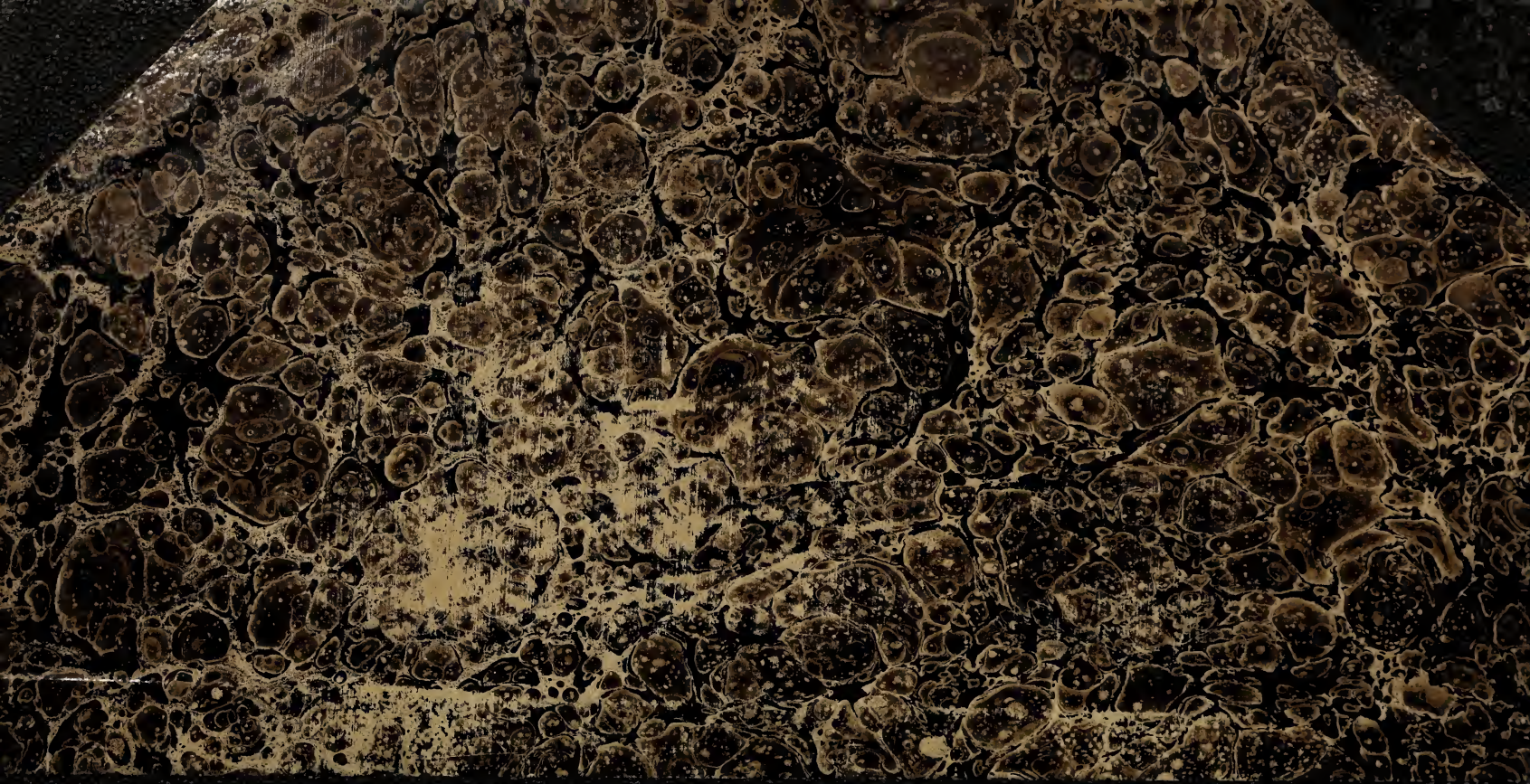

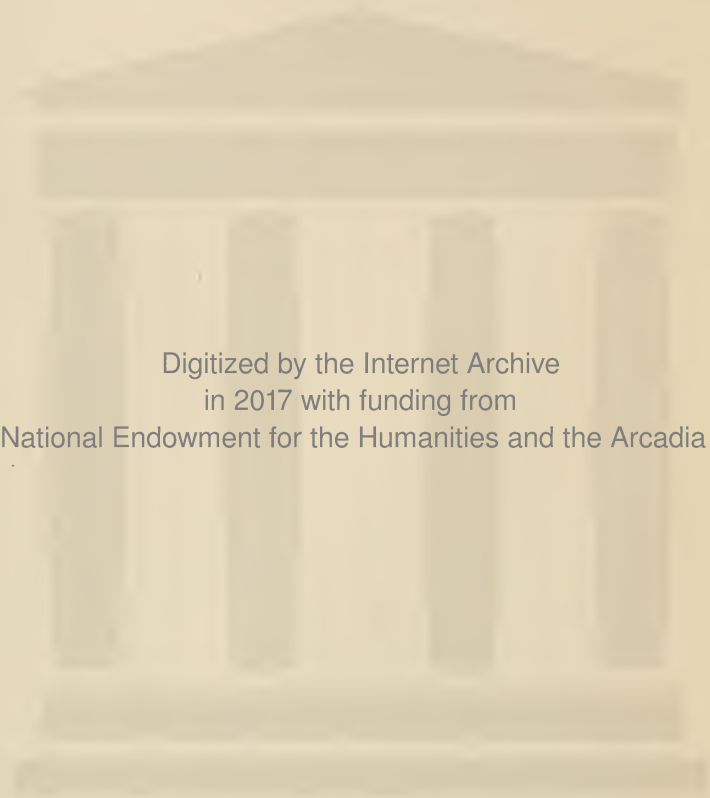

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NEW ORLEANS
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JULY, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompanies the paper.

On Circular Enterorrhaphy and its Rapid Performance With Easily Improvised Catgut Rings.*

By RUDOLPH MATAS, M. D., Visiting Surgeon Charity Hospital, Instructor in Clinical and Operative Surgery and Applied Anatomy, New Orleans Polyclinic, Etc.

The frequency of gangrene of the intestines from hernia; of gunshot and other injuries, and of diseased states of the intestines calling for their resection has always taxed the ingenuity of surgeons and called upon the resources of their art to restore the divided bowel to its functional and structural integrity. That the successful accomplishment of this result has been fraught with considerable technical difficulty is perhaps best illustrated by the fact that over forty different methods have been described and advocated for the performance of circular enterorrhaphy, and that notwithstanding this large number of procedures the tendency at present is still to seek for improved methods of performing the same operation, showing that up to the present there has been room for modification and improvement. Since abdominal surgery has become the surgery of the day, owing to the fact that the *surgical* opening of the peritoneum has lost its terrors, the sugeon has recognized

*Summary of remarks delivered by the writer while demonstrating the operation of enterorrhaphy before the meeting of the Louisiana State Medical Society, at its session in New Orleans, April 10, 1889.

many indications for his interference in intestinal diseases, which were unknown to, or ignored by, his predecessors. Consequently, the frequency of intervention in diseased states of the bowel has much increased, and the demand for *safe* and *ready* methods of suturing the gut has likewise risen. Leaving out of consideration the historical procedures which have marked the comparatively modern evolution of the "technique" of *circular* intestinal suture, I believe the surgeon of the day has offered to him for selection several procedures which may be fairly, but generally divided into two classes, viz.: 1. The simple stitch methods, and 2, the aided stitch methods. Among the pure stitch methods we may mention as the later and most prominent, Bishop's shoemaker stitch,* Halstead's plain quilt stitch† and the better known, though older, Lembert suture, (1825). These are all excellent methods of suturing, in so much as they meet one of the most important indications of the operation, i. e., approximation of the serous surfaces, obtaining thereby security from fecal extravasation by prompt plastic union. The last, the Lembert suture, if applied by the improved and excellent method described and beautifully illustrated by Greig Smith, in his Abdominal Surgery, 2d Ed., 1888, combines with simplicity and security a certain degree of celerity which none of the other simple stitch methods can equal, and consequently combines a number of positive advantages which surgeons have not been slow to perceive and popularize. It is probable that the surgical mind would have rested satisfied, for some time at least, with the Lembert suture as the simplest, safest and readiest method of uniting the divided intestines, had not the more recent additions to gastro-intestinal surgery, based upon the principle of anastomosis, called again into activity the ingenuity of surgeons, who realized that the Lembert and other simple

*E. Stanmore Bishop, F. R. C. S., on Enterorrhaphy, *Manchester Medical Chronicle*, page 448, volume 1, 1885. September.

†Circular Suture of the Intestine; an experimental study, by William S. Halstead, M. D., *International Journal Medical Sciences*, October, 1887.

stitch methods of securing the lateral approximation of the intestines in this operation were entirely too tedious, too slow for the time-saving demands of abdominal surgery. The successful results obtained by the greatest laparotomists of the century has positively demonstrated that, other circumstances being equal, time saving means life saving in matters peritoneal, and that celerity, as well as simplicity and security, is a positive and essential desideratum for the successful performance of intestinal as well as other abdominal operations.* For this reason, the introduction of the absorbable bone plate, as an aid to intestinal suture in making anastomotic communications between the intestines, by Prof. Nicholas Senn of Milwaukee,† was, from the moment of its presentation to the profession at the Ninth International Medical Congress, held at Washington, Sept. 5, 1887, rightfully regarded as one of the most permanent and beneficial additions that have been made in recent times to the surgical therapeutics of intestinal diseases.

From that moment it started a new period in the history of enterorrhaphy, thereby separating the comparatively slow and *unaided* simple stitch methods from the rapid and *aided* stitch method. Senn's bone plates or discs are now generally known to the profession, and it will not be necessary to describe them. The efficiency of Senn's discs has now been too often demonstrated, both experimentally and clinically, to require for them more than a simple allusion as a most valuable and time-saving device in the performance of intestinal anastomosis.

Senn's brilliant idea had barely time to crystallize and the full merits of its conception generally realized by the profession when the surgical mind, ever progressive and

* "Time plays an important factor in determining the results of all operations requiring abdominal section, and this is especially true in all operations for intestinal obstruction, as this class of patients are usually greatly exhausted before consent for an operation can be obtained. With a patient exhausted from an acute attack of obstruction of the bowels. it becomes exceedingly important to consume as little time as possible in the operation, as the shock incident to a long operation may itself determine a fatal result." N. Senn; vide following reference:

† "An Experimental Contribution to Intestinal Surgery, with Special Reference to the Treatment of Intestinal Obstruction," Annals of Surgery, p. 264, etc., vol. vii, 1888; and also the more recently issued (1889) and most valuable work by the same author, entitled: "Intestinal Surgery." Chicago: W. F. Keener.

on the alert for possible improvements, found a still easier and readier application of the "Senn principle," if I may so term it, than that originally devised by its illustrious projector. I refer to the very late modification recently proposed by Dr. Robert Abbe of New York, in a report on a case of "complete obstruction of the colon successfully relieved by using Senn's plates. A proposed substitute of catgut rings," (*New York Medical Journal*, March 23, 1889), by which catgut rings are substituted for the original bone plates of Senn. The reasons which justify this modification are plainly stated in Dr. Abbe's paper, and will be apparent to any one who has used the decalcified bone plates or tried to make them and used them on dogs or on the human cadaver. These objections may be summed up as follows: 1. The bone plates are not always at hand, especially for those who are not hospital surgeons, and they cannot be quickly improvised, and at best are not easy to procure; 2. The size and the lumen of the plates is always constant and is at best narrow and cannot be easily adapted to particular cases and the varying size of even the normal intestine; 3. If the ring is not thoroughly decalcified it may not be absorbed, and may give rise, in turn, to obstructive symptoms; 5. Finally, if these objections hold for the plates in anastomosis, they are particularly emphasized whenever an attempt is made, as I have tried, to employ them as approximation plates in circular enterorrhaphy, where a large lumen is particularly desirable.

The specimens that I exhibit and the illustrations which accompany these remarks will make more plain the mode of application and the difference between the original Senn plate and its proposed substitute.

The bone plate is decalcified by a maceration in a dilute 10 per cent. solution of hydrochloric acid for two or three days, and then washing half a day and compressing between blotting pads, with flat pieces of tin on either side until quite dry, "which is a slow process at best." They

warp if not tightly compressed. An oval opening has then to be cut or drilled in the plate, as well as openings for threads. Finally threads have to be secured, by a scheme not easy to carry out, which connect each with the other.

On the other hand, the rings suggested by Abbe are made of the heaviest catgut, softened in hot water until it ceases to twist upon itself. "It is then formed into a ring of four strands, on the ends of three fingers, and wound over and over with the same sized gut tightly applied. When completed it is stiff and flat, with no disposition to curl. The threads are quietly and simply adjusted around the ring and insure its making a firm pressure until it has dissolved in the bowels. Six silk threads may be attached to the larger rings, leaving an outer space of three quarters of an inch. Each thread should be armed with its own needle, in order to save time." The plan and construction of the ring is certainly very simple and elegant, and when already prepared perfectly meets the purposes for which it is intended, provided, of course, it is adapted in size to the particular intestine to which it is applied.*

It will be plain, therefore, to all who are interested in the subject, that the proposed substitution of ready made catgut rings, already experimentally successful, in the able hands of Dr. Abbe is a good one, and will contribute very largely to the general understanding and application of the the "Senn principle" as contradistinguished from the pure, unaided stitch methods, which are destined to be completely superceded by the former method in performing either lateral anastomosis or circular enterorrhaphy.

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*Since writing the preceding remarks a second very interesting paper by Dr. Abbe, entitled, "Intestinal Anastomosis," and read by him before the Philadelphia County Medical Society, May 8, 1889, has appeared in the *Medical News* of June 1, 1889. In this paper additional improvements in the construction of the catgut ring are described which render this ring, when made, practically perfect; but the advantage that is gained by the elegance and finish of the ring is lost in the longer time needed for its manufacture. So that constant and regular sizes can only be used, and these must be prepared beforehand. These rings cannot be prepared *impromptu* while a case is being operated, and thus the adaptability of a ring to a particular case is lost. The aim of the present writer is, as will be seen further on, to obtain perfect *security* with *rapidity* of preparation, so that with material on hand the surgeon may wait safely for the emergency to arise to prepare his rings, these being prepared in a few minutes and readily adapted to the special case to be treated.

Having thus pointed to the advantages of the approximation bone plates of Senn in enterorrhapy, and the still greater advantages offered by Abbe's catgut ring modification, I now submit to you a preparation which was made in the anatomical rooms of Tulane University a few minutes ago. It is another illustration of the application of the Senn principle, i. e., the utilization of approximation rings in the performance of *circular* enterorrhapy. Please note this, the rings are here applied to expedite and secure the union of the ends of the *resected* bowels. In this instance the transverse colon has been selected for the demonstration, an imaginary diseased portion having been excised. This operation differs essentially from that of simple anastomosis, in which the diseased portion is allowed to remain, and the communication or fistula between the intestines is obtained by lateral approximation of the edges of openings, cut into each gut, and not by direct inosculation or confrontation of the resected ends of the intestine. In the specimen before you circular enterorrhaphy is demonstrated, and it has been accomplished in very few minutes, as several of the physicians who are attending my course in the Polyclinic can attest. Moreover, in obtaining this result, I have utilized Dr. Senn's principle, though I have substituted catgut rings—not of the Abbe model, however—for the bone plates. Now if you will examine this joint, made in the intestine, you will doubtless agree that the union of the two ends is certainly satisfactory; the approximation is accurate and the serous surfaces have been brought in contact over a large surface; furthermore, there is no leakage, as I have had an opportunity of testing it with water under considerable pressure just before coming here. Consequently, in so far as the application of the rings to circular enterorrhaphy is concerned, it is demonstrated on this preparation, as well as many others that I have made, that it is perfectly feasible, and, what is more, decidedly advantageous, as with the assistance of catgut rings, the operation

of circular enterorrhaphy is enormously expedited and chances of recovery are no doubt proportionally increased. Even in the best hands, the Lembert suture, the quickest and the easiest of the simple stitch methods, will consume at leat thirty-five minutes to one hour and longer * if the operator is not skilled in this kind of work, while with the assistance of the catgut trings it can be performed thoroughly and leisurely in ten or fifteen minutes and less. The advantages, therefore, of such an innovation are not to be spurned, but must be seriously considered.

It is remarkable, however, that the discovery of the bone discs, or at least their modification in catgut rings, should not have suggested their great value in the performance of circular as well as lateral enterorrhaphy. This may be accounted for perhaps by the very satisfactory results obtained by Prof. Senn in this operation by substituting the invagination suture of Jobert to circular enterorrhaphy. The quick mind of Prof. Senn did not fail to realize the slowness and defects of the Lembert, and in the memorable monograph to which I have frequently referred he forcibly points out these objections and describes a very valuable modification of the Jobert invagination suture by which this old, but excellent operation is relieved of its more serious objections, and made quite available and acceptable as a technical procedure. By this modification, for the description of which I must refer you to the author's writings (loc. cit.), a simple stitch invagination procedure is transformed into an aided-stitch operation, aided by stitching rubber rings to the intussuscipiens. As modified by Senn it is unquestionably superior to the ordinary Lembert suture, and is at present one of the very best methods of realizing circular enterorrhaphy, combining, as it does, a certain degree of celerity with security. So satisfactory has this method proved in the author's

*"Even after I had acquired a fair degree of manual dexterity in suturing the bowels I seldom spent less than an hour in making a circular enterorraphy by a double row of sutures." Senn. (Loc. cit.)

hands, in his experiments on dogs, that he has good reason to rest satisfied with it.*

I have practiced this improved method in the cadaver quite often, and, while admitting all its merits, I cannot but believe that it is still inferior to circular enterorrhaphy as performed with catgut approximation rings, both in point of celerity as well as security.

I feel almost certain that further clinical experience will reduce the difficulties of circular enterorrhaphy to the easy level of the modern operation of anastomosis.

Dr. Abbe has also applied the approximation catgut rings to lateral enterorrhaphy or anastomosis, but thus far, if I understood him rightly, has not indicated their applicability to circular enterorrhaphy. (Loc. sit., *New York Medical Journal.*)

I hope, therefore, that this demonstration will have some effect in calling attention not only to the decided value of the "Senn principle," but to the wider field of application than that which is at present assigned to it, and especially to the recognition of its time-saving advantages in performing the otherwise tedious and time consuming operation of *circular* enterorrhaphy.

The steps by which the operation is performed can best be understood by demonstrating them, and it will be admitted that the way in which the rings secure the apposition of the intestines is to say, the least, simple. But before proceeding with the actual demonstration allow me to return for one moment to the construction of the approximation ring itself, which, as you see, is neither the bone plate of Senn or the catgut ring of Abbe.

Ever since Senn's method of securing an anastomosis of

*The recent paper by Mr. Bowerman Jessett: "Observations on Intestinal Surgery" (Transactions Royal Medical and Chirurgical Faculty of London, March 12, 1889, *London Lancet*, March 16, 1889), which I have read since delivering the preceding remarks, emphatically confirms the superiority of Senn's modification of the Jobert suture over the ordinary Lembert enterorrhaphy. By comparing the results of experiments on dogs, the Lembert method showed a mortality of 86.6 per cent., as against 24.99 per cent. when performed by the Senn-Jobert method. Lateral enterorrhaphy or anastomosis gave the low mortality of 7.63 per cent. when performed with Senn's discs. Surely a most eloquent tribute to the solid worth and imperishable value of this investigator's innovations.

the intestines by the aid of his bone plates was described in the proceedings of the Ninth International Medical Congress, held in Washington, in September, 1887, I have experimented with various materials that might be substituted to decalcified bone in the manufacture of the plates, so that a material more easily obtained and adapted to each particular case could be substituted. I have tried rubber and leather rings, gum catheters shaped into rings (ingeniously suggested by one of my students) which even, if not absorbed, could find their exit out of the intestine without great difficulty. At the recent congress of American Physicians and Surgeons held at Washington, September, 1888, I had the pleasure of seeing the application of the bone plates demonstrated by the eminent investigator himself. And while I did not think then of a material ideally better than decalcified bone still the thought lingered that some substance more readily procurable and manageable and equally efficient should be sought for.

After my return I devoted considerable thought to the subject, as it was frequently brought before me in teaching and discussing cases with students. It was not until last February, however, while making some purchases in a music store that I saw some coil of thick catgut cord such as is used in making the strings of the bass violin and more particularly in making drums—"drum snares"—that I was forcibly struck with the adaptability of this thick catgut to the needs of circular enterorrhaphy. Here, I thought, was the ready made and best stuff with which to make approximation rings, which could be substituted for Senn's plates. I immediately purchased a coil (5 cents per foot) and applied it to my purpose.* The ring which I now show you is the same as the one which I then made and have since frequently tried on the cadaver.

