E. Lower, of Cleveland. The following officers were elected: Dr. Edward L. Keyes, Jr., of New York, president; Dr. E. C. Smith, of Cincinnati, vice-president; Dr. C. L. Sanford, of Cleveland, secretary; Dr. James A. Gardner, of Buffalo, treasurer. St. Louis, Mo., was chosen as the next meeting-place.

THE MISSISSIPPI STATE MEDICAL ASSOCIATION met at Hattiesburg on May 11, 12 and 13, 1915, under the able presidency of Dr. J. L. Ullman, of Natchez. The meeting was largely attended, and proved to be a notable medical and social event. New Orleans was represented by a strong delegation, composed of Drs. R. Matas, J. B. Elliott, Jr., C. Jeff Miller, E. Denegre Martin, Oscar Dowling, Carroll W. Allen, Elizabeth Bass, Adolph Henriques, and P. J. Carter, who contributed valuable papers and discussions to the various sections. Dr. Matas also delivered the annual oration, selecting for his subject, "The Soul of the Surgeon," after which he was given an impromptu reception on the stage. Greenville was selected as the meeting-place for 1916. The following officers were elected: President, I. W. Cooper, of Newton; vice-presidents, W. H. Scudder, Mayersville; J. W. Lucas, Moorhead, and W. L. Orr, of Fulton. Councillors—Third District, C. M. Hurry, Ripley; Fourth District, F. J. Underwood, Nettleton; Ninth District, J. C. McNair, Fayette. Members of the State Board of Health—S. W. Glass, Lyon; T. F. Elkin, Tupelo; S. E. Eason, New Albany; J. H. Johnson, Brookhaven, and T. H. Seay, Laurel. Delegate to the American Medical Association, which meets in San Francisco, Dr. J. S. Ullman, of Natchez. The indefatigable and popular secretary, Dr. E. F. Howard, of Vicksburg, remains at his post.

WASHINGTON UNIVERSITY DEDICATES NEW BUILDINGS.—Dr. Rudolph Matas, who attended the dedication as the representative

of Tulane University, has returned with the degree of Doctor of Laws conferred upon him at the dedication exercises, in recognition of his original contributions to surgery. Among the guests who also received the honorary degree of LL. D. were: Presidents Lowell, of Harvard; Vincent, of Minnesota, and Hill, of the University of Missouri; Drs. Abraham Jacobi, of Columbia; Wm. H. Welch, of Johns Hopkins; Clittenden, of Yale; Porter and Folin, of Howard; Goldwater, of New York; Wille, of Christiana. The academic exercises were most brilliant and impressive. Delegates from almost all the great universities and institutions of learning in this country and of several foreign universities were present. The new buildings mark the completion of a group of structures that cost \$3,500,000, and put St. Louis in the front rank of medical centers in America. The buildings were made possible through the public spirit of prominent citizens of St. Louis, headed by Robert Sommers Brookings, who personally gave more than a million dollars to the great enterprise. President Brookings is one of those generous and enlightened men of wealth who firmly believes that "public health is public wealth," and that protection against disease can only come through the highest efficiency and scientific training of the medical profession. Dr. Matas, on his return from St. Louis, was agreeably surprised at the action of the senior medical class of Tulane, who presented him with a set of congratulatory resolutions on the occasion of his receiving the LL. D. degree from Washington University. The resolutions were presented in an appropriate and feeling speech by Dr. Clarence Bergheim, who acted as the spokesman of the class. The resolutions were signed by a committee consisting of Messrs. C. K. Townsend, K. G. Kinkead and R. B. Gardner, who voiced the sentiments of their comrades for their distinguished teacher. The clinic was interrupted for a few minutes, during which Professor Matas expressed his hearty appreciation, and in return his affection and interest in the class.

AMERICAN ACADEMY OF MEDICINE.—The fortieth annual meeting of this organization will be held in San Francisco, June 25 to 28, under the presidency of Dr. John L. Heffron, of Syracuse, N. Y. All the sessions will be held in the Auditorium Hall of the Panama Pacific Exposition, with the single exception of the social session, which will be held in St. Francis Hotel. Dr. Woods Hutchinson and Dr. David Starr Jordan will be the speakers on the first day

of the meeting. Dr. Jordan's address will be on the "Relation of Medicine to the Peace Movement." For further information regarding the meeting, and for hotel accommodations, write the secretary, Dr. Charles McIntire, Easton, Pa.

THE AMERICAN MEDICO-PHYSIOLOGICAL ASSOCIATION held its seventy-first annual convention at Old Point Comfort, May 13-15. The delegates to the convention visited in a body the Hampton Normal and Agricultural Institute and watched with interest the Indian and negro classes in manual training. The invitation extended by representatives of New Orleans to meet next year in that city was accepted.

ST. LOUIS COLLEGE OF PHARMACY.—The commencement exercises of the St. Louis College of Pharmacy were held on May 19, 1915, in Sheldon Memorial Auditorium. The valedictory address on behalf of the faculty was delivered by Arthur E. Bostwick, Ph. D., librarian of the St. Louis Public Library.

LOUISIANA NEEDS CONSUMPTIVE HOSPITAL.—At a meeting of the Central Council of the Louisiana Anti-Tuberculosis League, held on May 13, the erection of a hospital for tuberculosis patients in advanced stages was strongly advocated. The number of patients applying at the league's clinic in New Orleans is increasing constantly and rapidly, and the situation has become such that a separate hospital for advanced cases is greatly needed. Steps in this direction will be taken by the league. Resolutions thanking the police department of the city for the benefit for the league were adopted. The reports of the progress of Camp Hygeia and the results obtained there were most encouraging and satisfactory.

FRENCH VITAL STATISTICS.—The vital statistics of France for the first half of 1914 have been recently published, and show the following record: There were 2,000 fewer marriages, 4,000 more births, and 20,000 more deaths during that period than during the corresponding period of 1913. During this time the net diminution in the population of France was about 17,000.

WANT COLLEGES BOYCOTTED.—According to report, the New England Antivivisection Society wants parents to boycott the colleges of Wellesley and Mount Holyoke, because these colleges insist upon having all freshmen entering vaccinated.

GIFT TO WESLEY HOSPITAL OF CHICAGO.—Mr. James Deering, of Cleveland, Ohio, has given \$1,000,000 for the endowment of Wesley

Hospital of Chicago, with the provision that it shall be a teaching hospital under control of Northwestern University. The gift has been made in memory of Mr. Deering's father and sister.

HOSPITAL DISCOURAGES "TWILIGHT SLEEP."—The authorities of the Michael Reese Hospital, of Omaha, Neb., have announced, after an experience of about forty obstetric cases treated by the scopolamin-morphin anesthesia, that they will not use this method in labor except with the express guarantee of the patient that the hospital shall be free from all liability as regards ill results to the mother or the child.

POLICE AFTER QUACKS.—The police in one afternoon recently rounded up forty-three irregular and advertising practitioners of medicine in New York City—some licensed to practice and others not—and held them for examination as lawbreakers. Many of them were associated with "anatomical museums" or "medical museums." The police closed these places as constituting public nuisances.

DR. DANNA HONORED.—Dr. J. A. Danna, formerly house surgeon of the New Orleans Charity Hospital, has had conferred upon him the title of "Knight of the Crown of Italy." The decoration of chevalier was presented to Dr. Danna by Chevalier Carlo di Papini, vice-Italian consul at New Orleans. This honor comes to Dr. Danna in appreciation for what he has done for the Italian poor of the city and in recognition of his scientific work. A banquet was tendered Dr. Danna by his Italian friends on the occasion of his decoration.