As you see, this cord ("drum snare") is made of twisted

*Various catgut strings used in the bass violin may be utilized for this purpose though they are all thicker than the drum snares, and consequently, I believe, less advantageous. Strings G, thinnest, D, medium, and A, thickest, are all made of pure catgut, and may be purchased at prices varying from 60 cents to $1.25, according to the thickness of the string.

catgut and measures about 12 milimetres in circumference, so that it is quite resisting and will not be softened or digested prematurely. The advantages that I believe can be claimed for this material are, that it is easily procured; that it requires no preparation beyond that of cutting it to the desired length prior to immediate application; that it is very cheap; that it is readily digested; and that it can be easily and promptly adapted to the needs of any special case—a rather important consideration, in view, especially, of the varying condition of the intestines.

In making these rings all that is needed is to cut the material just long enough to make it into a ring of the desired length, so that after the cut ends are approximated the ring will fit easily into the divided gut. In order to secure a joint of the cut ends so as to maintain the oval shape of the ring and to prevent overlapping, the free ends of the cord are fitted into a piece of small drainage tube (No. 1), which, being a little narrower than the "snare-gut" itself, clasps it firmly and prevents it from slipping apart. In order to prevent any possible escape from the grasp of the drainage tube, the only precaution needed is to tighten a fine silk thread over the drainage tube at each end of the catgut string (see Fig. 1). The ring is thus readily made, and all that is needed to complete it is to attach to it four or six milliners' needles with threads five or six inches long. These are tied at equidistant points of the oval or circle, as shown in accompanying diagram. Though these rings can be prepared at a moment's notice, it will be well to have several regular sets of them in hospitals, though this is not necessary, as the rings can be prepared *impromptu*. For the large intestines rings 7 centimeters in maximum length (about 2⅝ inches) will be useful, while rings with a long diameter of 5 centimeters, or about 2 inches, will do best for the small intestine.

Having thus prepared our approximation rings and understood the principle of their application, we should not find great difficulty in understanding the technique of

the whole operation of circular enterorrhaphy, as I will now briefly describe it:

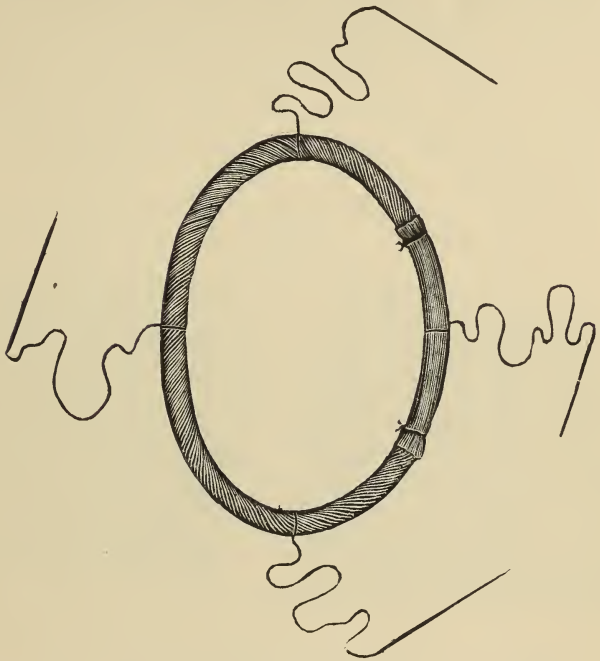

FIG. 1.—SOLID CATGUT RING JOINED WITH DRAINAGE TUBE.

After abdominal section and exposure of the parts to be excised, the diseased intestine is cut away, the mesentery being divided as close to the bowels as possible, no wedge-shaped portion being removed. Two Makins' clamps (vide Greig Smith, Abdominal Surgery, 2d Edition, p. 464), or any other clamp well protected with rubber drainage tubes, or the sterilized fingers of an assistant, are applied at a distance of about three to four inches from the divided ends of the intestine, due care being taken not to contuse the delicate bowel coats by the exercise of injudicious pressure. A catgut ring, armed with its needles (if the large intestine is being dealt with, six needles are preferable, if the small, four,) is now slipped into the ends of the divided intestine and pushed in at least ¾ or 1 inch

beyond the free end, so that the cuff of intestine will completely overlap and hide the ring within its lumen.

Each one of the needles is now made to transfix the entire thickness of the cuff-like flap of intestine in front of it, so that when all the needles have been passed through they will hang by their threads from four equidistant points, which will correspond to their respective attachments to the ring.

The same procedure is adopted with the other ring and the other divided portion of the intestine, attention being paid to the accurate confrontation of the opposed needle openings.

After each end of the intestine is transfixed by the needles and the threads which hold them to the ring are well drawn, it will be noticed that the intestinal serous surfaces will be readily brought in apposition, the thread of one side corresponding to that of the other. The opposed threads are now tied carefully and knotted and cut close, thus ending the fundamental part of the operation.

A fine milliner's needle, threaded with correspondingly fine white sublimated or iron-dyed silk, should now be passed through the serous and areolar coats of the intestine in the manner of a continuous running stitch. This suture, which closely unites the opposed surfaces of the intestine, can be very quickly applied once the rings are in place, as they furnish a firm basis upon which the operator can readily catch the serous surface with his needles. This suture should be carried all around the gut, and should be closely sewn, so as to secure a perfect and water-tight joint for the divided intestinal tube.

From the above account, confirmed by the illustration (Fig. 2), it will be noticed that the suturing demanded by this method of circular enterorrhaphy is of two kinds. First, rapid approximation of a sufficient extent of serous surface by means of catgut rings, these being fixed in coaptation by what could be called complete transfixion sutures, i. e., by threaded needles attached to

the rings. Second, a continuous "glover's" suture, which completes and perfects the work of approximation and secures the *close* and *safe* intestinal joint. (Vide fig. 3.)

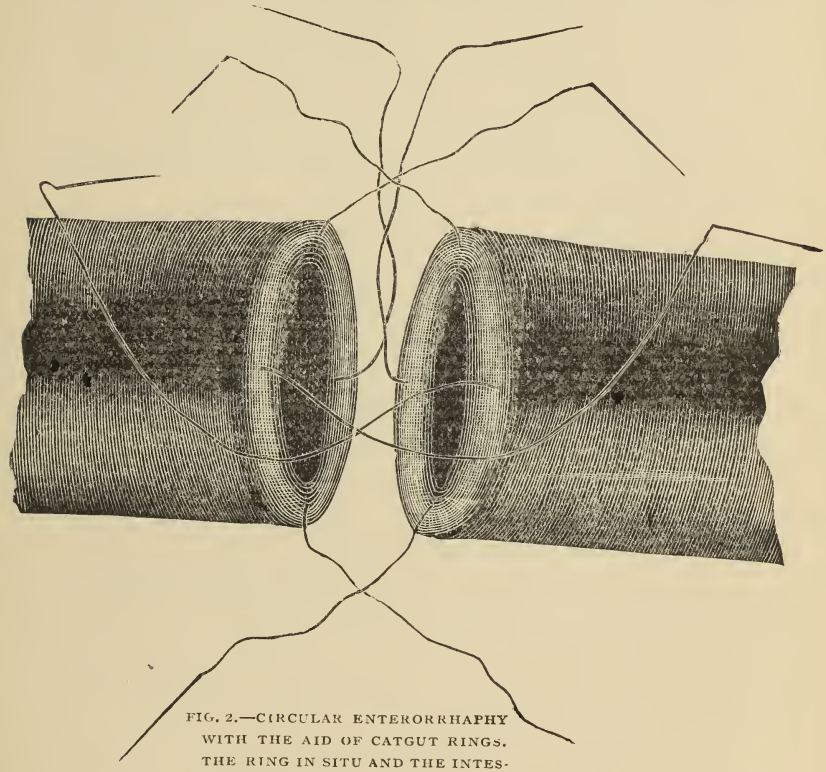

FIG. 2.—CIRCULAR ENTERORRHAPHY WITH THE AID OF CATGUT RINGS. THE RING IN SITU AND THE INTESTINES IN CONFRONTATION.

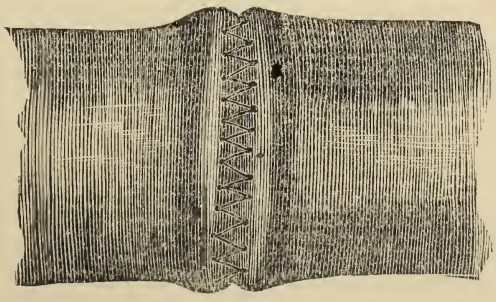

FIG. 3—CIRCULAR ENTERORRHAPHY WITH THE AID OF CATGUT RINGS; LAST STAGE OF OPERATION. COMPLETE APPROXIMATION WITH THE CONTINUED SUTURE AFTER ADJUSTMENT OF RINGS. THE SUTURE IS SHOWN DIAGRAMATICALLY.

When the suturing is completed there is no risk of extravasation. Of the truth of this assertion I am satisfied by frequent experimentation on the cadaver, the united intestine resisting an internal hydrostatic pressure, which will rupture the muscular coat of the intestine. I do not know, however, that the value of the approximation rings has yet been tested *clinically* in circular enterorrhaphy.

Fear has been expressed by some that minute extravasations might take place at the complete transfixion points made through the intestine with the needle attached to the rings by the escape of the intestinal contents alongside of the threads, but this fear is dispelled not only by clinical experience and experimentation, but by the well known fact that plastic exudation about all such punctures takes place in a few hours after the operation, completely sealing the perforation. Furthermore, it is manifest that the ring itself, which is held tightly behind the opening, will completely obturate it on its most exposed side.

Not fearing this danger, owing to the perfection with which the suture is made, I have not referred to the additional protection against extravasation offered by the transplantation of an omental graft, originally suggested by Prof. Senn.

Finally, I would present the following conclusions from the preceding considerations:

1. In performing circular enterorrhaphy the modern surgeon has offered to him for election: (a) the simple *unaided* stitch methods, and (b) the supported or aided stitch methods.

2. That the introduction by Prof. Senn of the decalcified bone plates as aids to enterorrhaphy immediately threw the weight of technical advantage on the side of the "aided"—or, better, "ring—stitch" methods in at least one enterorrhaphy operation—that of anastomosis.

3. That the principle of bone disc support in anastomosis has suggested an improvement over the bone disc in the shape of "Abbe's catgut rings," and the solid catgut

ring independently applied by myself, which, in addition to other advantages, have the very decided one that they can be readily adapted to the wants of circular enterorrhaphy, thereby greatly facilitating this last operation, and thus establishing the decided technical superiority of the aided, and specially, the ring-stitch methods, as I would call them, to the older simple stitch procedures.

4. That the decided practical advantages of the rings in the application of the "Senn principle" to circular enterorrhaphy is apparently overlooked by the latest investigators, and it is one of the aims of the writer to demonstrate the larger field of application of this principle (ring-stitch approximation) than that to which it is usually restricted, this principle being equally applicable to *circular* as well as *lateral* enterorrhaphy (anastomosis).

5. That while regarding the catgut ring introduced by Dr. Abbe as the most elegant and perfect substitute for Senn's plates thus far introduced, the writer believes that his catgut ring, made of the material known as "drum snare," and applied by him to meet the needs of *circular* enterorrhaphy and *anastomosis*, independently of other experimenters, will be found most readily applicable at the operating table, owing to the promptness with which it can be constructed and can be made to meet the special demands of particular cases.

Jaborandi as a Parturifacient.*

By N. P. Moss, M. D.

The fact that diaphoresis indisputably exercises a favorable influence over the progress of labor, first suggested to Dr. Jerome Hardcastle the applicability of jaborandi in obstetrical practice. Impressed with the success attending its employment in his hands, I determined to test for myself the value of this drug in a few suitable cases occurring in my practice. The result has been only confirmatory in character and always most gratifying. The phenomenon of

*Read before Attakapas Medical Association.

diaphoresis is readily induced, and close in its train follow a rapidly dilating os, with prompt relaxation of the soft parts and a consequent favorable termination. In support of the claim made for it I will recite my own experience with jaborandi. Although limited it is still another link in the chain of evidence.

Case 1.—August 26; patient aged 30 years; colored; had been in labor 18 hours when first seen by me and no progress was being made. Examination disclosed head presentation in first position; rigid, unyielding cervix; os dilated to size of a quarter dollar; pains strong, but ineffectual. Administered fl. ext. jaborandi, gtt. xx, three times at intervals of 30 minntes. No perceptible change in condition until 15 minutes after last dose had been taken, when parts were found materially relaxed and head was felt to descend a little lower during a pain. Patient complained of being very weak when first seen, and now assured me she could no longer "help herself," and in spite of every encouragement offered was fast despairing. Former experience had taught me the value and efficiency of sulphate of quinine as an ecbolic, so at this juncture administered 6 grains in 2 capsules, and within 30 minutes strong expulsive efforts were inaugurated with very gratifying result. The casus belli proved to be a fine, healthy looking female child. Mother made good recovery.

Case 2.—Oct. 2; Mrs. S. A., æt. 30 years, white, and of small stature. Third labor. Both of previous ones very long and difficult. When seen at 8 P. M. had been in labor twelve hours. All of amniotic fluid had been lost before my arrival. Only grinding and inefficient pains for first six hours. Became regular and stronger at 7 P. M. Examination at 8 o'clock disclosed os externum patulous to about the size of a silver dollar, and, with the exception of its immediate margin, the cervix was fairly relaxed. A hard, unyielding cordon occupied the site of the os-uteri, and forcible pressure attending pains now were causing excruciating suffering.

Administered twenty drops fl. ext jaborandi with but very slight change in condition in the thirty minutes following. Thirty drops more of the preparation, however, so far contributed to relaxation of the neck that in another half hour the head readily passed this point and labor soon terminated with nothing more untoward. Afterbirth followed entire. Resorted to chloroform inhalation during last few expulsive pains, consuming in all but half an ounce of this drug.

Case 3.—White, aged 25 years. Second labor. The first had been very tedious and followed by retained placenta. Saw patient at 10 P. M. First pain was felt at 4 o'clock. Labor not expected for three weeks to come, and undoubtedly uterine contractions were induced by strenuous exertion required to run a heavy sewing machine since early morn. Pains from onset occurred quite frequently, but were not at all forcible, and from 8 to 10 o'clock patient says she grew perceptibly weaker. Woman was young, stout and vigorous. On examination found a moderately dilated os, but with very rigid margin. A goodly portion of water had been lost. As pains began to lessen steadily in frequency and intensity administered a 5-grain dose of sulphate of quinine. Within a half hour effect was evident, and matters began to take on new life. A repetition of the quinine salt thirty minutes later furnished the desired reinforcement, but now the difficulty proved an inadequacy of relaxation, and good strong expulsive efforts met with no compensation in the face of an obstinate, unyielding os. Here, then, was presented a typical indication for jaborandi, and at 12:30 the first half drachm dose was administered. In twenty minutes was gratified to find a much more favorable condition of the parts, and another dose of the jaborandi was closely followed by a fully dilated neck, and a rapid passage of the head; and at 1:45 an 8-pounder was presented to the world. A half hour later, with some difficulty, caused ex-

pulsion of the placenta after Crédé's method. Patient made a very satisfactory recovery.

In neither of these cases did jaborandi appear in anywise either to affect the regularity or intensity of the expulsive act; and in my own mind the cause and effect in the cases reported are too closely and clearly related to doubt the instrumentality of the jaborandi employed.

It is important to add that the *green* fluid extract only is to be relied upon, the *brown* preparation having proved worthless in the experience of Dr. Hardcastle.

Gentlemen, it has been with a desire of bringing more fully before the profession the merits of this practically unknown parturifacient that I have addressed you at this time, and I recommend the utility of jaborandi in this particular connection as being well worthy of your earnest consideration.

Hospital Reports and Clinical Notes.

FATAL CASE OF FLOATING KIDNEY.

By J. T. B. Berry, M. D.

Mrs. S., æt. 42, splendid physique, mother of five children, applied for treatment for an abdominal tumor. Her health had been failing since her last confinement, two years previous. Noticed tumor some months after confinement, but as it gave her but little pain and inconvenience at first she did not seek relief. At the time she applied for treatment she would suffer a good deal of pain at times, and would also suffer with frequent attacks of indigestion. She was beginning to emaciate considerably.

My first examination was unsatisfactory, but when I examined her four or five days later I was confident that I had to deal with a floating kidney. I explained the case to her and her husband, and told them that while there was but little hope for her recovery so far as the tumor was concerned, that if we could keep her digestion good

she would not likely suffer any more inconvenience with the tumor than she was then suffering.

Indeed, there was but little change in her condition for about six weeks, when she had a very sudden and violent attack of peritonitis; abdomen *very* tympanitic: death in thirty-six hours. Doubtless the peritonitis was caused by the escape of some fluid into the peritoneal cavity; perhaps of pus from an abscess about the kidney, or, possibly, of urine through a rupture or perforation of the ureter. From the extreme mobility of the tumor the ureter must often have been greatly twisted and distended; enough so, perhaps, not to render a rupture or perforation altogether improbable.

The fact that I have failed to find a similar case reported is my apology for reporting this one.

EXCISION OF THE SUPERIOR MAXILLA FOR AN OSTEO-SARCOMATOUS GROWTH.

Reported by HENRY J. SCHERCK, M. D., Visiting Surgeon, Charity Hospital.

Anna F., æt. 50 years, born in Louisiana, was admitted in the Charity Hospital May 4, 1889. She states that about four months ago she first noticed a small swelling about one inch below the right eye. She gave it very little attention, thinking it would pass away, but to her dismay she soon found that it gradually became more prominent, involving gradually the right naris and finally the roof of the mouth on the right side. Finally, after delaying four months, she presented herself at the out clinic of ward 36. Upon examination it was found that the growth had involved very nearly the entire superior maxillary bone.

It had extended inwardly, very nearly obliterating the right naris; upwards, it had evidently destroyed the floor of the orbit and had nearly closed the eye; outwardly, it had involved about one-half of the malar bone.

Upon making an examination of the mouth a large growth was found on the right side of the roof, ulcerated

and sloughing. There were no teeth on that side. She tells us that she suffers great pain, lancinating in character at all times, so much so as to prevent sleep. It is with the greatest difficulty that she manages to take food, as the growth prevents her mastication.

The growth is smooth, hard on its outer surface, and the skin slightly tense.

The lymphatic glands of the neck are not perceptibly enlarged. The final conclusion arrived at, which was confirmed afterwards, was that the growth was sarcomatous in character. The question now presented was whether an operation was justifiable. It was finally thought so for the following reasons:

1. On account of the extreme rapidity of the growth, which, if left alone, judging from the past history of only four months, would in all probabillty destroy life in a very short period of time.

2. On account of the exquisite pain experienced at all times, which prevented her resting at night.

3. On account of the distressing condition of the roof of the mouth.

4. There was little or no enlargement of the cervical lymphatics.

5. The general condition of the patient seemed good enough to undergo the ordeal of the operation.

The nature and dangers of the operation were explained to her. She consented nevertheless with great alacrity.

Though there is little doubt that the removal of the superior maxilla for these growths is followed by a return, yet it seemed evident in this case that through the operation life would be prolonged and made more bearable.

On Thusday, May 9, assisted by Assistant House Surgeon Bloom and Mr. Hy. Walet, R. S., Dr. Sabatier administering the chloroform, I proceeded to operate.

The primary incision was that of Fergusson, which consists of an incision through the median line of the upper lip, carried around the corner of the nose up to the

angle of the eye, then outwards as far as the malar bone. The flap then being dissected downward, hemorrhage from the facial and transverse facial was controlled by ligature. This, the first step of the operation, being completed, the malar bone was sawed through by means of Hey's saws; after this the periosteum of the floor of the orbit was gently dissected back, and the bony wall between the nares and orbit sawed through with a metacarpal saw. It then remained to divide the mucous membrane of the roof of the mouth transversely, at about a level with the last molar tooth.

Finally, having dissected the cartilage of the nose away from the bone, a metacarpal saw was introduced into the nares and sawn into the mouth.

The growth had destroyed so much of the bone that it broke down easily under pressure.

The bone with the tumor was then gradually drawn out, and hemorrhage from several small arteries checked by simple pressure.

All suspicious tissues remaining were carefully removed. Some slight trouble was experienced at this stage in controlling hemorrhage from some branch of the internal maxillary artery. The cavity remaining was carefully irrigated with a 5 per cent. carbolic solution, and after this packed with iodoform gauze. The flap was now replaced and united with interrupted silk sutures, except the lip, where pins were used.

The wound was now dusted with iodoform and dressed with iodoform gauze. After having given her ¼ gr. morph. sulph. by hypodermatic injection she was sent back to the ward.

She rallied well from the operation, suffering from little or no shock. She took milk punches by mouth on the day following the operation, as well as nutrient enemata. Her temperature during the whole period following the operation never rose above 100° F., and became normal after the fourth day.

The following was also ordered, as there had been some time previously a case of erysipelas in the ward:

℞ Quin-sulph ..... ℥i
Tr. ferri. chlor..... .... ℥ii
Aquæ et syr..... .... ℥vj
S. A tablespoonful three times daily.

On the third day after the operation the dressings were removed from the external wound and it was found to have entirely united by "*first intention*." All stitches were then removed and the dressing replaced. The cavity was packed daily with iodoform gauze.

On the fifth day she was allowed to sit up. No trouble was experienced. She now states that she suffers little or no pain and feels much better than before the operation.

The deformity is not as great as one might expect.

She left the hospital twelve days after the operation, decidedly benefitted. The result as an operation was, strictly speaking, an aseptic one.

The two accompanying engravings were taken immediately before and ten days after the operation.

The former shows the extent of the growth; the latter, the result of the operation, the deformity resulting from the same not being as great as one might expect.

A UNIQUE CASE OF RETENTION OF URINE, CAUSED BY A FOLD OF MUCOUS MEMBRANE COVERING THE MEATUS URINARIUS, IN WHICH RELIEF WAS GIVEN BY INCISION.*

By Dr. C. B. Sanneau, Charleston, S. C.

The following is the report of a case which occurred in the practice of the writer, some time back, in the person of one of those unfortunate individuals who had become a complete physical bankrupt, as the outcome of reflex irritation of the genital apparatus.

Mr. A. F. P., finding—sometime betwixt two days—that his younger brother was unable to pass his urine, and was suffering from distension of the bladder, summoned the writer to go to his relief. The nature of the case being known, several catheters were carried, presuming

* Read before State Medical Association of South Carolina April 24, 1889.

that they would be required for the trouble in hand. On reaching the patient, however, the following unusual symptoms were observed, and the treatment which suggested itself, on examination of the penis, was obvious enough.

The foreskin, which covered the glans to within a quarter of an inch of the meatus, could not be retracted in the slightest degree; and examining this strange condition more fully there was found to exist a reflexion of mucous membrane entirely covering the meatus—even as completely as the hymen has sometimes been found to cap the entrance to the vagina; and there was visible, just over the opening of the underlying meatus, a central elevation, resembling a large vesicle, which protruded and receded as the patient made or ceased to make expulsive efforts. Laying aside the catheter, a thumb lancet was substituted therefor, and with it an incision carefully made, corresponding with the natural opening of the urethra. This was deemed to be only an initiatory proceeding; but no sooner had the incision been completed than there gushed out a full stream of urine, much to the surprise of all, for it was thought surely that strictures sufficient to cause at least partial retention existed lower down. The relief given was instantaneous and complete, and after having administered a small dose of morphia and ordering a mild saline laxative for the morning, the patient was left for the night.

He was seen the next morning, and still found able to pass his urine with little trouble; but it was thought advisable to explore the urethra, and a No. 8 bougie (of English scale) was selected for the purpose. A slight stricture was found about one inch from the meatus, and the lumen of the urethra seemed smaller than it should have been. He was now directed to keep quiet, and further operative procedure postponed until two more days had passed.

On the morning of the fourth day, all necessary arrangements having been made, the patient was chloroformed; a straight, probe-pointed bistoury was introduced into the urethra, and its calibre restored by an incision of the

stricture. None other could be found lower down. Seeking now to uncover the glans of its foreskin and adherent mucous membrane, a rather difficult job presented, for both the areolar tissue and mucous membrane were so intimately intertwined that to differentiate betwixt them seemed somewhat akin to the task one would set himself were the endeavor made to see if

> "He could distinguish and divide
> A hair 'twixt south and southwest side."

Loosening now the margin of foreskin by dissecting from before backwards; catching up the same with a small pair of dressing forceps, and then revolving the instrument, as much tissue was removed in this way as possible under existing conditions. Carbolized oil dressings were applied; a gum bougie, cut in half, given to the patient, which he was directed to use for keeping the urethral walls separated; and he was also enjoined to keep the bowels gently moved by the use of mild saline drinks. There having arisen no fever, neither quinine nor other febrifuge was given. He was told to keep quiet, and the hope was entertained that he would improve gradually and eventually be in a much better physical condition. After a few additional visits he was requested to report at office for further advice.

The patient could give no history of himself—of how long standing was his unnatural condition, or how it had been caused. He was, in short, an imbecile, but went about alone and wherever he wished. His social standing was fair; he had elder brothers and sisters (his own age was three and twenty), but his next older brother, residing in the old homestead, filled the role of guardian to him—their parents being dead. But he did not long continue to need medical attention, for one day, mentioning that he desired to take a swim, he left home and from that moment until the present time has never more been seen of men—literally dropping out of existence—and the mystery of his disappearance has never been solved.

There is little doubt that this young man was a victim of the vicious habit of self-abuse, the sad results of which the physician is but too often called upon to witness. Sad indeed it is that man is endowed with the power to thus wreck himself, and in this unnatural manner make

"His headlong passion form his proper woe."

DOUBLE HYDROCELE COMPLICATED WITH DOUBLE HERNIA —OPERATION OF HYDROCELE ON ONE SIDE BY INCISION—CURE.*

By Dr. EDMOND SOUCHON, Professor of Anatomy and of Clinical Surgery, Tulane University of Louisiana.

Mr. J. T. is a little over 70 years old, but really does not look more than 60. He is pretty tall, stout, hale and hearty. From his youth he has been affected with hernia, especially on the right side; he also wears a bandage furnished by the best fitters in the country, but in spite of all the hernia on the right side gradually descended into the upper part of the scrotum and is now about the size of a hen's egg. On the left side it is not any larger than a pigeon's egg.

For years back he noticed that his scrotum was enlarging gradually, and as it was annoying he consulted me. I found on the right side a hydrocele of about the size of a goose's egg, complicated with the hernia above described. On the left side there existed also a small effusion of about an ounce of fluid in the vaginal tunic, complicated also with an incipient hernia. I at first advised him to wait and to bear his trouble if the hydrocele did not enlarge, as any operation that might be attempted for a permanent cure might turn out seriously on account of his advanced age, and also on account of the confinement to which it would force him.

He returned two or three months after, saying that the hydrocele, on the right side especially, had perceptibly increased. I proposed to simply puncture it from time to time to evacuate the fluid, hoping to relieve him sufficiently

* Read before Orleans Parish Medical Society, April 29, 1889.

in this manner to avoid any operation. When punctured the fluid was very clear, and I ascertained that the walls of the vaginal tunic were unduly thickened. But the sac filled up again rapidly in the short space of three weeks. The patient called again and pluckily told me that he saw himself that some more serious operation would have to be performed sooner or later; that he thought the sooner would be the better, and that unless there was positively very great and immediate danger he wished it to be done now.

Accordingly, a day was fixed for the operation. I hesitated awhile upon whether I would puncture and inject iodine, or whether I would operate by incising the sac and packing it with carbolized lint. The presence of the largest hernia on the same right side was the principal cause of the hesitation. I was apprehensive that the usual inflammation which would follow the injection might extend to the hernial sac and then cause general peritonitis. I decided in favor of the incision, thinking that whatever inflammation and secretion would take place would have less chance of invading the hernial sac, and could be better controlled than if shut up in a tight sac, as would be the case after puncturing and injecting with iodine. The hernia was reduced and the bandage applied.

The patient showed great nerve and stood the operation surely better than many younger men without chloroform, both he and I not willing to run the risk of the danger of the drug at his age for such short operation. An incision was made in the long axis of the tumor about two and a half inches long. It was not made as quickly and as boldly as it could have been done, as great care had to be exercised not to inadvertently puncture or open the hernial sac. The operation proved quite painful, more so than anticipated, owing to the toughness of the vaginal tunic, which was also one of the causes of the slowness of the incision, as it compelled me to make short nicks with the scissors

instead of long ones. There followed a little hemorrhage, but it was soon controlled. I packed the sac with strips of carbolized lint, taking care that every recess was well filled, this step of the operation being all-important. The parts were well supported, and a piece of lint, wet with carbolized water, was applied over them.

The following days I found that the edges of the scrotal wound were becoming united with the lower part of the albugineous tunic of the testicle, threatening to leave about two-thirds of the testicle outside of the scrotum when it would have all healed up. To prevent the possibility of any such occurrence I destroyed the union as fast as it formed, and applied successively a number of stitches extending from one side of the incision to the other and arching *over* the testicle. With this exception the healing process went on without any trouble. The surface of the exposed testicle first turned out black and gray, but after the shedding of this very superficial slough, small and fine, ruddy, healthy granulations showed themselves, and healed handsomely. In the course of five weeks the patient was well, up and about. He says that he now feels the hernia less and is better able to retain it than before the operation.

In the future to avoid the premature union of the edges of the scrotal incision to the lowest part of the testicle I think I will at once—

1. Introduce deeply three or four sutures.

2. Pack well the cavity with long and narrow strips of lint, leaving the end protruding between the sutures so as to be able to easily remove the lint in due time; and,

3. Tighten the sutures to within one full third of an inch before the edges meet. Of course the parts must be kept very clean—washed two, three or four times a day if the suppuration is abundant; and the strips of lint must be removed, in part or in totality, as fast as they become loose enough to yield to little traction with the forceps; all this to prevent septicæmia.

TUBERCULAR MENINGITIS IN THE ADULT.*

Reported by O. CZARNOWSKI, M. D.

My apology in presenting this report to you is based on the great rarity of termination of phthisis in meningitis in the adult, as compared with the great frequency of tubercular meningitis in childhood when acquired by heredity. I can recall but a single case—the one about to be reported excepted—during my practice, and that occurring in hospital practice in a female under daily observation for a length of time.

G. W. A., a white man, 52 years of age, native of New York, resident here for upward of 30 years, clerk by occupation, of good habits and good family history (probably acquired his troubles during the war, wherein he served from first to last in Army of Northern Virginia), during spring of 1887, while apparently in the best health, was taken with a very profuse hemorrhage and subsequent consolidation of apex of left lung. Under usual treatment he rallied, and under continued exclusive milk diet, good air and creasote medicinally for upward of eighteen months he steadily gained weight, flesh, strength, and improved in appearance. His temperature during this time was, say, 99½, rarely more; sputa scant and gain in weight 40 pounds.

At this time (July 8) there was recurrence of hemorrhage, followed by the rapid formation of a cavity under left clavicle, with very profuse expectoration of large quantities of pus. Temperature did not rise at any time above 100; there were none of the usual accompaniments, such as sweats, prostration, etc. He expressed himself at all times as feeling well, and only continued persuasion induced him to seek the country (Osyka) for four or five months, where the gain in weight and strength again put him in a very fair state of health. He continued to follow his occupation without any hindrance from his ailment, his temperature during the entire winter being normal; milk

* Read before the Orleans Parish Medical Society.

his almost exclusive diet; creasote his only medication. Respirations had increased to 26-28; the only evidence of trouble was the cavity, respiratory sound being good over every portion of both lungs, apex of left lung excepted.

March 28 he consulted me in my office for a persistent headache of three or four days' duration, which he described as exacerbating on alternate days, never leaving him entirely, and locating it some days as frontal, on others as occipital pain; his temperature (in mouth) 105.3 degrees. Hypodermic injection of morphia, atropia and quinine were administered without any relief whatever, as he stated when I saw him at his home next day. Antipyrine, antifebrine, chloral, morphine, ice, all were used in the maximum doses; they afforded neither sleep nor relief from pain. The temperature varied between 103.4 and 105.5 degrees. The least move of his head or bedding increased pain to an unbearable degree; passing cars would elicit the most piteous appeals for quiet, as that gave comparative ease. The pupils were not dilated; they promptly responded to the light. Respiration was at this time not interfered with. He took no food or fluids, claiming he felt no desire for them. His urine was scant, and loaded with phosphates. This state continued for upwards of six or seven days, when he became at times delirious, and had to be retained in his bed by force. When rational his only complaint was pain. The character of respiration changed to the Cheyne Stokes type, and so remained to the end, unless interfered with by hypodermics of atropia and strychnia. There were eleven inspirations, from the very shallowest to the deepest possible, when every accessory muscle was called into play; then a pause of forty-five seconds, when, with the greatest possible precision, a repetition of this phenomenon of rythmical dyspnœa would be repeated. The pulse continued full, regular, of good volume, at 70 to 72. Convulsions ended the scene eighteen days after the first invasion of what I believe to have been tubercular meningitis.

CORRESPONDENCE.

LONDON LETTER.

[Our Regular Correspondent.]

Milk Scarlatina. — Dr. Klein has returned to the charge with a series of papers in the report of the medical officer of the Local Government Board. It will be remembered that Mr. W. H. Power traced a certain epidemic of scarlet fever in north London to the milk from a dairy farm at Henden, and that Dr. Klein stated that the milk became infected owing to the fact that certain of the milch cows were suffering from a general disease, the outward sign of which was an ulcerated condition of the teats. Further, it may be within your readers' recollection how the Agricultural Department took fright at this and called in a rival expert, Prof. Crookshank, who, having found another herd suffering from cowpox, hazarded the suggestion that the disease at Hendon also was cowpox. Dr. Klein rebutted this statement, and now brings fresh evidence in support of his position that the disease of cows which was found to be associated with a something in their milk which gave human beings scarlet fever is a disease *sui generis*, characterized by peculiar, very superficial ulceration on the teats, loss of hair and desquamation (after) fever, varying in severity and producing widespread visceral lesions. He is confident also that the streptococcus, which he isolated from the cow ulcers and the scarlatinal blood, is not a pyogenic microbe, but the genuine *streptococcus scarlatina*.

Lead poisoning.—Mr. W. H. Power, who started the cow-scarlatina theory, has struck out a new suggestion about lead poisoning. There was an extraordinary prevalence of this condition in certain parts of Sheffield recently. Following up this clue, Dr. Sinclair White, the resident officer of health for Sheffield, found that the reservoir which sup-

plied the districts where lead poisoning prevailed was fed by moorland streams, the majority of which were distinctly acid. The water in the reservoir was acid and its power of dissolving lead was thought to be probably due to its acidity. To what the acidity was due was not as clear. Vegetable matter in the process of decay imparts to water an acid reaction, and this acidity has been attributed to ulmic and humic acids, about which, however chemistry appears to know little. In the towns supplied with water from moorland reservoirs similar epidemics of plumbium have been observed, and it has been discovered that by passing the water over limestone or over quartz roughly broken it lost its plumbo-solvent quality. By eminent chemists this change has been attributed to "efficient silication of the water." Dr. White probably thought that the limestone would neutralize the water. Mr. Power is not satisfied with this obvious explanation—viz.: that the water was rendered acid by products of decaying vegetation, and then neutration. He thinks that the variability in the possession of this power by various waters and by the same water at different times—the fact that one source being thus affected it burdens a large bulk of water with the plumbo-solvent power, and the favoring influence of a high temperature, point to the probability that the variations in plumbo-solvency may be related to the agency, direct or indirect, of low forms of organic life.

Dr. Felix Semon, physician to the throat department of St. Thomas Hospital, London, made himself very busy in attacking Mackenzie for his treatment of the late Emperor Frederick. The new emperor has now presented him with the "red eagle of the third class," whatever that may be. There seems to be two kinds of eagles in Prussia—black and red. The great folk, Bismarcks, generals and diplomats, are "given" the black eagle; the smaller fry get the red bird of that species of one or other class.

A naval medical reserve is to be formed; newly qualified men will be taken for short periods (not less than six

months) at a fairly good salary. The service is likely to be very popular.

Straws show how the wind blows, and one may sometimes learn something of the drift of public opinion from the advertisements of enterprising tradesmen. Here is one clipped from the advertising columns of the *Times:*

> FUNERALS; BY MR. HALFORD L. MILLS, Undertaker and Upholder, Cremation and Embalment. Fixed tariff. Telegrams—Halford Mills, London.

Cremation at "a fixed tariff"—*i. e.* from the undertaker—is quite a new departure. Money has come in well from the new crematorium at Waking, which is an elegant structure of ordinary ecclesiastical Gothic type. The last person cremated there was the Marquis of Ely.

The injurious effect on mind and body of the strain involved in boat racing has often been the theme of homilies by sanitarians, and also of people who think that to pass examinations is the end all and be all of existence. The jubilee of the Oxford-Cambridge boat-race was celebrated the other day, and no less than six out of the nine men who sat in the winning boat were or might have been present. One is a Taxing Master in Chancery, one is a well-known man of science, one is a physician who retired a few years ago from a large consulting practice in a well-known watering place, one is the eminent architect who has charge of the fabric of St. Paul's Cathedral, one is an active country gentleman and magistrate, the coxswain is a barrister and ardent volunteer, while the sixth men presided at the jubilee boat-race dinner and is known to suitors as Lord Esther, Master of the Rolls; so that so far as longevity and success to various walks of life can be test, the boat-race of that year did not injure either the bodies or the intellects of the crew of 1839. Six of the oars of the defeated boat of that year are also a live: one is an archdeacon, one a county court judge, one a squire and three country parsons.

There were 71 candidates for the Fellowship of the Royal Society this year—a number considerably above the

average, which has been during the last decade 61, and before that 54. Only sixteen are elected annually, so that a great proportion are disappointed. This has been for many years a cause of much heart-burning, and charges of favoritism are made, which are not very well founded. Great pains are taken in making the selection, and as a rule the best men are chosen; very frequently a young man without friends, or scientist who has worked at an out of the way subject or in an out of the way place, is unfairly passed over, but very rarely is a man chosen who is not felt to deserve the honor. The complaint is that many men who do deserve it are rejected, owing to the rule which only admits a small fixed number; the rule may have been necessary a generation ago, but now that the sciences have become so numerous and complex and the number of workers in each so large, the men who attain distinction are also more numerous. This year the lucky candidates from among those holding medical degrees are: Dr. Ballard (Sanitarian), Dr. D. D. Cunningham (Professor of Pathology at Calcutta), and W. Gerald Yeo (Professor of Physiology at King's College, London).

VIENNA LETTER.

[Our Regular Correspondent.]

Herpes Zoster Atypicus.—Prof. Kaposi brought forward before a recent meeting of the Imperial and Royal Vienna Medical Society a very peculiar case of "herpes zoster atypicus." The patient, a woman, 27 years old, presented over the breasts and the abdominal layers, round, long and pointed spots, which had the appearance of being covered with scurf. Over the abdominal layers and the left breast there were also some spots which bore a resemblance to keloides. Eight days before the demonstration one of the keloides was very large, and at that period a green coloring of the corium—*i. e.*, necrosis of the same—could be detected through the intact epithelium. Over

some parts also very small transparent vesicles could be discovered, through which the corium was likewise found to have a green color. The patient, for the first time, had a similar eruption at the age of 12 years, and since that time the affection set in each year, lasted about eight days, and invariably scars developed in the places of the vesicles later on; also ulcers followed, which healed by the formation of cicatrices. The second patient shown to the society had in the left elbow joint a scurf of the size of the palm of the hand, in the surrounding parts of which there were also small spots covered with scurf. Prof. Kaposi said that in his opinion the affection under consideration ought to be called "herpes zoster atypicus." In spite of the frequent relapses and the irregular spreading of the process—none of which was characteristic of zoster—Prof. Kaposi, taking into account a similar case previously observed by him, yet maintained that we had to deal in this case with atypical herpes zoster.

Ectasia of the Frontal Sinus and Formation of Atheromatous Masses in the Same.—Prof. Weinlechner showed to the same society a man, 45 years old, who had been affected with ectasia of the frontal sinus and the formation of atheromatous masses in the same. The patient, when 8 years old, had on one occasion been thrown out of a carriage, and, according to the patient's statement, the left part of the forehead since that time was more prominent than the right one.

Twelve years ago he became affected with attacks of giddiness, paræsthesia and contractions of the extremities. After an interval of 1½ years the attacks diminished as to their intensity, and in August, 1888, the left part of the forehead became swollen and attended by severe fever and pain. A prominence, resembling that of an abscess, formed over the left part of the forehead, which was opened by the attending physician, and from which clear pus escaped. When the patient was admitted into the clinic of Prof. Weinlechner a slight prominence of the

protuberance of the forehead was found to be present. In a cavity of the prominence there was a drainage tube, and in the opening itself pulsations of the brain were felt.

Prof. Weinlechner made the diagnosis of perforating caries of the roof of the skull, and made a section into the soft parts of eight centimetres length, pushed back the periosteum, and in the region of the frontal protuberance he met with a round opening, in which the brain was seen to pulsate distinctly. The root of the nose could be reached by means of a sound, which was introduced into the opening. After the opening had been sufficiently enlarged pus, as well as atheromatous masses, escaped from the same. Immediately after the operation the patient became affected with fibrillar contractions in all the muscles, with slight trismus and tetany. According to the opinion of Prof. Weinlechner we had to deal in this case with empyema, combined with ectasia of the frontal sinus and the formation of cholesteatoma.