EXAMINATION, LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.—This examination will be held at the Hutchinson Memorial, 1551 Canal street, June 3, 4 and 5, 1915. Applications may be obtained at the office of the secretary, 716 Machecha Building. The schedule for the examination is as follows: First Day—8:50 a. m. to 10:50 a. m., chemistry; 11 a. m. to 1 p. m., anatomy; 2 p. m. to 4 p. m., physiology; 4:10 p. m. to 6:10 p. m., materia medica. Second Day—8:50 a. m. to 10:50 a. m., gynecology; 11 a. m. to 1 p. m., surgery; 2 p. m. to 4 p. m., pathology; 4:10 p. m. to 6:10 p. m., obstetrics. Third Day—8:50 a. m. to 10:50 a. m., theory and practice of medicine and physical diagnosis; 11 a. m. to 1 p. m., hygiene.

PUBLIC HEALTH SERVICE EXAMINATION.—Boards of commissioned medical officers will be convened to meet at the Bureau of

Public Health Service, 3 "B" street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass.; New York, N. Y.; Chicago, Ill.; St. Louis, Mo.; Louisville, Ky.; New Orleans, La., and San Francisco, Cal., on Monday, June 21, 1915, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the bureau. Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work. Candidates must be not less than 5 feet 4 inches, nor more than 6 feet 2 inches in height, with relatively corresponding weights. For invitation to appear before the Board of Examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

INFORMATION FOR PERSONS DESIRING TO ENTER THE MEDICAL CORPS OF THE UNITED STATES NAVY.—A candidate for appointment in the Medical Corps of the Navy must be a citizen of the United States, between 21 and 30 years of age, a graduate of a reputable school of medicine, and must apply for permission to appear before a Board of Medical Examiners. The application must be in the handwriting of the applicant, and must be accompanied by the following certificates: (a) Letters or certificates from two or more persons of good repute, testifying from personal knowledge to good habits and moral character; (b) a certificate to the effect that the applicant is a citizen of the United States; (c) certificate of preliminary education: the candidate must submit a certificate of graduation from an accepted high school or an acceptable equivalent; (d) certificate of medical education: this certificate should give the name of the school and the date of graduation; (e) if the candidate has had hospital service or special educational or professional advantages, certificates to this effect, signed by the proper authorities, should also be forwarded. The applicant will save unnecessary correspondence if he will make sure when submitting his application that the qualifications enumerated above are clearly and plainly described in his letters or certificates. A candidate whose qualifications are satisfactory will receive a formal

permit to present himself for examination. Examining Boards are usually in session at the following naval stations: Washington, D. C.; Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; Norfolk, Va.; Charleston, S. C.; Great Lakes (Chicago), Ill.; Mare Island, Cal.; Puget Sound, Wash. These boards conduct the preliminary examination. After examination, the successful candidates are appointed assistant surgeons in the Medical Reserve Corps, and if so recommended are subsequently assigned to duty, with full pay and allowances, in attendance upon a course of instruction at the Naval Medical School, Washington, D. C. This course begins annually about October 1, and lasts about six months. Upon the completion thereof the student officers are given their final examination and, if found qualified, are commissioned as assistant surgeons in the regular Medical Corps of the Navy. The next examination will take place about July 6, and applications should reach the Bureau not later than June 26, 1915. The entrance examination for the Medical Corps thus consists of two parts—the preliminary, prior to appointment in the Reserve Corps, and the final, after assignment to duty at the Naval Medical School. The pay of assistant surgeon is \$2,000; that of surgeon, from \$3,300 to \$4,000, with various allowances for quarters, etc.

**TYPHUS RAMPANT IN SERBIA.**—According to a report from the Rockefeller Foundation War Relief Commission recently made public, 25,000 to 30,000 persons were suffering from typhus in Serbia, and that this and other epidemics were “swiftly enveloping the entire nation.”

**PLAGUE IN HAVANA.**—The latter part of April three cases of bubonic plague were discovered in Vedado, Havana's most fashionable residence district. These cases are the first discovered outside the region in the lower part of the city contiguous to the wharves and docks.

**UNVACCINATED NURSES VICTIMS OF SMALLPOX.**—Because of failure on the part of a Chicago hospital to have all the nurses vaccinated, the *Bulletin* of the Chicago School of Sanitary Instruction says:

“This week, for the thousandth time or more, a reason was presented for the consideration of those who desire to escape a disease that is easily preventable. A Chicago hospital with a training school for nurses neglected the formality of having all the nurses vaccinated. An un-

recognized case of smallpox came in contact with these nurses, and three were taken to the isolation hospital suffering with smallpox. All the nurses in the hospital had been vaccinated except the three who contracted the disease. These never were vaccinated, and were not required to be vaccinated when they entered the nurses' training school."

**EXAMINATION FOR PHYSIOLOGIST.**—An open competitive examination for physiologist has been announced by the United States Civil Service Commission, to fill a vacancy in the Dairy Division Bureau of Animal Industry, Department of Agriculture, Washington, D. C., with a salary of \$2,500 to \$3,000 a year. The examination is for men only, and is to be held June 8. Those who desire to enter should apply to the United States Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Boards at the cities at which examination will take place.

**SYNTHETIC FOOD.**—Production of food materials to take the place of those the enemy will not let them have, is the work upon which the German chemists are devoting their energies. Not long ago they proposed to make bread from straw, and now it is announced that a process has been invented at the Institute for Fermentation Industry at Berlin whereby albumin can be made from sugar and ammonium sulphate.

**CIGARETTE LEGISLATION.**—Wisconsin has had a bill introduced into its Legislature providing that no educational institution of any kind, supported in whole or in part by public money, shall employ teachers who smoke cigarettes, and that no such institution shall grant a diploma or certificate of education to any one who smokes cigarettes.

**HOSPITAL FOR DRUG ADDICTS.**—A hospital for the care and treatment of sufferers from the drug habit will shortly be under construction. A site on Riker's Island has been chosen. This has been made possible by a fund of \$6,000 subscribed by a number of women in New York.

**LOYOLA COLLEGE OF PHARMACY GRADUATES.**—Twenty-six graduates of the New Orleans College of Pharmacy, affiliated with Loyola University, were presented with diplomas on May 14. After a most interesting program was completed, dinner was served at the Old Hickory restaurant for the graduating class, members of the faculty and the reception committee. Those receiving diplomas were;

Leonce J. Aucoin, Rene J. Bienvenu, Mertie M. Bloom, Alvin S. Brizzard, Leon Aloysius Gabrol, George D. Comeaux, Fred. Rufo Crosby, W. Elmo Doucet, Edgar E. Ewing, John Robert Germany, Harry Goldstein, Antonio M. Gonzales y Falcon, Oden J. Lonibos, Manuel Lopez y Quintana, Eloi L. Melanan, Guillermo Perez y Pena, Robert Lane Pollock, Laurence Rappleye Rolling, Miss Anna Barbara Schneider, T. A. Scott, Miss Verona E. Stumpf, J. Warren Tarbox, Eugene Waldemar Vogt, George R. Welsh, Harold B. Williams, Hypolite Rene Xiques.

THE MASSACHUSETTS COLLEGE OF PHARMACY extended an invitation to the JOURNAL to attend the commencement and class day exercises on May 20 at Convention Hall, Boston.

PERSONALS.—Dr. J. Wofford Sanders, of New Iberia, La., was elected president of the police jury of that city.

Dr. G. Farrar Patton (New Orleans) is convalescing from an attack of grippe, which left him with an affection of the middle ear, and necessitated a mastoid operation.

Dr. Morton Paul Lane (New Orleans), who several months ago went to Serbia to serve as assistant physician in the American Red Cross, has returned to his post, after a short vacation in this country.

Brigadier-General Carroll A. Devo, Q. M. C., U. S. Army, has been detailed for service as general manager of the American Red Cross.

Prof. C. E. A. Winslow, formerly assistant professor of biology at the College of the City of New York, and curator of public health at the American Museum of Natural History, New York City, has been appointed to the Anna M. L. Lauder professorship of public health in the Medical Department of Yale University.

Dr. Theodore J. Dimitry has been appointed oculist for the New Orleans public schools. Dr. Dimitry will leave on June 1 for a stay of a few months in the East.

REMOVALS.—Dr. J. Z. Wise, from Benton to Crichton, La.

The *Medical Economist*, from 898 Park avenue to 140 A Floy street, Brooklyn, N. Y.