Prof. Billroth mentioned a case of the clinic of Esmarch which had been described twenty years ago, in which cholesteatoma had supervened in the diploë of the skull, above the eyelids, and was in communication with the cranial cavity. Congenital cholesteatoma also occurred in the internal angle of the eye and could be confounded with encephaloceles.

On the Use of the Faradaic Electric Current in the Treatment of Icterus Catarrhalis.—Dr. E. Kraus of Vienna gives the following details about the application of the Faradaic electric current in catarrhal icterus. Gerhardt in 1871 had described a case in which he had successfully treated catarrhal icterus by faradization of the gall-bladder, and also mentioned that, according to a communication of Copland, Hall and Darwin had used electricity for the treatment of jaundice. Gerhardt placed one of the electrodes of a strong induction apparatus on the gall-bladder and the other opposite to the first on the right

side of the vertebral column. Dr. E. Kraus, at the instance of Prof. Mouti, availed himself of this procedure in the cases of seventeen children who suffered from catarrhal icterus; thirteen of these children received a restricted diet (milk and soup), whereas the other four little patients were nourished in the usual way.

In none of these cases more than from seven to eight "séances" of faradization were required, and invariably the symptoms of the disease began to subside after the application of the electricity for three or four times. The faradization was practiced once a day for five minutes.

As to the method of application the author either availed himself of the method of Gerhardt, or he used two moist electrodes, or one moist electrode and the electric brush, which he placed over the region of the gall-bladder; such intensities of the electric current as might possibly have given origin to contractions of the abdominal muscles were avoided.

As to the explanation of the success obtained by these methods of treatment, the author suggested that the tetanic shortening of the smooth fibres of the muscles of the gall-bladder, which was produced by the electrification, gave origin to a diminution of the size of this organ, or produced increased peristaltic movements of the gall-bladder, which resulted in an evacuation of the contents of the same. The author was moreover of the opinion that the supposition that the katalytic effect of the Faradaic current also exerted a favorable influence was justified, as modern experiments have shown that the katalytic effects ascribed to the galvanic current were also present in strong currents of faradization.

Pyrodin and Acetylphenylhydracin.—Dr. Th. Zerner of Vienna makes, in a recent number of the *Wiener Medinische Wochenschrift*, a communication on the effect of pyrodin and acetylphenylhydracin. The pyrodin which has recently been introduced into theraphy by Dreschfeld, had, according to the statements of the last

mentioned author, a more rapid and more lasting influence than antipyrin, antifebrin and phenacetin when used in one day's dose of from one-half to three-quarter grammes; but, on the other hand, it was stated to have the disadvantage of exerting a toxic influence when administered for several times in one day or during successive days. Owing to the obnoxious influence of this drug on the blood (Lépine), an intraglobular methæmoglobinæmia was produced, which, after several days' administration of the drug, was followed by a diminution of the red blood corpuscles.

According to Lépine, also, the therapeutic dose of pyrodin was stated not to have considerable influence. Pyrodin was a mixture, and the efficient constituent of it was, according to Dreschfeld, the acetylphenylhydracin. Immediately after this communication he also reported that the acetylphenylhydracin was four times as strong as pyrodin; hence, that the maximum dose for adults was 0.2 grammes (2 decigrammes), "*pro dosi et pro die.*" This statement was opposed by Dr. Zerner, owing to the result of his personal experiments. He was of the opinion that the dose mentioned above was rather the minimum dose, as in the case of patients suffering from fever of a remittent type (for instance, tuberculosis) doses of from 4 to 6 decigrammes had indeed produced a decrease of the temperature, which, however, immediately rose again, and sometimes even more rapidly than after a natural remission. In severe continued fever the above-mentioned daily dose of from 4 to 6 decigrammes could, at the utmost, produce a decrease of the temperature of 1.5°, and this decrease was not even constant.

Doses of 1.0 grammes (0.4+0.4+0.2) for testing the analytic effect of the drug showed that the drug under consideration was also, in this respect, inferior to antifebrin in the case of tabetics, hemicrania, ischias, etc. Moreover, the fact must be emphasized that in the case of considerable heart-weakness an unfavorable influence on

the cardiac activity was observed. In the case of gastric disturbances, irritations sufficient to cause vomiting and diarrhœa were also observed. The author therefore warned against the use of acetylphenylhydracin (or pyrodin), which, according to his opinion, will soon disappear from the class of the antipyretics.

Hereditary Atrophy of the Muscles.—At a recent meeting of the Imperial Royal Society of Physicians of Vienna, Dr. G. Anton, assistant to Prof. Meynert, brought forward two interesting cases of hereditary atrophy of the muscles. The two patients affected with this disease were brothers. The parents were healthy, and the same was true of the four sisters of the patient. No similar case had previously been observed in the family. The youngest child of the family has been ill for the last two years; the mobility of its articulations had become impaired; some of the muscles presented the condition of hypertrophy, whereas others were already atrophied. The disease under consideration was progressive: the muscles of the calf of the leg were much developed; whereas the muscles of the thigh did not present the normal condition of development. The triceps-muscle of the arm was hypertrophic, whereas the biceps was atrophic. The development of the musculi supra and infraspinati was in striking contrast to that of the muscles of the breast. The elder brother of the two patients, who was likewise brought before the society, had been confined to his bed for the last seven years and presented a very sad appearance. Almost all the articulations were loose (shaking), and only few muscles like those of the nape, the forearm, the hand and the leg were little affected. Various pieces were excised from the hypertrophic muscles, as well as the atrophic ones and submitted to a histological examination. The result was that in the hypertrophic muscles, the fibres of the muscles were intact and separated from each other by undulating connective tissue, whereas the atrophic muscles were degenerated. The electric irritability of the muscles was not

impaired, the contractions were prompt, but over some parts, in conformity with the slight development of the muscles, they were impaired.

Hofrath Prof. August Breisky, the distinguished obstetrician and gynæcologist, and ordinary professor at the Vienna Medical Faculty, died on the 25th of May, at the age of 57 years. In 1886 Prof. Breisky was called from Prague to fill the chair, which at that time had become vacant owing to the retirement of Prof. Spaelt. Prof. Breisky belonged to the greatest capacities of our medical faculty.

LEADING ARTICLES.

OUR QUARANTINE SERVICE.

When a few years ago Dr. Jos. Holt, the then President of our State Board of Health, instituted and put in successful operation his admirable system of maritime sanitation, he made a good stroke by inviting prominent sanitarians and others closely interested in excluding pestilence to examine his methods and see how they worked in practice. This movement, coupled with other acts of Dr. Holt, showed to the world that the suspicion of a policy of concealment of cases of infectious disease, and of Punic faith generally, was entirely unfounded. The inspecting party comprised official delegates from the Boards of Health of the Gulf States and Tennessee, representatives of the press and prominent business men. They saw the workings of the new order of things and were pleased.

This idea of inviting gentlemen from neighboring States to examine our system has been carried out every year since Dr. Holt inaugurated it. Dr. Holt's system contained the germ of a mighty improvement in maritime sanitation.

The first machines and appliances, though carrying out his ideas, were, as he afterwards said, very clumsy. He

soon modified them, each modification bringing in its train greater simplicity in operation and increased efficiency of action. In this good work he was ably assisted by Dr. Thos. J. Aby, the then quarantine physician. Every annual inspecting party that visited the quarantine stations of the lower Mississippi found that the busy minds of those in charge had not been idle during the preceding year, but that every twelve month had contributed its share of progress. The last year has brought forth several important changes, which, while being merely elaborations of the system as Dr. Holt left it, are such as materially to enhance its value, and which reflect great credit upon the projector and designer, Dr. C. P. Wilkinson, the present President of the Board of Health.

Upon the invitation of Dr. Wilkinson an inspection party visited the station on June 1, 1889. Forty-four persons were in the party, in which were our Lieutenant-Governor (illness prevented Gov. Nicholls from accepting the invitation), Congressman Wilkinson, members of our State Legislature, well-known business men, and a large number of medical men. Dr. H. B. Horlbeck, Mr. H. T. McGee and Mr. B. A. Caufield of the South Carolina Board of Health went with a view to inspecting the apparatus and erecting a similar one at Charleston.

The former quarantine station was located seventy miles below the city. When first built there were very few houses near it, but now the settlement is so thick that it would be extremely difficult to prevent communication between vessels at anchor and people on the shore. The station was accordingly abandoned, and another site, lower down, selected. The present site is on the east bank of the river, a short distance above Cubitt's Gap. At this point the river is a mile and a quarter wide and about sixty feet deep. The part of the upper station that concerns us is the fumigating and disinfecting apparatus.

The vessel and its effects receive different treatment. The clothing, bedding, etc., are treated in three gigantic

cylinders, each fifty feet long and eight feet in diameter. These are made of boiler iron; one end is fixed, while the other acts like a door, which may be removed at pleasure, and is so constructed as readily to be secured air-tight to the rest of the cylinder. This movable end weighs about a ton and is hung on a powerful crank or derrick. Each cylinder is covered with a thick layer of Russian felt, so that very little heat is lost by radiation. The clothing, bedding, etc., are hung on a connected series of wooden frames, the whole thing being suspended from a railroad track overhead. This track extends through the whole engtli of the boiler and fifty feet out of it. The clothing is hung on the racks outside of the cylinder, and these are then pulled into it by machinery; the big door is closed and bolted and the heat is turned on. The heating is done by means of 120 coils of pipes lining the interior of the cylinder, and all being connected with a main supply-pipe running along the bottom of the cylinder. When steam is forced through these pipes a dry heat of 180 degrees F. is obtained in a short time. Then from a smaller pipe, perforated with capillary holes and lying on bottom of the cylinder, steam is forced into the cavity of the cylinder, and soon a moist heat of 225 degrees or 230 degrees is secured.

The moist heat is kept up for half an hour or longer, and the end of the cylinder is then swung open. The heat is so intense that the clothes dry almost explosively when removed from the cylinder. Not even the most delicate fabric is injured by this heating. These cylinders were introduced by Dr. Wilkinson. They succeed the patent Troy laundry drying-chambers.

The ship is washed off with a solution of bichloride of mercury (1 to 1000). At the same time sulphur fumes are being forced into all parts of the hold and cargo by a powerful reverberating fan, which drives the air over pans containing burning sulphur. In the old apparatus the air was drawn through the retorts. The present arrangement

does more rapid work. The fumes are intensely hot at the moment of leaving the retort. In order to cool them they are passed through 217 feet of large tin pipe, coiled upon the upper deck of the boat. They are driven with such force that they reach the remotest corner of the hold of the vessel.

The time occupied by the whole process is now not more than three hours. During this brief period the largest ocean steamer can receive on the lower Mississippi more cleansing and disinfection than it can get in any other part of the world.

This is the treatment that a healthy vessel receives. If there be any yellow fever aboard, or even a suspicious case, the vigilant inspector at Port Eads, just within the mouth of the river, at once orders the vessel to the lower quarantine station, where ample hospital accommodations are provided for a considerable number of patients. Then after all danger is over the vessel (which has already been well cleaned) is subjected to the same treatment that a a healthy one must undergo.

Every possible source of danger is provided against. The quarantine has been steadily improving for years, and now it has reached a state of efficiency and discipline upon which improvements can scarcely be made. But who can tell? The same thing was said before. Be that as it may, we feel sure that if any improvements make their appearance in other localities our home authorities will be prompt to use them and incorporate them in the system that now stands at the head of all quarantine systems.

REPORT OF THE NORTH CAROLINA BOARD OF HEALTH.

Though encountering difficulties on every side, when attempting to record vital statistics from different portions of his State, the Secretary of the North Carolina Board of Health, Dr. Thomas F. Wood, has succeeded in making

an interesting and valuable report for 1889, the second biennial report from that State. Just as in many other States, it is found difficult to get at the exact mortality rate on account of the universal tendency to over-estimate the population, and because of insufficient returns of burial permits.

In attempting to ascertain the prevailing diseases death certificates have been found insufficient on account of physicians naming only the last cause of death. "For instance," says the report, "naming 'convulsions' as the cause of death, when the real disease might be 'hemorrhage' or 'asthma,' the 'hemorrhage' signifying really aneurism of the aorta, the sac bursting into the trachea."

The report recalls one incident of last summer when 260 refugees from Jacksonville, Florida, were landed in the little town of Hendersonville, situated 2252 feet above the sea level, and with perfect safety to the inhabitants, for none of them took the fever, and only two died out of ten refugees brought there sick.

The State is divided for convenience into three sections, because of the excess of mountains on the western side, the absence of them on the eastern side, and the combination of mountain and plain in the middle section.

In the eastern section, or region of the long-leaf pine, malarial fevers abound, as do also consumption and heart diseases; while in the west the most troublesome diseases are pneumonia, typhoid fever and diarrhœal diseases.

Inquiring into the causes of diseases the Secretary has expressed his conclusions in some very plain and emphatic words on the subject of the negro. It is because of their very truth in other States than North Carolina that we are tempted to quote verbatim: "Emancipation virtually emptied a foreign population on our towns; for the negro cared for in the cabins of the master under rules of strict personal government, could be commanded to do for his well-being; while the emancipated negro considered that a home apart from the whites was the essence of personal

and political freedom—to live in squalor, packed in small, windowless rooms, to a degree that would nauseate a white man and drive sleep away effectually, in a condition of perfect comfort; in sickness, trusting to any chance remedy brought to him, regarding his disease as a matter of little concern to himself, but as a matter demanding service from the former white master or his present white employer, so firmly had this taken possession of his being while a slave.

"Personal cleanliness was utterly neglected, except as to the face and hands and change of raiment, confined in most cases to the putting on of fine cast-off toggery for Sunday, rushing into contagious diseases with stolid indifference, and herding with each other during epidemics with helpless fatality. Smallpox is a disease which vaccination causes, in their belief, because they know that the white people vaccinate during the prevalence of smallpox, their blind deduction being that it was the cause.

"Syphilis, which was rare among negroes as slaves, became the most common of diseases. Promiscuous herding of the sexes spreads the disease with fearful rapidity. A negro man applying for treatment for chancre only desires (and he has not improved any to this day) to be relieved of the discomfort and inconvenience of the local sore, regarding it only as a barrier to further indulgence.

"In all essential respects, therefore, the negroes were and are a foreign population, below the people of any nation in decent instincts, and elevated from the condition of native Africans by the contact with the whites, entirely at the expense of the latter, and burdensome in many respects as the Old Man of the Sea was to Sinbad. The most patient and valuable of all laborers in a hot climate, the most tractable and easily influenced for good when segregated among the whites, but when herding among themselves, with no light but that of their own leaders, drifting always away from the good. A town, therefore, which has 20,000 inhabitants, more than half of whom are negroes, repre-

sents a lack of thrift and a lack of hygienic surroundings that really discounts the white population. In speaking of a town of this sort as compared with one wholly of whites, numerical estimates are entirely misleading."

Special articles by members of the board on the subject of sewerage, water supply, etc., fill out the report and treat the subjects considered with intelligence and discretion.

QUACK DOCTORS AND INDECENT PRACTICES.

The determination of the State Medical Society at the last meeting to hold its next convocation in Baton Rouge just before that of the Legislature, in order to thereby influence members to enact laws favorable and necessary to the well-being of the medical profession, is one in which under the circumstances we heartily concur. The idea of being directly on the spot to look after our recommendations is a good one, for no matter how wisely a law may be originally framed it is the easiest thing in the world for its purposes to be destroyed by additions or amendments at the last moment, whether they are made in a friendly or unfriendly spirit.

The Legislature should be made to understand that laws regulating the practice of medicine are not for the protection of the medical faculty so much as for the people, who have no right to complain of malpractice from the hands of unprincipaled quacks and charlatans when they themselves have been too lazy to enact laws raising the standard of knowledge and intelligence in men who are entrusted with their lives and physical comfort.

It is true that there are doctors and doctors—men in the profession of Louisiana of unusual learning and high moral character—whose lives are an honor to the profession and the community at large, and these should be taken as a standard; but there are those who are the opposite of this, and compared with whom the Indian doctor who humbugs a credulous public at the rate of

one dollar a bottle for some lauded nostrum, is comparatively harmless and without guile.

We refer more particularly to two men whose characters have been exposed to the public by the daily press during the past spring, and who have used certain assumed qualities to excite the lowest traits of degraded characters, and to the debasement of human nature, always unguarded and weak where it trusts most implicitly. One of these persons, a certain Etienne Deschamps, a quasi dentist and doctor, pretending to have powers of clairvoyance, hypnotism, magnetism, or what you will, uses these powers to the seduction of a young and confiding girl, who had not yet arrived at the age of puberty. The entire story is too disgusting to relate, but suffice it to say that, his art failing to produce complete narcotism, he resorted to chloroform, and by the bungling use of the anæsthetic succeeded in killing the girl. It would seem a thing to be regretted that the very ignorance of the man saved his own life, for in attempting to destroy himself he failed to "crowd" the chloroform, which ceased to affect him after anæsthesia began. As Dr. Hava has suggested, had he lain on his stomach with his face in the handkerchief the attempt might have been successful.

Another competitor of New Orleans physicians for popular favor is the now notorious voudou doctor of the Third District. This esteemed confrere of ours scorns the entire materia medica, and knows nothing of clairvoyance, hypnotism or magnetism, as such, but seeks by means of heathenish yells, incantations and fantastic dances to charm away disease. His patients are mostly females, white as well as black, who do not hesitate, under his magical influence, to lay bare such parts of their bodies as may offend them in the shape of disease; and it is said that the body of the charmer is likewise but scantily clad.

These men—call them physicians or magicians—nevertheless practice on the border line of our profession, and a wise law should make their performances punishable be-

fore they culminate, as in one of these cases, into actual crime, and disgrace the community which allows them to go unheeded.

DR. T. G. RICHARDSON.

As briefly announced in the last issue of the JOURNAL, Dr. T. G. Richardson has resigned the chair of surgery in the Tulane University, Medical Department, and sought that rest to which he is entitled after giving so many of the best years of his life to the relief of human suffering and to the training of others to the same noble calling.

How busy a life has been that of Dr. Richardson, and how worthily he now seeks a rest, may be gathered from the merest outlines of his labors.

Born in Lexington, Ky., he graduated in 1848, when just 21 years old, a Doctor of Medicine from the University of Louisville, Medical Department. He was immediately chosen Demonstrator of Anatomy in this same institution, and continued to fill this position until 1856, when he was called to the chair of Professor of Anatomy in the Medical College of Pennsylvania at Philadelphia. There he remained until 1858, when he was elected Professor of Anatomy in the University of Louisiana, Medical Department, and from that time until the 20th of May, 1889, or for *thirty-one years*, he has been steadily connected with this college. From 1858 to 1872 he was Professor of Anatomy, and from 1872 to the date of his resignation Professor of Surgery.

When the war closed the school Professor Richardson went to the front and served in various positions until the end in 1865. He was on the staff of General Bragg from 1863 to 1865, and at the time of the surrender was Medical Director, Department of North Carolina.

When peace was finally declared Dr. Richardson returned to New Orleans, and being elected Dean of the University began the task, which he so successfully accomplished, of reëstablishing the University on the ante-bellum footing. In 1885 he resigned the deanship, which then

fell to the present holder of the position, Dr. Chaillé, who vies so closely with his predecessor in the administration of the office.

Notwithstanding the great draft upon his time and energies by the labors enumerated above, and the still further cares of a large practice, Dr. Richardson's pen was a busy one. He was successively editor of the *Louisville Review* and of the *North American Med. Chir. Review*, and while Professor of Anatomy was the author of "Richardson's Anatomy." He wrote much for the medical journals of the country, and was always a prominent member of local and national medical associations. In 1878 he was president of the American Medical Association, and it was in his presidential address that was inaugurated the movement that eventuated in the Association of American Medical Colleges and the gradual and still progressive elevation of American medical education.

Many an alumnus will hear with regret of the retirement of the beloved professor, the senior member of the faculty; but while sympathizing with their alma mater at the loss it sustains, will join the JOURNAL in acknowledging how well-merited is his exemption now from service; and every alumnus will especially join us in wishing that freedom from care and labor may enable Dr. Richardson to enjoy for many years to come a life of ease, made doubly pleasing because of the knowledge that it is the reward of a life well spent, of duty well performed.

A NEW VOLUME.

This number begins a new volume. It is usually customary on such occasions to call attention to the fact to the extent of a page or more of self-gratulation, or whatever it may be termed. We feel so well pleased with ourselves that we shall simply point to the volume and the index and invite our readers to see for themselves. We rest easy as to the verdict.

Abstracts, Extracts and Annotations.

MEDICINE.

TYPHOID FEVER IN ITALY.