Dr. P. E. Waddell, from Alexandria to Natchitoches, La.

Dr. James F. Duncan, from Bonham, Texas, to Yoakum, Texas.

*Denver Medical Times*, from 1839 Champa street, Denver, Colo., to 138 North Center street, Reno, Nevada.

Dr. J. W. Powell, from Turton to Webster, South Dakota.



**MARRIED.**—On April 15, 1915, Dr. Rowland Howard Peak to Miss Florida Emma Joor, both of Baton Rouge.

On April 23, 1915, Dr. W. J. Gilbert to Mrs. Bertha Wilkin, both of New Orleans.

**DIED.**—On May 13, 1915, Dr. J. B. Daughtry, of Brookhaven, Miss. Dr. Daughtry was one of Brookhaven's pioneer residents and citizens and mayor of that city for many years.

On May 14, 1915, Dr. I. T. Rand, prominent physician of New Iberia, La., aged 49 years.

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## Book Reviews and Notices.

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*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.*

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**A Text-Book of Diseases of the Nose and Throat**, by D. Braden Kyle, A. M., M. D. With 272 illustrations, 27 of them in colors. Fifth edition, thoroughly revised and enlarged. W. B. Saunders Company, Philadelphia and London, 1914.

Dr. Kyle's book has long been recognized as one of the foremost standard works on diseases of the nose and throat. From the very beginning, Kyle had treated these affections in their relation to the general system, and has thus emphasized the point that a specialist should have a good, broad knowledge of general medicine.

The arrangement of his text is particularly to be commended, for it shows unity of design in pathology and etiology as well as in treatment. The entire work has been revised. The technic of tonsil surgery has been brought up to date. His chapter on vaccin-therapy in infections of the accessory sinuses is concise, but very valuable. Some cases of sinusitis refuse all operative intervention, and in such cases the specialist need not feel that he is in a hopeless plight. A successful application of this treatment calls for a fair knowledge of bacteriology and other matters on the part of the physician. While the field of application is not yet fully determined, we can find abundant grounds for hope in any chronic sinusitis that resists ordinary treatment, and in which there is a pure culture of the infecting micro-organism, and in chronic ethmoidal supuration that does not heal after exenteration.

We are glad to welcome this new edition of a valuable work, and bespeak for it a continuance of the favor that it has always enjoyed.

McSHANE.

---

**Urinary Analysis and Diagnosis**, by Louis Heitzman, M. D. Third revised and enlarged edition. William Wood & Co., New York, 1915.

This edition is a considerable improvement over the former editions.

The author has attempted to bring the work up to date. It does not include some of the more complicated tests, but includes all of those practical in any except the best equipped laboratories.

The several different tests for obtaining the same information are given, and the reader is left to choose for himself.

The clinical indication of various findings are discussed, and the book will be found especially valuable for the general practitioner, most of whom need suggestions as to what to test or examine for and what the significance of the urinary findings is. BASS.

**Infection, Immunity and Specific Therapy**, by John A. Kolmer, M. D.,  
Dr. P. H. W. B. Saunders Company, Philadelphia.

This is the best and most complete work of its kind that has come to the reviewer's attention. There are 813 pages of well-written text, in which the fundamental principles of infection, immunity, specific serum tests, specific reactions and specific therapy are plainly set forth. The technic for the many serum tests is stated in the very best way and is easily understood.

In the last part of the book the author has arranged a series of sixty exercises, consisting of 112 experiments in experimental infection and immunity. These are complete and well suited to the requirements of the advanced student.

I recommend this book most highly to all students of medicine and physicians who would inform themselves upon this important and, we may say, necessary part of medical knowledge. BASS.

**Diabetes Mellitus.** Designed for the Use of Practitioners of Medicine,  
by Nellis B. Foster, M. D. J. B. Lippincott Company, Philadelphia  
and London.