Carlo Ruata of Perugia gives a striking account of the prevalence of typhoid fever in Italy. Every year, he says, this disease attacks from 200,000 to 300,000 individuals, and causes a mortality of 27,700. One-third of the persons in Italy who reach the age of 45 are attacked with typhoid fever. In several districts over 3 per cent. of the inhabitants die from the disease annually. The extraordinary prevalence of typhoid fever in Italy can be better realized by a comparison with the rate in this country. Massachusetts, with a population of 2,000,000, has annually less than 1000 deaths from typhoid fever. Italy, with a population fourteen times as great, has twenty-seven times more deaths from this disease.—*Northwestern Lancet, Gaillard's Medical Journal.*

SYNCOPE AND CONVULSIONS CAUSED BY FORCIBLE DEPRESSION OF THE TONGUE.

M. Vergely reports in the *Journal de Médecine de Bordeaux* the following case, which is instructive from a practical point of view.

A child of 18 months was attacked with a light laryngismus stridulus. In order to examine the child well M. Vergely had it rolled up in a coverlet, which held the trunk and limbs, and then he depressed the tongue gently with the aid of a spoon. The child struggled and squirmed. Another examination was attempted and, while the child was crying, the spoon was again placed on the base of the tongue for the purpose of depressing it. The child at once became motionless, the eyes were fixed, the arms fell lifeless, the heart and breathing ceased and for forty seconds he remained apparently dead. Titillation of the mouth and palate, energetic rubbing, all the usual measures were employed; at last the child breathed. But, at the end of a minute a convulsion came on, continued, and was accompanied by a chill and cyanosis of the extremities. For two hours the child remained in a state of absolute torpor. He slowly recovered from it, and on the following day no trace of it remained. M. Vergely has

never seen a similar case, and he is convinced that if the syncope had been prolonged a few seconds it would have ended in death. Such cases show the need of prudence in examinations of the throat, and teach us to depress the tongue gradually.

M. Moure remarks that M. Bouchut has recorded a case of death from depression of the tongue. In order to avoid accidents the depression should be made during expiration; if done during inspiration the epiglottis is crowded back on the larynx at the moment that the glottis opens for the introduction of air, and a spasm of the glottis results, even in the adult. For little children the finger is the best tongue-depressor.—*Journal de Médecine et Chirurgie Practiques.*

CAUSE OF ULCERATION OF THE DUODENUM IN EXTENSIVE BURNS OF THE SURFACE.

Dr. P. G. de Saussure of Charleston, S. C., writes in *Gaillard's Medical Journal* as follows: "What is the cause of ulceration of the duodenum in cases of burn? A burn shows an acid reaction; that is, the secretions from a burnt surface are acid—the urine is rendered intensely acid, the tears are acid, the sweat, the saliva and vomit *intensely* acid. Now, into the duodenum opens the main duct of the pancreas through a small opening or trough, a duct common to it and to the liver. The secretions should be *alkaline*, but I think they are acid in burns, and thus the products from the stomach are not neutralized, and we have, possibly, a digestion of the mucous membrane of the duodenum, or it may be an ulceration from too much acidity. I thought of this three years ago, and, acting on it, have since put my patients suffering from burns, of whom I have seen a great many, on alkalies, and have lost but one from the said ulceration."

ETIOLOGY OF TETANUS.

M. Trasbot admits neither the equine origin nor the contagiousness of tetanus. In regard to the first point, in all the cases which have been related there is no more reason to blame horses than to blame cattle, the earth or the air. In regard to contagiousness, it cannot be admitted. It is true that the injection of matter taken from a wound of an animal suffering with tetanus can give rise to tetanus.

Thus, at the Veterinary School of Alfort, where 2000 horses are operated on every year, and where M. Trasbot has seen 34,000 horses, only six acquired the disease at the hospital. During the same period fifty horses were admitted with tetanus and mixed with the others without any attempt at isolation, but the disease was not communicated to other horses. In regard to the production of human tetanus by contact of a wounded man with a tetanic horse, not one of the attendants at Alfort ever caught the disease.—*Gazette Medicale de Liège.*

POISONING BY PTOMAINES.

Dr. Merveille reports the history of a family poisoned by the use of a beef broth only one day old, but not recooked, and kept in a bedroom over night. The symptoms presented by the patients were very much like those of cholera—incessant vomiting, frequent rice-water evacuations, cramps in the limbs, cyanosis, etc. The condition of the patients was very grave, but they all recovered. In this case there was evidently poisoning by the ptomaines developed in a broth made of healthy meat, for the patients had consumed largely of it the first day without experiencing any unpleasant effects.—*Gazette Med. de Liège.*

RATIONAL TREATMENT OF PERICARDIAL ADHESIONS.

A case of adherent pericardium in a man 28 years of age, who as a boy of 15 suffered from an attack of rheumatic fever and pericarditis, and who afterwards disobeyed advice in the most reckless manner, indulging in running, cricket, football, and volunteering enthusiastically, has set Dr. Cantlie of Hong Kong thinking as to the rational treatment of pericardial lesions generally. If adhesions the result of inflammation take place in a joint, early movement of it is the A B C of treatment; if neglected, a stiff joint is the result. When recently-formed pericardial adhesions take place, why should the opposite condition be insisted on? Prolonged rest will allow of the formation of fibrous adhesions, rendering it impossible for the heart to execute more than a limited amount of movement; whereas early cardiac excitation will bring more movement to bear on the recently-formed adhesion tissue, and pull it out into strands of tissue, in place of allowing it to heal as it chooses in patches. In fact, a filamentous in place of a membran

ous adhesion will be more likely to be induced, thereby allowing more freedom of cardiac movement. When valvular trouble is present in conjunction with pericardial adhesions, encouragement to take exercise will no doubt cause trouble; but with pericardial adhesions pure and simple it seems only rational that benefit may ensue from gradually increased exertion at a reasonably early period during convalescence.—*British Medical Journal.*

AN IDEAL ANTISEPTIC.

The following is recommended by Rotter (Congress of German Naturalists) as an ideal antiseptic solution which will not injure instruments. A weaker solution may be made by using smaller quantities of corrosive sublimate and carbolic acid:

℞	Bichloride of mercury	5	parts (by weight)
	Chloride of sodium	25	" "
	Carbolic acid	200	" "
	Chloride of zinc	500	" "
	Sulphocarbolate of zinc	500	" "
	Boracic acid	300	" "
	Salicylic acid	60	" "
	Thymol	10	" "
	Citric acid	10	" "
	Water	100,000	" "

M. *Le Progrés Medical—Gaillard's Medical Journal.*

INDICATIONS FOR THORACOCENTESIS.

In a clinical lecture on the indications for thoracocentesis Professor Potain points out that these arise from very few symptoms, the most important of which are dyspnœa, syncope, abundance of the liquid and its nature, with the duration of the malady. Dyspnœa alone may be an indication to perforate the chest and evacuate the contained fluid, as it may bring on either rapid or slow asphyxia, both of which are serious dangers. Amongst the causes of dyspnœa, bronchial and pulmonary complications merit our attention; the indications being different according as they come from the side where the effusion is, or not. When there is pulmonary congestion or a bronchial inflammation on the side where the effusion is, we must *never practise thoracocentesis*, as we are almost certain to render the congestion greater. On the other side it is quite different, as it may cause rapid asphyxia, so that it is our duty to *extract the liquid at once*, and in these cases we give immediate relief. A tendency to syncope is a serious complication in

pleural affections, and it may be mortal at once; so that whenever there is fainting we can lay it down as a rule that it is an important indication for immediate action; and it is here that thoracocentesis shows its most brilliant results. With respect to the *duration* of the malady Professor Potain recommends that if after the twenty-fifth day of treatment the liquid is not absorbed it is best to draw it off; but if there is a rapid increase in the fluid we ought to operate from the fifteenth to the twentieth day. Indeed, in most cases where there is no improvement by the twentieth day he would advise thoracocentesis, unless there is fever, when it is better to delay to see what the results will be, whilst we treat the fever. As to the *quantity* of the liquid to be withdrawn the better plan is to always take away the same proportion of liquid to its entire quantity. We ought to attach a manometer to the extracting instrument, to judge of the pressure. At first we find it is positive, and then it slowly transforms itself to negative pressure, descending to zero, and on below to – 1, to – 6 millimetres. Suddenly the needle will bound from – 3 for instance, to – 6 or – 8, and then we must hasten to stop the operation.—*Philadelphia Medical Times.*

RELATIONS OF CHOREA TO RHEUMATISM AND HEART DISEASE.

At a recent meeting of the Royal Medical and Chirurgical Society of London two valuable papers were read on the relations of chorea to rheumatism and heart disease. The first paper was by Dr. Herringham, who found that acute rheumatism preceded the attack in 19 out of 80 cases —immediately in 4, at some interval in 15; accompanied the chorea in 2 cases; and that pains in the joints preceded the attack in 15 cases and accompanied it in 1 case. The total number of cases in which rheumatism could be traced was 37. Injury, shock or violent burst of emotion preceded the attack in 6 cases, the interval never exceeding two days. Hard mental work or worry was found in 20 cases. These influences were not mutually exclusive; all those classed under injury, shock or emotion could alone be considered as exciting, the others only predisposing causes. In 25 cases none of them could be traced, and of these 14 were first attacks. The following conclusions were drawn by Dr. Herringham: (1) that a large number of choreic patients are liable to rheumatism; (2) that

choreic patients are nearly always of a delicate constitution; (3) that chorea is sometimes directly caused by emotion; (4) that chorea may cause permanent heart disease; (5) that it also gives rise to signs of heart disease which are not permanent.

The second paper on 80 cases of chorea was compiled by Dr. A. E. Garrod. 61 of the patients were females, and only 19 males; 49 were suffering from first attacks. Forty per cent. presented a rheumatic family history. The total number of cases in which there was a personal history of rheumatic manifestations other than endocarditis was 36, or 45 per cent.; in 15 a definite personal history of rheumatic fever; in 9 of rheumatism with swollen joints; in 1 of joint pains, confining the patient to bed; in 9 of joint pains only; 1 patient had nodules, but no arthritis; 1 had acute pericarditis. The same patient sometimes had an attack of chorea with joint pains only, and a later attack with well-marked rheumatic fever. Evidence was brought forward to show that some cases in which there was no family or personal history of rheumatism proved subsequently to be rheumatic. In 15 cases the onset was ascribed to fright, but in some instances inquiry showed that the fright followed the onset of the chorea. A definite murmur was heard in 56.25 per cent.; in 6 others the first sound was murmurish. Dr. Garrod is of opinion that the endocarditis of chorea is probably always of rheumatic origin, but that we have no evidence to show that all chorea is of rheumatic origin, a considerable number of cases being probably due to emotional and other causes.

Considerable difference of opinion amongst the Fellows was elicited by the subsequent discussion. Dr. Cheadle was inclined to think that much more chorea is rheumatic than is generally allowed; in a choreic case the absence of previous arthritis is not a proof against rheumatism, for it may have been overlooked, or it may come after the chorea. Dr. Sansom maintained there is definite proof that there are cases of chorea arising in non-rheumatic patients from fright only. It was easy to see that fright would supply a cause for the phenomena noticed in the heart. The first thing that follows on fright is pallor—an inhibition of the heart, with local contraction of the arterioles. After that there is a violent overaction of the heart, such as might be quite enough to cause injury to the valves.—*British Medical Journal.*

MODES OF INFECTION IN MEASLES AND DIPHTHERIA.

Sevestre has put on record the results of his experience as physician to the *Hospice des Enfants Assistés*, at Paris, as to the means of transmission of measles and diphtheria. He has no doubt that measles is infectious from the very first appearance of any symptoms, three days before any eruption can be seen; and of this he gives some clear cases. As to the length of the infective period he is not quite so certain, but says he has only seen one case which proved infective on the fifth day after the beginning of the eruption, and none which were infective later. His frequent practice is to give the children a bath containing corrosive sublimate on the seventh or eighth day after the beginning of the rash, and to discharge them from the hospital, with no bad results. The infectious germ first appears in the bronchi, and is transmitted by the expired air; it may travel ten feet, but not as much as thirty feet from the child's bed. It dies very quickly in the air; a room which has been tenanted by children with measles becomes non-infectious two or three hours after they have left it. It is very seldom carried by a third person, or by anything that has been in contact with the patient.

In diphtheria, on the other hand, though infection is sometimes carried by the air, it is carried more often by a third person or some inanimate intermediary. Dr. Sevestre instances a remarkable case in which, after the death of a woman from diphtheria, some articles she had used in her last illness were put away in a drawer and not touched for two years. After these two years her daughters opened the drawer and cleared it out, and a few days later one of them got diphtheria. Having satisfied himself that no other cause of infection could be found he came to the conclusion that this was a genuine case of diphtherial infection from the contents of the drawer.—*Le Progrès Méd.*

INHALATION OF THE IODIDE OF MERCURY IN TUBERCULOSIS OF THE LUNGS.

According to the *Pharmaceutische Post* for March 3, 1889, Meqùel and Rueff have recently recommended the inhalation of diniodide of mercury in tuberculosis, basing their opinions on a long series of careful observations made at the bedside. The result of this method of treatment, according to the authors, is a very satisfactory one

—often after its administration the cough is reduced, and the expectoration, even in individuals with large cavities, becomes reduced in quantity and loses its offensive odor. As a result of its continued employment it is claimed that night sweats disappear and the general condition becomes improved, the body taking on weight.

Their method of employment is to dissolve one part each of biniodide of mercury and iodide of potassium in one thousand parts of distilled water. This solution is employed in the form of a spray, at first only once daily, and later, when the patients have become accustomed to it, twice daily. If it is found that the irritation from inhalation is too excessive the solution may be reduced one-half in strength, without the result being affected, since it is claimed that this preparation of mercury will destroy bacteria in concentration of one to forty thousand.

On of the chief conditions of success is to prolong the use of the treatment, which may be carried out for a year or more without evil effect to the patient. If we admit that phthisis is due to the presence and growth of a bacillus, the use of such a bactericide would be indicated on theoretical grounds, and, as the authors' experience seems to prove that its use may be persisted in without danger to the patient, it is certainly worthy of a trial.

SURGERY.

BASSINI'S OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

At the late congress of Italian surgeons, March, 1888, Bassini described a new method of treatment in inguinal hernia, which he had successfully practiced in 102 cases. He asserts that Wood's and Zerny's operations, which have for their object the closure of the canal by cicatricial tissue, expose the patient to recurrences of the hernia unless a truss is constantly worn. This does not occur in his operation, which restores the inguinal canal to its normal conformation. His procedure is as follows: He lays bare the aponeurosis of the external oblique muscle, and cuts through it from the external ring to the internal. The neck of the hernial sac is then separated from the spermatic cord and tied or sutured at the situation of the internal ring. It is next divided and the ligated part returned to the abdominal cavity. After pushing aside the sper-

matic cord, the posterior margin of Poupart's ligament is exposed, and the musculo-aponeurotic layer, consisting of the internal oblique and transversalis muscles, and the transversalis fascia dissected off from the subserous stratum in such manner that it can be brought in close apposition to the posterior margin of Poupart's ligament. These parts are united by sutures for a distance of from 5 to 7 centimetres, commencing externally at the ilio-pubic tubercle and extending to the place where the spermatic cord enters the abdominal cavity. The cord is next replaced and the aponeurosis of the external oblique is sewed up, an opening being left that is large enough for the cord to pass through without compression. The cutaneous wound is then closed, after providing for drainage.

This operation restores the inguinal canal to its natural condition; the internal opening and the posterior wall are newly-formed, while the external ring is merely narrowed. Moreover, the canal is restored to its nominal oblique position, so that the posterior wall, which is pressed forward by the intra-abdominal pressure is supported by the anterior, and the canal is thus permanently closed. Another advantage claimed for Bassini's method is that the newly-formed posterior wall, which is composed of muscle and aponeurosis, is permanent and will not disappear like the cicatricial plug in Wood's operation. Of the author's 102 cases 95 were reducible and 7 strangulated herniæ; in 98 the hernia was complete oblique and in 4 complete direct.

The following conclusions are formulated:

1. The method is absolutely without danger.
2. It effects a radical cure in a short space of time.
3. It obviates the necessity of wearing a truss, as after the other operative procedures.—*Allgemene Wiener Med. Zeitsch. Iternat.—Journ. Surg. and Antseptico.*

IRRIGATION OF THE BLADDER WITHOUT A CATHETER, ETC.

The author advocates a method of injecting the bladder on principles similar to those of the nasal douche. The apparatus consists of nozzles of various calibres adapted to enter the meatus, and connected with a tube descending from a reservoir. By altering the height of the latter any desired pressure can be obtained, and when the pressure is low the method is a very convenient one for irrigation of

the anterior urethra. The chief advantages are the avoidance of pain and diminution of septic risk. By this means Dr. Lavaux recommends previous irrigation with antiseptic solutions in all operations about the urethra, including the dilatation of strictures. He employs it also in all varieties of cystitis, and finds it especially valuable in cases where sounding causes pain. The method is applicable to either sex. One conditions is, however, essential to its use, viz.: that the bladder shall retain its expulsive power, the fluid being allowed to enter by hydrostatic pressure, and discharged by the contractions of the bladder. In cases of painful cystitis and irritable bladder, this method has yielded excellent results in the hands of Dr. Lavaux, who injects a 4 per cent solution of cocaine, or boracic acid. By this means he claims to have rendered unnecessary the use of subcutaneous injections of morphia or vesical injec- of nitrate of silver, and he is very strongly opposed to the practice of perineal section, which he regards as much abused by English and American surgeons, and which with his method he finds needless.—*Medical Chronicle.*

EQUINO-TELLURIC ORIGIN OF TETANUS.

M. Verneuil terminates the reading of his memoir on this subject at the Académie de Médecine with the following conclusions: (1) Tetanus is transmissible not only between animals of the same species, or of different species, but also from man to man, from man to animal, and reciprocally. (2) Contagion between a tetanic horse and man may be direct or indirect, mediate or intermediate. (3) The intermediary agents are all those objects which, whatever may be their nature, come into contact with a tetanic horse and receive undestroyed the virulent element; multiplicity of contracts and objects increase therefore the circle of infection. (4) Living beings can serve as organs of transmission without their being themselves affected; but they are then under the menace of tetanus by traumatic auto-inoculation, this being affected as soon as a point of entry is open to the virus. (5) A wounded man can contract tetanus from the greater part of the objects with which his wounds come in contact; but the cases and experimental researches show that the most dangerous is the horse and all articles connected with it, and cultivated earth and some of its products. (6) The

earth only possesses a tetanic virulence after contamination from a tetanic horse. (7) Statistics show that the greatest liability attaches to those who are in habitual contact with horses. The topographical distribution of human tetanus is parallel to the equine variety. In our climates, the latter, like glanders, is the more frequent. The prophylaxis of human tetanus is therefore in the hands of the veterinary surgeons.—*Medical Chronicle.*

DIAGNOSIS AND TREATMENT OF CANCER OF THE BREAST.

Dr. J. Collin Warren (*Boston Medical and Surgical Journal*, April 11, 1889) thinks it is generally agreed at present to remove the whole gland and a more liberal supply of integument than formerly. Sometimes vertical incisions are preferred to the customary horizontal cuts, as affording better drainage. But the most important feature of this part of the new operation is the careful dissection of the fascia from the pectoral muscle, for it is in this tissue that capillary lymphatics are concealed, which form hiding places for the outposts of the disease. Careful attention should also be paid to the margin of the pectoral muscle; not only should the fascia which covers in the axilla be dissected off from it, but its lower border should be well freed from fat and connective tissue. The axilla is best opened by a cut through the skin along the edge of the pectoralis, until we come to the edge of the coraco-bracialis. Continuing down on this muscle a short distance with the knife the skin and superficial fat drop away sufficiently to disclose the great vessels lying beneath a thin fascia. Opening this fascia backward along the line we have come exposes the contents of the axilla, and especially the branches of the vessels, which can now be secured as the operation progresses. A pyramidial mass of fat is now dissected out, the apex reaching sometimes to the clavicle, the base frequently extending deeply on to the subcapular group of muscles. The glands which lie near the clavicle will have to be removed separately, and can best be enucleated from the neighborhood of the vessels by the finger. If they are numerous the pectoralis can be separated on the line selected for the ligature of the auxiliary artery below the clavicle, and the glands and some of the loose tissue can then be readily removed.—*American Journal of the Medical Sciences.*

ON INFLAMMATORY DISEASE OF THE SEMINAL VESICLES.

Mr. Jordan Lloyd reports (*British Medical Journal*, April 20, 1889) several cases of disease of the seminal vesicles, as to which he makes the following remarks:

Seminal vesiculitis is usually secondary to mischief in the urethra. It is a common accompaniment of gonorrhœal epididymitis, and originates in a precisely similar manner. When the inflammatory process has crept from the urethra along the common ejaculatory duct to its termination it is as likely to proceed along the short seminal tube to the vesicle as along the twenty-four-inch vas deferens of the epididymis. It commonly extends along both these structures. Mr. Lloyd has seen the vesicles inflame secondary to urethritis, set up by the passage of a bougie, by the presence of a stricture, and after coitus with a lucorrhœal woman. He has seen both vesicles suppurate in one case where their inflammation appeared to be primary; at least, there was no antecedent cause discoverable in the urethra. When acute inflammation attacks a vesicle it gives rise to a swelling at the base of the bladder, the greater part of which is due to effusions of inflammatory products into the perivesicular connective tissue rather than into the cavity of the vesicle itself, just as in epididymitis the bulk of the enlargement depends upon inflammatory infiltration into the connective tissue between the tubules of the epididymis.