This book begins with a short, readable chapter on "Normal Metabolism." The "Sources of Glucose in the Animal Body" follows, and a goodly chapter it is. Next comes a chapter on "Experimental Glycosuria." After a brief review of the "puncture diabetes" of Claude Bernard, there is some consideration of the work of Eckhard, Pflüger, Mayer, Macleod, Blum, Herter, Kraus, Eppinger, Hirayama, Falto, Rudinger, Neubauer, Von Mering, Minkowski, Pratt, Sandmeyer, Virchow, Bouchardat, Frerichs, Lancereaux, Lépine, Sauerbrück, Cohnheim, Forschbach, Hedon, Zübzer, Marcens, Underhill, Grey, von Noorden, Zuntz, Grube and Lusk.

The importance of acidosis is recognized in a chapter of twenty-two pages. "Pathogenesis" comes next; then "History," closely followed by "Etiology." The importance of "pathology" is emphasized in a fair chapter, reference being made to the best work in this direction. "Symptomatology" required a chapter of thirty-two pages. "Renal Diabetes" is given scant two and a half pages. "Diagnosis and Considerations Which Affect the Course of the Disease" follows; then comes a chapter on "Total Metabolism in Diabetes," and next the chapter of "Treatment," which is the largest in the work, covering forty-five pages. The final chapter, on "Identification of Sugars," is thoroughly practical. The index follows.

Dr. Foster has given us a readable and practical book. STORCK.

## MORTUARY REPORT OF SHREVEPORT.

Computed from the Monthly Report of the Board of Health of the City of Shreveport for April, 1915.

	Resident				Non-Resident				Total
	White		Colored		White		Colored		
	M.	F.	M.	F.	M.	F.	M.	F.	
Typhoid Fever.....	.....	.....	1	.....	.....	.....	.....	.....	1
Intermittent Fever (Malarial Cachexia).....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smallpox.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria and Croup.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenza.....	1	.....	1	.....	1	.....	.....	.....	3
Cholera Nostras.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pyemia and Septicemia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis.....	.....	.....	5	3	3	2	2	.....	15
Cancer.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheumatism and Gout.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diabetes.....	.....	.....	.....	.....	1	.....	.....	.....	1
Alcoholism.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Encephalitis and Meningitis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor Ataxia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions of Infancy.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of Infancy.....	2	.....	.....	.....	.....	.....	.....	.....	2
Tetanus.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Nervous Diseases.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heart Diseases.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bronchitis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia and Broncho-Pneumonia.....	4	2	1	2	.....	.....	1	.....	10
Other Respiratory Diseases.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulcer of Stomach.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of the Stomach.....	1	1	.....	1	1	.....	.....	.....	4
Dysentery.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhea and Enteritis, under 2 years.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhea and Enteritis, over 2 years.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hernia, Intestinal Obstruction.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cirrhosis of Liver.....	1	.....	.....	.....	.....	1	.....	.....	2
Other Diseases of the Liver.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Simple Peritonitis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Appendicitis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bright's Disease.....	1	1	.....	.....	.....	.....	.....	.....	3
Other Genito-Urinary Diseases.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerperal Diseases.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Senile Debility.....	2	.....	1	.....	.....	.....	.....	.....	3
Suicide.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Injuries.....	.....	.....	.....	1	.....	1	1	.....	3
All Other Causes.....	.....	.....	.....	.....	.....	.....	.....	.....	49
Total.....	.....	.....	.....	.....	.....	.....	.....	.....	96

Still-born Children—White, —; colored, 1. Total, 1.

Population of City (estimated)—White, 24,000; colored, 16,000. Total, 40,000.

Death Rate per 1,000 per Annum for Month—White, 9.60; colored, 20.00. Total, 13.75.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for April, 1915.

CAUSE.	White	Colored	Total
Typhoid Fever.....	3	5	8
Intermittent Fever (Malarial Cachexia).....			
Smallpox.....			
Measles.....			
Scarlet Fever.....	1		1
Whooping Cough.....			
Diphtheria and Croup.....	5		5
Influenza.....	11	10	21
Cholera Nostras.....			
Plague.....			
Pyemia and Septicemia.....			
Tuberculosis.....	39	66	105
Syphilis.....			
Cancer.....	18	14	32
Rheumatism and Gout.....			
Diabetes.....	7	1	8
Alcoholism.....	1		1
Encephalitis and Meningitis.....	3	2	5
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	15	11	26
Paralysis.....	4	1	5
Convulsions of Infancy.....	1	1	2
Other Diseases of Infancy.....	19	6	25
Tetanus.....	2		2
Other Nervous Diseases.....	10	2	12
Heart Diseases.....	61	31	92
Bronchitis.....	4	3	7
Pneumonia and Broncho Pneumonia.....	24	44	68
Other Respiratory Diseases.....	2	1	3
Ulcer of Stomach.....	4	1	5
Other Diseases of the Stomach.....	1	2	3
Diarrhea, Dysentery and Enteritis.....	14	11	25
Hernia, Intestinal Obstruction.....	2	3	5
Cirrhosis of Liver.....	2	3	5
Other Diseases of the Liver.....	3	4	7
Simple Peritonitis.....		1	1
Appendicitis.....	3	1	4
Bright's Disease.....	27	16	43
Other Genito-Urinary Diseases.....	10	8	18
Puerperal Diseases.....	6	5	11
Senile Debility.....	1	2	3
Suicide.....	3		3
Injuries.....	18	23	41
All Other Causes.....	18	12	30
<b>TOTAL</b> .....	<b>343</b>	<b>290</b>	<b>633</b>

Still-born Children—White, 19; colored, 19. Total, 38.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1,000 per Annum for Month—White, 15.13; colored, 34.46. Total, 20.36. Non-residents excluded, 17.73.

## METEOROLOGIC SUMMARY (U. S. WEATHER BUREAU).

Mean atmospheric pressure ..... 30.07  
 Mean temperature..... 69.  
 Total precipitation ..... 0.04 inches  
 Prevailing direction of wind, southeast.

*Paullum sepulta distat inertia Celata Virtus.*

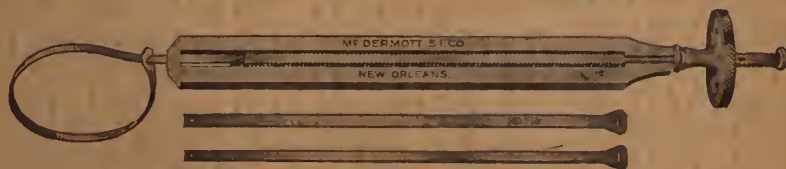
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ESTABLISHED 1844

EDITORS:—Chas. Chassaignac, M. D., and Isadore Dyer, M. D.

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Band fits snug around any unevenness of the bones. Especially useful in the treatment of oblique fractures. Fragments of bones are held perfectly in place after bands have been adjusted.

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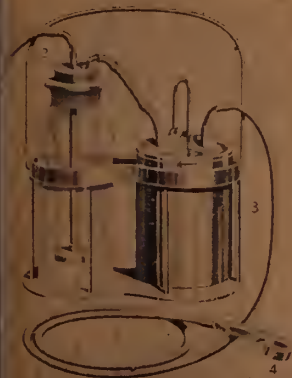
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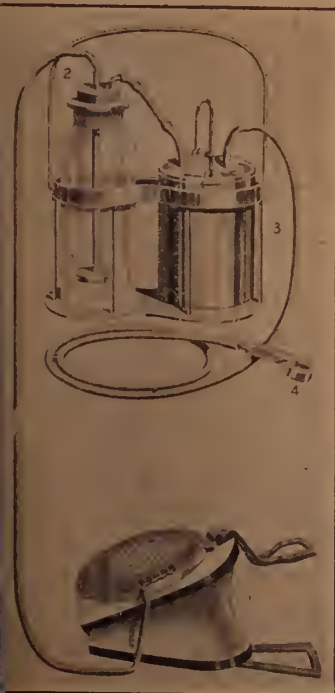
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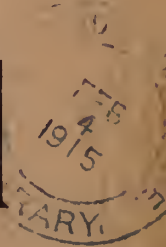
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