Seminal vesiculitis, like acute epididymitis, most frequently terminates in resolution. It sometimes ends, however, in suppuration, and when this occurs pus may make its way laterally into the ischio-rectal fossa, or may diffuse itself deeply around the rectum (constituting one of the varieties of perirectal suppuration), or may discharge itself by the ejaculatory duct, or may open either into the bladder or rectum, but never into both cavities together.

The symptoms of vesicular disease are essentially those of vesicle irritability—increased frequency of micturition, attended by more or less pain. They are like those of prostatis, according to Prof. Humphrey, and consist in uneasiness about the perineum, painful defecation, frequent and rather painful micturition or retention, painful emissions at night, bloody semen, persistent gleety discharge and irritability of the bladder and sexual organs.

Zeissl says that the subjective symptoms differ but little from those of prostatis; but there is one symptom which

belongs exclusively to the disorder, namely: erections are well-nigh constant and so painful as to constitute priapism. According to Lallemand, Gosselin and Pitha, involuntary seminal emissions occur.

Objective symptoms are much more reliable, and are easily elicited by careful methodical examination. A finger in the rectum recognizes an elongated swelling beyond the prostate, running obliquely upward and outward at the side of the base of the bladder. This swelling is made quite evident to the examining finger when a metal bougie is passed into the bladder and moved from side to side across the tumor. Mr. Lloyd has demonstrated a distended vesicle in this way, and has verified the diagnosis by aspirating seminal fluid through the rectum.

The conclusions he is led to by his present experience are as follows:

1. That inflammatory disorders of the seminal vesicles and their ducts are not uncommon.

2. That they are in many respects analogous to inflammatory diseases of the Fallopian tubes in women.

3. That while occurring sometimes primarily, they are, as a rule, secondary to inflammation of the urethra.

4. That the ejaculatory ducts may become obstructed and the seminal vesicles consequently hyper-distended.

5. That termination by suppuration is exceptional.

6. That when suppuration occurs it should be dealt with by incision from the perineum rather than from the rectum.

7. That gonorrhœa is by far their most common originator.

8. That they are frequently concomitant with gonorrhœal epididymitis.

9. That they are usually diagnosed as inflammation of the prostate or neck of the bladder.

10. That while certain subjective phenomena are suggestive of these disorders their diagnosis can only be made by objective examination from the rectum and bladder.—*American Journal of the Medical Sciences.*

WOUND TREATMENT WITHOUT DRAINAGE.

The author's treatment of wounds is a combination of the methods of Neuber and Schede. It is indicated in cases in which diseased tissues have been completely re-

moved and in which healing by first intention is to be expected. Thus, for instance, the author no longer employs drainage after resections for tubercular disease of the knee-joint, since he is firmly convinced that a complete extirpation of the capsule and resection of the affected ends of the bones removes the seat of disease. He still employs drainage after hip-joint resection, although Neuber has discarded it in favorable cases. The advantages of dispensing with drainage after resections for tubercular joints are that no obstinate drain-fistulæ are left behind to impede final recovery. To dispense with drainage, however, it is not sufficient to remove all pathological tissue, but no infectious matter must have been introduced into the wound. The most careful disinfection of the instruments, hands and seat of operation is absolutely requisite to the success of the method. Neuber is certainly correct in his assertion that the frequent irrigation of wounds with antiseptic solutions during the operation acts as an irritant, and by increasing the wound secretions lessens our chances of effecting healing by first intention without drainage.

Briefly stated Rydygier's method is as follows: Scrupulous disinfection before operation. Infrequent irrigation of the wound with antiseptic solutions during the operation. Loose apposition of the margins of the wound, usually with a furrier's suture. Several layers of iodoform or corrosive sublimate gauze, usually the latter, are moistened immediately before use in a 1 to 1000 solution of sublimate and placed over the wound. If we have to deal with a wound-cavity the gauze layer is covered with a pad of gauze or cotton, which is made to exercise gentle compression. Over this are placed several layers of dry sublimate gauze and the whole is fastened down with muslin and starched gauze bandages.

Among forty-three cases treated in this manner by the author only eight failures occurred. These results, although not quite equal to those of Neuber, must be regarded as excellent in view of the unfavorable conditions at Rydygier's clinic. The cases comprised 9 ligations of arteries, 4 extirpations of large lymphomata, 1 extirpation of a parotid carcinoma, 3 excisions of the breast, 1 fibroma of the abdominal integument, 1 herniotomy, 5 resections of the larger joints, 3 arthrectomies, 1 partial resection of the scapula, 6 partial resections of tuberculous joints, 1 Wladi-

mirow-Mikulicz operation, 5 amputations, 1 excision of a fistula in the region of the knee-joint, 1 osteotomy, 1 enucleation of a neuro-fibroma.

The author emphasizes the point that even in the cases of failure no bad effects resulted to the patient.—*Prof. Dr. Rydygier (Krakau) in Archiv. für Klinische Chirurgie, Bd. 37, Heft. 3.*

CHOLECYSTOTOMY.

Dr. R. W. Stewart reports (*N. Y. Medical Journal*) the case of a woman, æt. 59 years, who had had symptoms of either biliary or renal colic for many years. They at last became so severe that operation was decided upon, and the appearance of jaundice determined the choice in favor of cholecystotomy.

An incision of about one inch in length was made in the fundus of the gall-bladder. It was noticed that the wall of the gall-bladder was abnormally thick and that no bile escaped from the incision. A calculus was found impacted in the cystic duct. The extraction of the calculus was attended with considerable difficulty, as it not only seemed to be impacted in the duct, but also encysted, for a firm fibrous membrane surrounding the calculus had to be torn through before the calculus could be seized. Once exposed, the calculus was easily crushed and removed piecemeal; it consisted chiefly of inspissated bile. After washing out the débris the incision in the gall-bladder was closed by a continuons catgut suture, and the liver allowed to assume its natural position. The peritoneal toilet was completed in the usual manner, and the abdominal wound closed with silver sutures. The patient made a rapid recovery.

The points of special interest connected with the case are: (1) The long duration of the trouble (thirty years). (2) The absence of marked jaundice at any time. (3) The presence of blood, pus and bile in the urine, which obscured the diagnosis between renal and biliary calculi. (4) The impossibility of suturing the gall-bladder to the abdominal wound on account of its collapsed state and its distance from the border of the liver. (5) The thickening of the gall-bladder, probably due to hypertrophy of its muscular fibres, caused by repeated ineffectual attempts to expel the calculus.—*Am. Jour. Med. Sciences.*

SURGICAL NOTES RELATING TO FRACTURE AT THE BASE OF THE SKULL.

In reporting two recently treated cases of fracture through the middle cerebral fossæ I wish to emphasize a few facts not heretofore definitely settled, relating to injuries of that nature.

1. That when there is a free flow of blood from the external ear it is safe to assume that the drum membrane has been ruptured, and if followed later by a discharge of a fluid limpid in color it is unmistakably cerebro-spinal fluid, and that there exists a fracture through the petrus bone.

2. That although a seeming paradox it is notwithstanding a fact that if the fracture is not attended by a free escape of the extravasated blood extending over a period of several days' duration, that just in proportion to the degree of pressure thus superimposed, will the graver or more painful symptoms manifest themselves.

3. That if the extravasated blood does not find a free egress from the cranial vault the case wil assume a less promising outlook, except when upon the cessation of the hemorrhage, free discharge of the cerebo-spinal fluid takes place, then compensatory relief is afforded.

That Hilton in his experiment upon a boy with fracture at the base of the skull, whereby he increased the flow of the cerebro-spinal fluid by compressing both internal jugular veins, and thereby increased the cerebral congestion artificially, not only verified his belief that the extravasated fluids escape freely or not, just in proportion to the degree of congestion, but the suggestion also that when the symptoms become aggravated and alarming in consequence of the arrest or interference with the discharge of the extravasated fluids the rational thing to do is to control the force and impulse of the heart.

The first of the two cases referred to sustained no external wound. The drum membrane was torn and the face partially paralyzed. The hemorrhage was very free for some days, after which the limpid subarachnoid fluid escaped, perhaps a pint daily for a period of ten days. The interruptions in the progress of the case occurred only at intervals, when we would lose control of the heart at these particular periods. The patient would very quickly experience uneasiness in his head, and shortly thereafter agonizing paroxysms and finally convulsions. Cold to the

head and heroic doses of digitalis and aconite frequently repeated would in a little while subdue the patient.

The last case treated met with the accident which resulted in a fracture through the petrus bone; sustained several ugly scalp wounds also. But the case progressed most satisfactorily under the administration of atrophanthus and aconite regularly repeated, with the addition of the ice bladder. It may be here stated that in the topical use of cold applications or the ice bladder we conclude that this practice, when pursued independent of an effort to secure cardiac sedation, can only be regarded as hurtful and irrational.—*Geo. W. Broome, M. D., in Weekly Med. Review.*

GYNÆCOLOGY.

TREATMENT OF PHLEGMASIA DOLENS.

℞. Extract of opium, extract of belladona, extract of hyoseyamus, extract of hemlock, of each 3 parts; vaseline 30 parts. This ointment to be applied along the course of the inflamed vein.—*L'Union Medicale.—Med. News.*

ANTIPYRIN IN LABOR.

Dr. Ermanno Pinzani recently made a communication to the Societa Medico-Chirurgica di Bologna, in which he gave an account of some experiments he had made with the view of ascertaining the effect of antipyrin on the strength of uterine contractions in labor. Two series of experiments were made. In five cases he simply kept his hand on the woman's abdomen for some hours, and noticed the condition of the uterus before and after the administration of the drug. In eight other cases (on which he made in all twenty-three experiments) he passed an India-rubber ball, first disinfected and then filled with a watery solution of corrosive sublimate, into the uterus. This he connected with a manometer, which gave him an accurate gauge of the pressure exerted by the uterine contractions on the fluid in the ball. Dr. Pinzani was careful to exclude irritation of the uterus by the foreign body as a source of fallacy by previously warming the fluid in the ball to the temperature of the body, and by waiting for some time after its introduction before making observations. In the first set of experiments three gramme doses of antipyrin were given by the mouth; in the second

the doses were from one to two grammes. Dr. Pinzani came to the conclusion that antipyrin relieves the pains of labor simply by lessening the force of the uterine contractions. The effect of the drug showed itself in about two hours after hypodermic injection, and four or five after administration by the mouth. He noticed that infants suckled by women who had had antipyrin given them during labor were apt to suffer from diarrhœa. Dr. Pinzani's verdict is, therefore, decidedly against the use of antipyrin in midwifery practice.—*British Med. Journal—Gaillard's Med. Journal.*

INDUCTION OF LABOR IN KIDNEY DISORDERS DURING PREGNANCY.

The author is sceptical as to the occurrence of true convulsions in connection with parturiency without an accompanying disturbance of the renal function. The cases which seem to unsettle such a belief may be only apparent exceptions to the rule, as often the urinary signs and uræmic symptoms are of the slightest and most erratic character, and often the albuminuria may be absent on the days on which the urine is examined. As to interference with gestation in cases presenting signs of renal disturbance no general rule can be formulated. The history of previous uræmic attacks during former pregnancies should always make the question of arresting gestation a prominent element in the problem of treatment to be solved, and this should be answered in the affirmative in case any evidence of the same complication should be observed in the case under consideration. The author holds that the danger of a chronic nephritis, induced by the repeated attacks of the functional renal disturbance, is too great to be overbalanced by the desire to save the child, or by its rights, as there is every reason to believe that spontaneous abortion and eclampsia will follow, if an expectant plan of treatment be adopted in such a case, and that both mother and child will be lost by temporizing after symptoms of uræmia have developed, in the larger number of cases. The histories of three cases are reported, all bearing on this point of organic renal disease resulting from successive attacks of puerperal uræmia, but only presenting symptoms during the existence of the pregnant state, two of which were fatal after premature labor had been induced, and the other

one of recovery after spontaneous abortion at the beginning of the third month, although grave symptoms of uræmia, not preceded by any urinary signs, developed in all immediately after the miscarriage, but gradually subsided. The symptoms of uræmia developed in all immediately after delivery, and the amount of albumen found in the urine before labor was insignificant or a mere trace. His own conviction is that in every case in which chronic nephritis exists, the immediate interruption of the pregnancy is strongly indicated.

In "puerperal albuminuria," the purely functional disease, action in arresting gestation should depend on the amount of albumen excreted: its tendency to increase or dimininish; the presence or absence of symptoms and the general condition of the patient. In 40 per cent. of his cases of this condition he had induced labor. Vomiting, visceral disturbances, and marked decrease in the amount of urine excreted are to be disregared as grave symptoms, and demand an exercise of great vigilance and readiness for action on the part of the physician.

In the discussion following the reading of the paper the author expressed the opinion that in the treatment of eclampsia venesection was preferable to the use of veratum virde in the majority of cases.—*Patridge in Journal of Obstetrics.*

THE BELLY BAND FOR THE NEW BORN.

The abdominal pad, as used in obstetrics, having received the condemnation of the great majority of the profession, as being not only useless to prevent post partum hemorrhage, but absolutely harmful, and the obstetric binder being looked upon as valueless except as a comfortable support to the mother's relaxed abdominal walls, we are quite prepared for innovations in the management of the new born child. Hitherto the old women's notions regarding this latter have been allowed to go almost unchallenged, but the iconoclastic spirit of modern scientific obstetrics is becoming evident even here, and this last entrenchment of mediæval obstetrical science is being forced. No doubt the poor helpless babe is tortured beyond what we can conceive by a system of treatment which in a great many cases is as irrational as it is harmful, yet little has been said or done to remedy the evils of which we speak.

In this connection the following by Dr. Ada in the *Pacific Medical and Surgical Journal* will be of interest: He says "he believes the belly band, however made, is a relic of barbarism, uncomfortable and mischievous, often causing and never preventing hernia. The inguinal region is the weakest part of the abdomen. Instead of protecting this the band, on the contrary, forces the intestines down into it. Even if the umbilical opening has not properly closed, the pressure of the band about the circumference of the body will only crowd a knuckle of intestines into the aperture and effectually keep it open, instead of allowing it to close, which it will generally do if left to itself. He would, therefore, advise that all bands, skirts, etc., that punish the baby be left off."—*Canada Lancet.*

DEVENTER'S METHOD OF DELIVERING THE AFTER-COMING HEAD.

A year or more ago a member of this society, while "pondering over many a quaint and curious volume of forgotten lore," discovered the lost art of delivering the after-coming head by the method practiced and referred to by Deventer, over 160 years ago.

In a paper read before the International Medical Congress in Washington, Dr. Bartlett described this as differing from the usual method in the following points: As soon as the child has passed so far as the base of the thorax, extractive efforts are to be made, the woman resting on her back, not in the line of the body of the paturient, but in a direction perpendicular to the floor. When the arms are within reach we are not to stop and draw them down, a thing often difficult to perform and requiring much time; but to examine and see that they are extended by the side of the head and in front of the parietal protuberance. We are then to make forcible traction in the same direction, at the same time urging the mother to bear down with all her power, and if necessary we are to make pressure upon the occipital end of the head as nearly behind the anterior wall of the pelvis as practicable. The occiput appears under the pubes and the delivery is accomplished with the head in forcible extension instead of flexion.

I have been fortunate, Mr. President, in delivering by this method, and thereby, I believe, saved the life of the child and spared the mother many minutes of suffering.

I was called the night of October 3 to attend Mrs. S. in labor at eight months. The child presented by both feet, and the labor progressed satisfactorily until the shoulders were delivered—the arms were delivered with the shoulders. I endeavored to deliver in the usual way, but in trying to reach the chin found it high up and the head extended.

Immediately we placed the woman upon her side and I made traction directly backward, at the right angle to the axis of the mother's body, and then when the occiput appeared under the pubes backward and slightly upward to the mother's head, at the same time Dr. Wadsworth, who assisted me in the case, made pressure on the head just back of the pubes; in a few moments we had the pleasure of seeing the occiput glide from under the pubes and the delivery accomplished; and to my gratification and surprise—for I feared the traction had been carried to a dangerous degree—the child almost immediately cried out. The child was of average size and has flourished since, although bottle-fed. The mother's recovery from the labor was uninterrupted, although under the most adverse circumstances.—*J. H. Chew, M. D., in Western Medical Report.*

TWO HUNDRED LABORS WITHOUT A PROPHYLACTIC DOUCHE.

Mermann (*Centralblatt für Gynäkologie*) considers vaginal douches in the hands of the average midwife dangerous. He does not believe in auto-infection. As a clinical test he conducted 200 labors in the Manheim Maternity without prophylactic vaginal douches, but with the most scrupulous antisepsis of building, nurses, students and attendants; the patients were carefully disinfected externally. The labors were at term; the placenta was expressed by Credé's method fifteen minutes after birth.

There were two deaths, one from infection contracted outside of the clinic, and one from cancer of the stomach. In the first hundred cases 21 per cent. had rise of temperature; in the second hundred, 6 per cent. The difference arose from an improvement in discipline of attendants regarding personal antiseptic precautions.

In the *Centralblatt* Döderlein replies to Mermann, stating that the obstetrician must disinfect his field of operation just as the surgeon does. Pathogenic germs are

found in the genital tract of women who have never been treated by doctors and nurses; they may remain from previous infection (specific or other), or may have come from an unknown source. Cleansing the vagina by thorough anointing with mollin and creolin and a prophylactic douche of creolin he considers the best routine practice for disinfection.

THE FORCEPS AS A CAUSE OF IDIOCY.

The *London Lancet* gives a short account of the investigations of Dr. Winkler and Bollaan as to the effect of forceps upon the brain substance. They held a number of autopsies on idiots, in one of which they found marks of the forceps on both sides of the head corresponding almost exactly to the damage done to the brain. Of ten idiots examined after death and twenty-five living, six had bilateral depressions in the skull. Drs. Winkler and Bollaan believe that depressions of the skull caused by forceps even when no fracture occurs tend to damage the cortical substance of the brain, and that this leads to general atrophy of the hemispheres, thus producing idiocy.

The exact degree of pressure that should be made with the forceps must be left to the judgment of the physician. It is a much easier matter to graduate the pressure before making traction than while traction is being made; for this reason a set screw in the handle is of great service to those who are not thoroughly skilled in the use of forceps. The base of the cranial cavity has been fractured in instrumental delivery. The investigations mentioned will assuredly do good in calling the attention of the profession to a possible danger that has heretofore received too little attention.—*Ed. Weekly Medical Review.*

DERMATOLOGY AND HYGIENE.

MODERN WATER CURE.

External applications of water are now a very essential part of surgery. Wounds are healed by irrigations of boiled water or antiseptic solutions, and by permanent absorbent dressings.

It is just beginning to be recognized that heated water is better for this purpose than cold water, and that boiled

water is quite as good as water charged with germ-destroying drugs, if not better.

Very hot water as a styptic and a preventive of shock is not so widely recognized as it should be. The hot douches used in gynæcology to remove inflammation are another important use of hot water. But here there must be great attention to detail. When we turn to the uses of water in skin diseases we come upon its first contra-indication—namelv, in diseases of which eczema is the type.

I have known cures to result from a simple avoidance of water after applications of oxide of zinc ointment and tar and rubber gloves have all failed even to relieve.

The internal applications of water are only beginning to be known at all widely, and are often not alluded to in the text-books.

The drinking of warm water to cleanse the stomach must be done methodically. Half a pint of hot water slowly sipped an hour before meals has been found by actual examination to cleanse the stomach of mucus. The most remarkable results from the cold water bath are now realized in typhoid fever.

Since Brandt published his invaluable researches as to his treatment of typhoid, and his method had become known in Germany, a partial application of it in a large number of cases reduced the mortality from 21 to 7 per cent., and where strictly followed to only 1 per cent. Not a single patient has been lost who had come under treatment before the fourth day. The idea that its usefulness consists in reducing the temperature in typhoid has been widely prevalent, and has prevented all who took this conception from realizing in what its real value consists. In these baths the benefit is derived almost entirely from the stimulus to the reflexes controlling circulation, respiration and nutrition. Lung complications and heart weaknesses do not contra-indicate their use; the heart is in fact aided. With these baths all the symptoms become lighter; there is less stupor and less sleeplessness; the nerves and nervous centres are not so apt to be affected, and the tendency to intestinal ulceration, hemorrhages and other complications is less. It is more a preventive than a curative remedy. Its statistical record is unparalled.—*Dr. Simon Baruch in the Sanitary News.*

Book Notices.

Rectal and Anal Surgery, with a Description of the Secret Methods of the Itinerants. By Edmund Andrews, M. D., LL. D., and E. Wyllys Andrews. A. M., M. D., with original illustrations. Chicago: W. T. Keener. 1888. Pages 110.

In their preface the authors do not lay claim to having produced an exhaustive treatise on the etiology, pathology and other scientific aspects of rectal diseases; they simply aimed to provide the general practitioner with a manual of the most approved treatment of all the more common rectal and anal affections. While these gentlemen have succeeded in carrying out their general purpose they have also done something which, perhaps, renders their work unique. They have appended to each chapter the secret methods of and prescriptions of itinerant pile doctors. The authors say that the "pile-doctors" have accomplished one good result, in compelling physicians to give more attention to the neglected subject of rectal diseases. Drs. Andrews have been very industrious in unearthing the secrets of the itinerants, and they, in 1876, discovered the secret of the injection of carbolized oil into piles and published it to the world. The authors' remarks on the subject of "pile-doctors" form very entertaining and instructive reading. There is also an air of originality about the book, imparted to it by several wood cuts of instruments devised by the authors.

We can only repeat what we have already said concerning these two works. They resemble each other, yet not so closely as to render either superfluous. A. McS.

Handbook of the Diagnosis and Treatment of Skin Diseases. By Arthur Van Harlingen, M. D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine; Clinical Lecturer on Dermatology in the Jefferson Medical College. Second edition, enlarged and revised, with eight full-page plates and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1889. New Orleans: Armand Hawkins, 194 Canal street. Price, $2.50.

A practical handbook, containing a brief description of

the different diseases of the skin. Especial attention is paid to diagnosis and treatment, pathology not being considered in the scheme of the work. A number of good illustrations assist in the study of the diseases and instruments described, and a large amount of information is condensed into a small space. The author has seen fit to give the pronunciation of the names of many familiar diseases, and not without reason, when we remember how many physicians there are who fail to recognize the fact that *eczema* is pronounced *eks'-ema*, and *psoriasis*, *so'-ri-a-sis*. This second edition will find even a better sale than the first, as it more fully satisfies the needs of the busy practitioner. H. W. B.

The Operations of Surgery. A Systematic Handbook for Practitioners, Students and Hospital Surgeons. By W. H. A. Jacobson, F. R. C. S. With 199 illustrations. Philadelphia: P. Blakiston, Son & Co. 1889. New Orleans: Armand Hawkins, 194 Canal street. Pp. 995; 8 vol. Price, $5.

This newcomer in the field of surgical literature deserves a warm welcome. The author in writing his book was impelled thereto by the belief, held for many years, that a work on operative surgery, which aimed at being more comprehensive in scope and fuller in detail than those already published, would be of service to practitioners and students. The outcome of Mr. Jacobson's labors to fill the hiatus which he believed to exist is a safe and valuable guide to him who would operate.

Mr. Jacobson treats his subjects in a clear, methodical manner. No space is given to unnecessary phases of a subject, but the technique of the operations is most clearly exposed. Under each operation we find—1, indications; 2, description of operation; 3, possible difficulties. A happier arrangement could hardly be conceived, for a prospective operator, who is at all conscientious, must feel that an operation is clearly indicated before he subjects his patient to the risk incurred in operating; he wishes to know exactly what to do and how to do it; and he wants to know what emergencies may arise during an operation and how to meet them. Mr. Jacobson's book furnishes the surgeon with all the aid he desires from an operative point of view.

We venture to suggest that a separate chapter on the technique of antisepsis would be well received by the readers of Mr. Jacobson's valuable work, A chapter on cerebral localization and cerebral surgery, containing a description of Prof. Horseley's method of operating on the brain, shows that the work has neglected none of the developments of modern surgery. In regard to the chapter on internal urethrotomy, we would like mildly to suggest that figures of the urethrotomes of Otis and Rogers might add something to the attractiveness of the chapter. It is true that the beautiful instrument of Rogers is of so recent introtroduction that Mr. Jacobson may not have seen it until his work was in press; but Otis' urethrotome has been long enough before the medical world to establish a permanent foothold for itself. Our author quotes from the observations of Mr. Berkeley Hill on the use of Otis' urethrotome. Our own experience, though more limited than that of Mr. Hill, still inclines us to feel that a classical work on operative surgery should not be wanting in a working description of Otis' method. A. McS.

Medical News and Miscellany.

Prof. Francis Cornelius Donders, the eminent ophthalmologist, died recently at the age of 71.

Toothache Drops.—Morphine acetate, ½-1 grain; oil of peppermint, 5 drops; phenol, 20 drops; collodion, one drachm. Apply with cotton.—*Jour. de. Méd.*

Dr. Archinard has returned from Europe, much enthused over his trip and fully convinced that bacteriology is the true stepping stone to greatness in the medicine of the future.

Prof. Thiersch of Leipzig, after having given intubation a thorough trial, has abandoned it entirely for the method of tracheotomy, by which means, he says, he can save one-half of his patients.

A case of Cæsarean section was down on the bills at one of our city clinics the other day, but the child would not wait, and came into the world by the usual route before the clinic day arrived.—*Times and Register.*

COCAINE FOR IRRITABLE GUMS.—

℞.—Cocainæ.....gr. ij.
Aquæ.....ʒj.—M.

This is an excellent remedy, when applied to the gums, when there is much irritability.—*Walker.*

NEW REMEDY FOR PEDICULI PUBIS.—

℞.—Salicylic acid..... 2 to 3 parts
Toilet vinegar..... 25 parts.
Alcohol (eighty per cent)..... 75 parts.

The parts are to be rubbed with a piece of flannel wet with the mixture. One application is usually sufficient.

FOR INFANT'S COLIC.—

℞. Ol. terebinthinæ.....fʒj.
Chloroformi.....gtt. x.
Sodæ bicarb.....gr. x.
Mucilag. acaciæ ad .....fʒiij.
M. S.—fʒj every two or three hours for a child six months old.

BEDFORD BROWN.

DR. A. BOWIE, *Lancet*, March 2, 1889, reports two cases in which cardiac failure was promptly relieved by tincture of nux vomica, in small doses every half hour There is no better remedy for cardiac failure than strychnine, given hypodermically.

NOCARD, of the veterinay school at Alfort, at the congress for the study of tuberculosis, recommended that no milk should be used without having been boiled. Goat's milk may be excepted, as a tuberculous goat is a pathological curiosity.—*La France Med.*

THE French courts have decided that a physician cannot legally sell his practice, on the ground that a medical practice is not an article of commerce. A contract to abstain from practicing in any given neighborhood is, however, valid, and to be capable of enforcement at law.

NEW YORK POST GRADUATE MEDICAL SCHOOL.—The summer term of this institution opens on June 17, 1889. The fees for this session are one-half those of the winter term, and yet the advantages in the dispensary of the school and in many of the hospitals of the city are quite as good as during the winter.

SALOL IN DISEASES OF THE UTERUS.—Dr. Vuillett uses salol in the form of cotton tampons in diseases of the uterus as an antiseptic dressing. Drs. Creyx and Jarry use equal parts of salol and amylum as a dusting powder in fungous granulation of the uterus and in vaginitis.—*Journ. de Pharm. et de Chirurgie.*

Gelsemium.—For cold in the head, while in the acute congestive stage, no better remedy. One good, large dose, say ten minims of the fluid extract, taken upon retiring at night, will effectually dispose of this troublesome and uncomfortable affection. One dose is usually sufficient.—*Southern Medical Record.*

Treatment of Gonorrhœal Ophthalmia.—Dr. Grandclement of Lyons, France, advises to cauterize the conjunctiva every twelve hours with a 2 per cent. solution of nitrate of silver, and every hour to thoroughly and completely wash out the conjunctival sac with a solution of corrosive sublimate, 1-1000.—*Lyons Medical.*

Idiosynocrasy for Quinine.—It sometimes happens that persons suffering from intermittent fevers cannot take quinine without its causing erythema, accompanied by severe itching; but if a solution of bromide of sodium, 1 in 40, be used, giving a dessertspoonful of it every two hours, quinine may be given with impunity.—*Times-Register.*

Effect of Drainage.—A striking example of the grave importance of sanitation is found in Munich. An excellent system of drainage works was finished in 1881; and, according to the *Sanitary News*, the annual deaths from typhoid fever, which had numbered 245 up to 1880, were reduced in 1881 to 40, the yearly average since that time.

For Vomiting.—When vomiting occurs without any apparent cause, Randvelplh's mixture is sometimes successful. Composed as follows:

℞. Creasote ..... gtt. xx.
Acetic aid ..... gtt. xj.
Morphia sulphate ..... gr. ij.
Water ..... ℥ij.
M. Sig.—A teaspoonful every half hour, for two or three doses.

According to the *British Medical Journal*, official statistics show that there are only 118 homœopathists in Austria out of the whole number of medical men, 7183, and that only 44 of those profess to practise homœopathy exclusively. There are none at all in the Italian districts and but 19 in Vienna. They are said, too, to be decreasing in number.

Commendatory.—Tennessee now has a Medical Examining Board, and the Governor with singularly good judgment has given to the State Medical Society the privilege of recommending three members of this Board, he to nominate the fourth regular practitioner. Elected in

such manner the Board is likely to be both competent and just.—*Times-Register.*

If you suspect you rhigh-priced olive oil apply the following test, which has been authorized by the Italian government: Mix one part of pure nitric acid with 2½ parts of the oil to be tested. Place a clean copper wire in the mixture and stir thoroughly with a glass rod. The oil, if it contains cottonseed oil, will turn red in the course of half an hour.—*The Doctor.*

Among the "provings" of the *California Homœopath* may be found this valuable contribution to science: "Nasal symptoms of Pulsatilla—Orange-colored discharge from nose, *especially from right nostril.*" And yet this nonsense has numerous professors, a large and influential clientele, schools and a literature of its own, social and political standing, and even claims scientific recognition. *Mirabile dictu!—Pittsburgh Medical Review.*

Dyspepsia.—The following is a good combination for fermentive dyspepsia:

℞. Acid carbolici ..... gr. vi
Tr. nucis vom ..... f℥ss.
Ac. nitromur. dil ..... f℥ss.
Elixir lactopeptin ..... f℥iij.
Spts. frumenti ..... f℥ij.
M. Sig. Teaspoonful three times a day before meals.

—*Dr. I. N. Love in Med. Review.—Gaillard's Medical Journal.*

Calomel in Phthisis.—In phthisis Dochman advises the administration of calomel in fractional doses, combined with opium and pepsin. Ergotin and extract of hyoscyamus may also be added to the pills:

℞. Calomel (prepared by the moist method) ..... gr. xv.
Pepsin ..... ℥j.
Simple tincture of opium ..... gtt. xxx.
Ext. phelland. aquat ..... q. s.
M. ft. in pil. no. 60.

—*Thérap. Monat.—La Gazette Méd.*

Iodoform Poisoning in Children.—Dr. Cazin reports two cases of children who had toxic symptoms after applications of iodoform dressings following surgical operations. In one of them "the symptoms took a comatose and in the other a meningitic form." After a modification of the dressings the symptoms disappeared. Dr. Cazin thinks that iodoform should be used with the greatest caution in dressing open wounds of children.—*Répert. de Phar.*, April 10.

Tonsilitis.—The following has been a very useful gargle in the treatment of tonsilitis, and is highly recommended by Dr. John Aulde:

℞. Tr. guaiac. ammoniat. ..... aa f℥iv
Tr. cinchon. comp. ..... aa f℥iv
Potass. chloras. ..... ℥ij.
Mel. desp. ..... f℥iv.
Pulv. acaciæ ..... q. s.
Aquam ..... q. s. ad f℥iv.
M. Sig. Use as a gargle, and take a teaspoonful every two hours.
—*Med. Register.*

Diphtheria vs. Yellow Fever.—During 1888, says the *Sanitary Inspector*, about one-third of the cases of diphtheria which were reported in the city of Boston died. The number of deaths was 470. In last year's yellow fever epidemic in Florida only 350 deaths occurred in about 4000 cases. With diphtheria always with us is it not about time to wake up to an appreciation of the fact that our northern scourge is worse than the southern one?—*The Annals of Hygiene.*

How to Clean Hypodermic Syringes.—Syringes, whose canals have become obstructed so that a fine wire cannot be drawn through, are cleaned by holding them for a moment over a flame; the foreign substance is thus quickly destroyed and driven off. If a wire has been rusted into the needle it should be dipped in oil before holding over the flame. To remove the rust from the interior of the canula it is well to pass oil through the canula, then heating it; then rinse it out with alcohol. The needle is then ready for use.—*Deutsch Med. Wochenschr., 1889.*

Pills for Spasmodic Vomiting (V. Audhoui).—

℞ Ext. nucis vomicæ ..... gr. xv.
Ext. belladonnæ.
Ext. opii, áá ..... gr. iij.
M. et ft. pil. no. xx.

In anæmic women with dyspepsia and spasmodic vomiting, and also uterine catarrh, one or two pills, or even more, are to be given in the evening upon retiring. Twice a day, at about 11 A. M. and 7 P. M., 30 or 40 drops of tinct. ferri. tartar are to be given in water. A vaginal douche morning and evening; an alkaline bath once a week.—*L'Union Med.—Deutsche Medizinal Zeitung.*

MORTUARY REPORT OF NEW ORLEANS

For May, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	3	2	3	2	2	3	5
" Congestive	4	2	4	2	4	2	6
" Continued,	.....	....	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....
" Remittent	1	4	3	2	5	.....	5
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	3	2	1	4	5	.....	5
" Puerperal	2	2	.....	4	4	.....	4
Typho-Malarial	2	.....	1	1	2	.....	2
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	5	1	1	5	.....	6	6
Diphtheria	3	2	1	4	.....	5	5
Whooping-cough	3	1	1	3	.....	4	4
Meningitis	10	5	6	9	2	13	15
Pneumonia	20	13	17	16	18	15	33
Bronchitis	8	3	7	4	6	5	11
Consumption	41	25	36	30	64	2	66
Congestion of brain	13	7	6	14	11	9	20
Diarrhœa	15	11	13	13	12	14	26
Cholera infantum	59	16	41	34	.....	75	75
Dysentery	11	1	6	6	10	2	12
Debility, General	1	3	3	1	4	.....	4
" Senile	17	4	10	11	21	.....	21
" Infantile	11	6	8	9	.....	17	17
All other causes	209	96	143	162	197	108	305
Total	441	206	311	336	367	280	647

Stillborn children—White, 22; colored, 22; total, 44.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for month—White, 28.68; colored, 35.57; total, 30.57.

DIPHTHERIA RECORD FOR MAY, 1889.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	4	2	6	1	1	2
2	9	1	10	2	.....	2
3	2	1	3	.....	.....	.....
4	5	1	6	.....	1	1
5	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	20	5	25	3	2	5

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—MAY.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	66.0	68.0	63.0	.47
2	66.0	74.0	59.0	.....
3	68.0	75.0	60.0	.....
4	66.0	75.0	56.0	.....
5	68.0	79.0	58.0	.....
6	70.0	81.0	59.0	.....
7	70.0	81.0	60.0	.....
8	72.0	82.0	63.0	.....
9	73.0	82.0	64.0	....
10	73.0	83.0	63.0	.....
11	72.0	85.0	60.0	.....
12	76.0	86.0	66.0	.....
13	76.0	86.0	66.0	.....
14	78.0	87.0	69.0	.....
15	78.0	88.0	67.0	.....
16	78.0	88.0	68.0	.....
17	78.0	86.0	69.0	.....
18	75.0	84.0	66.0	.....
19	80.0	89.0	70.0	.....
20	79.0	90.0	68.0	.42
21	77.0	84.0	70.0	.....
22	76.0	85.0	67.0	.....
23	76.0	87.0	66.0	.....
24	77.0	86.0	68.0	.....
25	77.0	88.0	66.0	.....
26	76.0	87.0	65.0	.....
27	76.0	88.0	64.0	.....
28	79.0	87.0	71.0	.11
29	78.0	87.0	69.0	.11
30	67.0	70.0	64.0	.06
31	65.0	76.0	54.0	.....
Sums	.	....	....	1.17
Means	7.38	....	....	.....

SUMMARY.

Mean barometer, 30.058.
Highest barometer, 30.30, 5th
Lowest barometer, 29.75, 29th.
Mean temperature, 73.8.
Highest temperature, 90.0, 20th.
Greatest daily range of temp., 25.0, 11th.
Least daily range of temperature, 5.0, 1st.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..73.0	1876..78.0	1881..79.0	1886..73.0
1872..76.0	1877..73.0	1882..74.0	1887..75.0
1873..74.0	1878..76.0	1883..74.0	1888..73.0
1874..75.0	1879..75.0	1884..76.0	1889..74.0
1875..76.0	1880..76.0	1885..74.0	1890.. —

Total excess or deficiency since Jan. 1—216.0.
Prevailing direction of wind, S.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and dete, 28 miles, N. W. and S., on 30th.
Total precipitation, 1.17 inches.
Number of days on which .01 inch or more of precipitation fell, 5.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874..... 0.22	1879..... 4.63	1884.... 4.33
1875..... 2.53	1880..... 6.58	1885.... 5.77
1876..... 7.10	1881..... 3.20	1886.... 3.07
1877..... 1.48	1882..... 6.83	1887.... 3.99
1878..... 8.11	1883..... 5.41	1888.... 9.75

Total excess or deficiency in temperature during month—4.21.
Total excess or deficiency since Jan. 1—10.71.
No. of clear days, 23. No. of fair days, 4.
No. of cloudy days, 4.
Thunder storms on 1st, 19th, 20th and 28th.
Lunar halo, on 7th.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable.

R. E. KERKAM, *Signal Corps Director.*

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

AUGUST, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should the so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompanies the paper.

On the Use of Mercuric Bichloride in a Certain Class of Cases.

By HENRY DICKSON BRUNS, M. D., New Orleans, La., Pathologist and One of the Visiting Oculists to the Charity Hospital.

A class of children, evidently anæmic and suffering from some fault of nutrition, but in whose cases iron in the various forms does but little good, often come under our observation. These little patients are flabby-faced, fairly plump, usually light-eyed, with fair hair and skins; they are thick-lipped, one or two of the cervical glands may be enlarged and their incisor teeth are defective, as a rule showing "tidal marks." They are pale and languid, but often mentally bright. In our eye and ear clinics they present themselves with running noses, phlyctenular keratitis or conjunctivitis, blepharitis marginalis or otorrhœa. In a word they belong to that class usually designated by the somewhat vague term "scrofulous." But in many individuals the ear-marks of the so-called diathesis are wanting, and a careless or routine diagnostician would fail to classify them. All that we can observe is that while these children are not thin or puny they are pale and patently

out of health. Occasionally we are first led to observe the child more closely by the failure of a long-continued course of the ferruginous tonics to do good. In the frankly scrofulous cases we prescribe the syrup of the iodide of iron, cod-liver oil, the hypophosphites, etc., but for my part I must confess with most disappointing results. I have not time to discuss the much mooted point whether scrofula is the direct descendant of syphilis or not. At any rate it is sure that these patients form a separate group from those whom we point out unhesitatingly as the victims of secondary—inherited—syphilis, little people with swollen tibiæ, interstitial keratitis and Hutchinson's teeth.

Of late years, acting upon a hint dropped by a practitioner of large experience, I have treated all these patients, whether the signs of scrofula were well marked or scarcely discernible, with small doses of bichloride of mercury, *occasionally* combined with equally small quantities of potassium iodide; and with far better results, I believe, than I ever derived from the syrup of the iodide of iron, cod-liver oil and all that genus. By small doses of the bichloride I mean doses of from gr. $\frac{1}{40}$ to gr. $\frac{1}{30}$, and of the iodide of from gr. j to gr. ij, repeated twice or thrice a day; and under this regimen we see these children rapidly gain color, flesh and vivacity. How is this brought about?

If we look over the works of, let us say, such excellent therapeutists as Lauder Brunton (Pharmacology, etc.), Bartholow (Therapeutics), Ringer (Handbook of Therapeutics) and Wood (Therapeutics, etc.) we find that our knowledge of the physiological action of mercury and the iodide of potash is less definite and thorough than we could wish. This much at least seems fairly well determined, by both the therapeutists and clinicians, that mercury and the iodides increase waste, tissue metamorphoses; and especially possess the power of breaking down and thereby aiding in the carrying off of newly-formed lymphatic syphilitic deposits, etc. That is to say, these

drugs hasten the death and breaking down into those simpler compounds necessary to insure easy and rapid elimination of all organic elements, but especially, of course, of the rapidly made and therefore improperly organized and weak products of disease.* This is confirmed, as I said, by the unusual experience of clinicians, by the emaciation which follows the long-continued use of the drugs, by the fact that iodine is set free at certain points of elimination (*e. g.*, eyes, nose and mouth); that mercury in large doses diminishes the number of the red blood corpuscles, and that the albuminate of mercury added to blood outside of the body destroys these corpuscles. Indeed this therapeutic action is what we should expect from such elements as mercury and iodine, and their compounds with chlorine and potassium. Contrary to what we should expect, however, it is found that the mercury and iodine but slightly increase the elimination of urea; a fact of which Bartholow probably offers the correct explanation when he says: "The products of the increased waste of the tissues caused by mercury are also largely eliminated by the intestinal glands."

Now observe that the class of patients of whom I have been speaking, while usually pale, are rarely thin. My idea of their physiological condition—of the condition called scrofulous, in both its major and minor degrees—is this:

The physiological chemistry of these individuals is so deranged that while all the conditions necessary to constructive metamorphosis, tissue building, are in fair condition, the process of retrograde metamorphosis, tissue destruction, is impaired. The tissues of such persons may be likened to a lot now occupied by a dilapidated building, but upon which it is desired to erect a fine new house; before the new edifice can be constructed the old one must be pulled down and removed. Perhaps it would be a more

*Ringer: Mr. John Marshall's paper on the Oleates of Mercury. "The mercury probably promotes the death and degeneration of the morbid products, and so facilitates their subsequent removal by absorption."

exact figure to say that the scrofulous body resembled a structure we wish to repair, but cannot, because, although an abundance of new bricks, mortar and timbers are at hand, we are without means to take out and carry away the old material.

In such a body, I conceive, the nutritive material is present in sufficient quantity and is well supplied to all parts, but those processes by which the old cells are chemically changed, broken down and their detritus removed, are in abeyance. The old inactive cells linger too long in positions that should have been occupied by young and energetic ones, and as a consequence in time the whole organism suffers. There can be little doubt that the lymphatic system is greatly in fault in all this. The introduction of the active agents, mercury, chlorine, iodine and potassium, into the blood brings about a change in the vital chemistry, and a change, it seems highly probable, favorable to retrograde metamorphosis. These agents also, it seems reasonable to suppose in the light of our present knowledge, stimulate the lymphatic system *. Mercury increases the red blood corpuscles, because it breaks down the old ones, thus making room for new; while at the same time it stimulates the blood-making organs—for the most part, we imagine, lymphatic.

I have now, gentlemen, briefly submitted to you what I believe to be a fact and what I know to be a theory. I hope you will aid by your observations to establish or refute the former, and by your learning and your logic to support or overthrow the latter. I say hope in either case, for the introduction of something like definite knowledge and scientific precision into the profession of medicine is the task that lies immediately before the physicians in the future, and it can only be accomplished by concert of action.

* Bartholow says boldly: "This metal" (mercury) "has a selective action on the lymphatic glandular system, and notably on the salivary glands and pancreas."

Remarks on Hypertrophy and Atrophy of Tissue.

By G. FRANK LYDSTON, M. D., Chicago, Lecturer on Genito-Urinary and Venereal Diseases, Chicago College of Physicians and Surgeons.

The paucity of literature on the subjects of hypertrophy and atrophy of tissue is something surprising if we take into consideration the large number and practical importance of those physical conditions which are either directly dependent upon a relative increase or diminution of bulk of the part affected, or present such changes as their chief objective phenomena. All the various surgical writers, to whose works I have had access, either discuss the matter in a superficial or unsatisfactory manner, or neglect it entirely.

Hypertrophy and atrophy of tissue bear a most intimate relation to irregularities of conformation and growth of various portions of the body. It is, however, not always practicable to outline the precise relation of the presumable cause to its clinical effects. It is, for example, a much easier matter to demonstrate the relation of certain acquired or congenital causes of hypertrophy and atrophy to malformations and overgrowth of limbs, than to the same conditions affecting the teeth and jaws. We are nevertheless justified in applying the same laws of aberrant growth to the one as to the other.

For purposes of study hypertrophy and atrophy of tissue may be tabulated as follows:

HYPERTROPHY.

1. Simple hypertrophy, due to hypernutrition from—

(*a*) Relative *over-exercise* of parts (simple compensatory and physiological hypertrophy), affecting non-striated and involuntary muscles, bones, etc.

(*b*) *Disproportionate exercise* of corresponding parts or special sets of muscles (affecting voluntary muscles.)

(*c*) Defective blood supply and a relative innutrition of opposing parts. (May affect voluntary or involuntary muscles, bone, connective tissue, etc.)

(*d*) Excessive blood supply from congenital *anatomical*

aberrations of vascular distribution. (May affect any of the tissues.)

(*e*) Excessive blood supply from *pathological* aberrations of vascular distribution. (May affect any of the tissues.)

2. Hypertrophy with hyperplasia, due to hypernutrition from congestion or inflammation incidental to—

(*a*) Injuries.

(*b*) Osteitis (in case of bone.)

(*c*) Periostitis (in case of bone.)

(*d*) Syphilitic deposit.

(*e*) Benign or malignant neoplasmata.

(*f*) Vascular obstruction (venous.)

(*g*) Prolonged irritation of the soft tissues. (May be produced by special poisons, foreign bodies, etc.)

ATROPHY.

1. Simple physiological atrophy, due to innutrition incidental to—

(*a*) Vascular obstruction or aberrations (arterial) of congenital origin. (Local starvation.)

(*b*) Disuse. (Conspicuously noticeable in muscle and bone.)

2. Pathological atrophy, due to innutrition from—

(*a*) Vascular obstruction (arterial) of acquired origin. (Local starvation.)

(*b*) Pressure applied from without.

(*c*) Pressure from inflammatory deposit.

(*d*) Pressure from syphilitic deposit.

(*e*) Pressure from tumors.

(*f*) Perturbations of the trophic function of the sympathetic nervous system.

(*g*) Perturbations of motor and sensory nerve supply.

(*h*) Cerebral disease.

We will now discuss as far as possible the several phases of hypertrophy and atrophy. The relation of hypernutrition of tissue to simple hypertrophy is very obvious.

Relative over-exercise of a part necessarily calls for an increased supply of nutritive material with a consequent overbuilding of tissue. This condition of affairs is seen in its elementary form in the simple compensatory hypertrophy which occasionally affects nonstriated and involuntary muscular fibre, and sometimes the bones. *This change is a purely physiological one and is aptly illustrated in the overgrowth of the heart muscle under certain conditions of obstruction.* When vegetations, atheroma, or calcification of the aortic valves exist, there is necessarily a condition of overstrain of the heart during the expulsion of the blood into the aorta at each systole. Nature interprets this overstrain (1) as a demand for increased power for the purpose of performing the normal function of the organ—*i. e.*, driving the blood into the arterial system; (2) as a demand for increased tissue resistance to the unnatural strain. As a consequence of these conditions the cardiac muscle becomes enormously hypertrophied. After a time, as a consequence of increasing obstruction, the overwork becomes so excessive that the nutrition of the organ is impaired, and it is impossible for nature to supply material in sufficient quantity and of suitable quality to withstand the strain. As a consequence there occurs (*a*) degeneration of the hypertrophied tissue and (*b*) atrophy. The pressure remaining the same, the result of this is dilatation.

We have here an illustration of relative atrophy occurring as a direct consequence of causes which primarily produce hypertrophy. The heart may be dilated and yet its walls at an early stage of the disease may be thicker than under normal circumstances. There still exists, however, a condition of atrophy which is a relative affair, and which can only be determined by contrasting the thickness of the dilated walls with a hypertrophied organ in which dilatation has not begun.

A similiar series of morbid changes prevail in the bladder when obstruction exists to the evacuation of its contents. Thus in stricture of the urethra, enlarged prostate

and vesical calculus the organ becomes immensely hypertrophied. This hypertrophy may be attended by dilatation and atrophy of the tissues at certain points. This condition of affairs gives rise to the formation of a sacculus.

Bone tissue may undergo simple compensatory hypertrophy as a consequence of an increase of nutrition incidental to excessive action of the muscles which they support.

2. Hypernutrition of tissue with consequent hypertrophy due to the disproportionate exercise of corresponding parts or special sets of muscles is very frequently met with. The voluntary muscles are affected. Thus in cases in which a limb is not exercised to a sufficient extent the corresponding member becomes enlarged. If one arm be tied in a sling for a considerable length of time the corresponding limb will be found to have enlarged to a considerable extent, as a consequence of the increased exercise to which it is necessarily subjected in the daily life of the individual. The remaining limb after an amputation undergoes this form of hypertrophy. In this instance, however, the next consideration to be mentioned comes into force. When certain sets of muscles are brought into action with relatively greater frequency than others hypertrophy will also occur. The excessive development of the muscles of the arm of a blacksmith and of the legs of a ballet dancer are more apt illustrations of this form of hypertrophy.

3. Defective blood supply and relative innutrition of opposing parts will result in hypertrophy. There is a tendency on the part of the vascular system to maintain its equilibrium, and as a consequence, when the blood is shut off from a limb, a greater than normal amount is sent to its fellow. For example, when a limb is amputated there is a relatively greater blood supply to the remaining limb. When an important artery of a limb is ligated the corresponding limb will usually become—temporarily at least—to a certain degree hypertrophied. It is obvious that in this instance the same condition which will produce in the

one limb atrophy will in the other produce hypertrophy. This form of hypertrophy may affect voluntary or involuntary muscles, bone, cartilage and connective tissue alike.

4. Excessive blood supply from congenital anatomical aberrations of vascular distribution are occasionally seen and may affect any of the tissues. Thus I recall a case in which the left arm was relatively much larger than the right, the arterial pulsation being very strong, as compared with the latter, as a consequence of pressure produced upon the right subclavian artery by what was apparently a supernumerary rib attached to the seventh cervical vertebra and the clavicle. The woman with enormously hypertrophied feet who has been on exhibition in various museums throughout the country is undoubtedly affected by a congenital aberration of vascular supply.

5. Excessive blood supply from pathological aberrations of vascular distribution may affect any of the tissues. Thus pressure produced by neoplastic growth in the vicinity of the main artery of a limb will produce not only atrophy of the affected limb, but hypertrophy of its fellow. This is due to the tendency of the maintenance of vascular equilibrium already mentioned.

In the various forms of hypertrophy just mentioned there is at least in the early stages no increase in the relative number of tissue elements. There is simple over-nutrition and consequent overgrowth of existing elements, incidental either to increased work or to an increased supply of nutrient pabulum. The process is a purely physiological one.

Hypertrophy with hyperplasia may be due to hypernutrition from congestion or inflammation produced by various causes. In this condition of the tissues it is understood that the tissue elements are not only enlarged, but there is also an increase in the connective tissue elements of the part. An increase in the size of a part may occur from simple hyperplasia without any increase in the size

of the normal tissue elements; in fact, these latter may be atrophied.

(*a*) Injuries of various kinds may produce hypertrophy with hyperplasia, temporary or permanent.

(*b*) When bone or its periosteum becomes affected by inflammation we have an actual thickening of the bony tissue and an infiltration of hyperplastic material. This is particularly noticeable in the case of the periosteum, in and beneath which we have considerable inflammatory exudate, which may subsequently form solid bone, while at the same time there exists enlargement of the ultimate elements of the periosteum itself.

(*c*) Syphilitic deposit may produce enlargement or thickening of tissues as a consequence of proliferation not only of the syphilitic material, but of young connective tissue cells in the part affected. This building up is subsequently followed by atrophy.

(*d*) Benign or malignant tumors may produce pseudo-hypertrophy of a part, or by pressure upon the blood-vessels may give rise to true hypertrophy with hyperplasia

(*e*) Venous obstruction from whatever cause may give rise to hypertrophy and hyperplasia of the part affected. This is well illustrated in the case of growths pressing upon the veins of the lower extremities.

(*f*) The effects of prolonged irritation of the tissues in conjunction with venous obstruction are well illustrated in certain cases of varicose ulcers of the leg.

Atrophy of tissue may for description be divided into (*a*) *physiological;* (*b*) *pathological.* Both forms are due to innutrition.

1. *Physiological Atrophy.*—Arterial obstruction or aberrations of congenital origin give rise to a condition of relative starvation in the tissues supplied by the affected vessel. An excellent illustration is the atrophy of the arm already mentioned as a consequence of the pressure of a supernumerary rib upon the subclavian artery.

2. All of the tissues of a limb, muscular, osseous, areo-

lar and cartilaginous, may atrophy as a consequence of innutrition incidental to disuse of the part. A limb that has been fractured and kept at rest for a prolonged period becomes, as is well-known, considerably shrunken. There are many and familiar examples of this form of atrophy which it is unnecessary to enumerate.

Pathological atrophy may result from the innutrition produced by various acquired morbid causes.

(*a*) Obstruction of the arteries of acquired origin may result from the pressure of a tumor, from injury, atheroma, aneurism, or surgical interference with its continuity. As a consequence of this arterial obstruction there occurs a condition of local starvation of the distal tissues. The limb being weaker there is necessarily associated with this cause of atrophy the element of disuse.

(*b*) Innutrition and atrophy of tissue may result from pressure applied from the exterior. Thus if a hard body be bound upon the soft tissues for a long time they will become absorbed to a certain extent, even if ulceration does not result.

(*c*) Inflammatory deposit infiltrated in and about the normal tissues presses upon them, and not only prevents their proper nourishment, but causes them to degenerate by direct irritation.

(*d*) Syphilitic deposit acts in a similar manner. Thus syphilitic neoplasia will be found to produce atrophy of the testicle in some instances, which is only manifested after the morbid deposit has been removed by appropriate remedies. An apt illustration of the action of syphilitic material is shown in the scarring of the skin without ulceration, which results from certain syphilides. Under such circumstances the normal tissue elements suffer from innutrition, produced by the pressure of the morbid material, and undergo fatty degeneration and absorption, to be replaced by connective tissue, which induces still further shrinking of the part.

(*e*) The pressure incidental to the development of tu-

mors in the tissues will produce atrophy of the normal tissue elements.

(*f*) The relation of disturbances of nerve supply to atrophy of tissue is a very important one. This is particularly true of those conditions which affect the trophic function of the sympathetic. The atrophy of the muscles in progressive muscular atrophy is an apt illustration of the manner in which affections of the nervous system will pro duce atrophy of tissue.

(*g*) Atrophy due to perturbations of motor and sensory nerve supply incidental to (1) local nervous disease or injury; (2) disease of the spinal cord; and (3) disease of the brain, are very frequently seen. Thus the various forms of paraplegia and hemiplegia are attended by atrophy of the affected tissues. In some instances of apparent hypertrophy there is really atrophy of the normal tissue elements. Thus in the pseudo-hypertrophic paralysis of Duchenne, and in certain cases of myelitis, the limbs will be apparently enormously hypertrophied, yet upon microscopical examination the normal tissue elements will be found to have undergone atrophy and degeneration.

It will be seen from the foregoing analysis of the subject that hypertrophy, atrophy and hyperplasia are intimately associated under certain pathological conditions. Under physiological circumstances, involving relative overuse of a part, with relative disuse of the corresponding part, atrophy and hypertrophy bear a certain definite relation to each other. In certain cases of congenital deformity, involving apparent hypertrophy of a part, the condition may perhaps be explained by a tendency to reversion of type. For example, in the lower orders of humanity and in certain idiots there is a marked tendency to strong and powerful jaws, with correspondingly large teeth. In some instances the reversion of type apparently affects the teeth and not the jaws, and vice versa. Overcrowding and irregularity of the teeth may result under such circumstances. Syphilis and struma bear an important relation to certain con-

genital hypertrophic and atrophic deformities. Thus a child may be born with an enormously large head (megalocephalus-macrocephalus) with relatively small and spindling limbs, affected perhaps with talipes or other deformity.

Mydriatics in Correcting Errors of Refraction.

By E. P. DAVISS, M. D., New Orleans, La.

First we will ask, what is refraction and what the most common errors of refraction to be corrected?

Refraction of the eye, according to Donders, means the effect which, by reason of its form and structure, this organ produces upon rays of light entering it *when the action of the accommodative apparatus* is *completely suspended.*

In *emmetropia* parallel rays come to a focus *upon* the retina *when there is no accommodation.*

An *emmetropic* eye is one in which, *when there is no accommodation*, parallel rays do *not* come to a focus on the retina. Such an eye may be either hypermetropic or astigmatic.

A *myopic* eye is one in which, *when there is no accommodation*, parallel rays come to a focus in *front* of the retina.

A *hypermetropic* eye is one in which, *when there is no accommodation*, parallel rays are so changed in direction that they tend to come to a point *behind* the retina.

In all of the foregoing definitions the *accommodation* is reckoned as entirely suspended and the rules or laws of *refraction* are meant to apply only to eyes in a state of *absolute* rest from the action of the accommodative apparatus of the eye, which may certainly be obtained by judicious use of mydriatics, as shown by Dr. Bruns' excellent paper in the *American Journal of Ophthalmology*, June, 1888, from which "Resumé" I beg leave, with permission of its author, to read some extracts before submitting a report of a few cases corroborative of his thesis.

Dr. Bruns' thesis, in which I concur, is that the use of

mydriatics is absolutely necessary for the accurate determination of the refractive defect in every patient below the age of 50 or 60; that in every case it is of the utmost importance "to know precisely the degree of latent H." "Both in H. and M. the cilliary muscle retains a notable degree of power long past the age of 30, and instinct and habit drive it to use this power to lessen in H. and increase in M. the degree of the refractive error we are endeavoring to discover. Lack of exactness is the opprobrium of medicine, while the boast of ophthalmology is that the use of the ophthalmoscope and test glass has well nigh raised it to an exact science."

"Yet, no one can deny that in every determination of refraction made without a mydriatic there lurks an element of uncertainty, which it was in our power to eliminate, and failure to do so is a voluntary surrender of an exact for an approximative method."

"Although I have known men who had attained wonderful skill in the determination of refraction with the ophthalmoscope, yet I believe it vain to rely upon this instrument. The unrestrained, ever-varying cilliary muscle vitiates its results as it does those of test glasses. For though the patient in the dark room ought to sit with his accommodation perfectly relaxed, he is almost certain to fix his attention on the object most clearly illuminated by the lamp. Every hypermetropic oculist must remember that it was only after long practice that he became able to relax his accommodation, and how difficult this is to do without his correcting glass; and yet this is what we demand of every hypermetropic patient, whose refraction we undertake to estimate with the ophthalmoscope." * * *

"The facts, then, seem to sustain fully the following propositions, to-wit:

1. Without the use of a mydriatic it is impossible to determine with indisputable accuracy the total amount of refractive error in cases of H. or M., the action of the cil-

liary muscle causing the former to appear less, and the latter greater than the degree present.

2. The presence of astigmatism complicates the problem. The axis of the astigmatism can be usually determined without a mydriatic, but the amount will be found to vary at each trial, and there is nothing to indicate which is the true result.

3. In regular mixed astigmatism the sources of error in both H. and M. co-exist. Hence the use of a mydriatic in the case of every patient under the age or 50 or 60 should be a "a hard and fast rule," only to be departed from when the circumstances of the patient absolutely forbid his submitting to the inconveniences entailed by the use of the drug; then it should be explained to him that it is only approximative, and the glasses prescribed merely a temporary resource. * * *"

But few authors agree with this thesis, which insists upon the use of mydriatics in every case for the accurate determination of refractive error, while almost without exception they insist upon an allowance being made for the muscular tone of the accommodative apparatus. But the results shown by Dr. Bruns' paper and also by the following illustrative cases tend to disprove the necessity of allowing for this muscular tonus, as in nearly all the cases cited the full correcting glass found under atropia (8 gr. to ℥i) was prescribed with perfect satisfaction and comfort. Though there is a certain per cent. of cases requiring very strong glasses, that will not bear the *full* correcting glass, still I think these are the exceptions and not the rule.

I also agree with Dr. B. when he says: "Convinced of the principle I have contended for in this paper it becomes our duty to insist upon the necessity of using a mydriatic in every case of refractive error in a person under 50 (unless contraindicated by some pathological condition), and to spare no pains to persuade our patients to adopt the use of glasses correcting the total error thus determined. The first rule I believe admits of no exceptions,

for, as stated, without a mydriatic an element of doubt must lurk in our results, and an intelligent optician will achieve in most cases (without mydriatics) all that we can accomplish. But once the formula found, under atropia, is registered in our book we are masters of the situation. If it becomes necessary we can modify in a reasonable and definite manner the glass which has proven unsatisfactory —we have a fixed quantity to work from."

The second rule cannot be laid down hard and fast, as there are some hypermetropes, especially victims of a high degree, who can never learn to relax the accommodation sufficiently to wear with comfort fully correcting glasses for distance, and certain ones, more especially those who begin the use of glasses late in life, must be provided with a weaker glass for near work; occasionally even they are unable to use for distant vision fully correcting glasses, and we must reduce to comfort-giving degree.

Finally, a settlement of these questions is devoutly to be wished for, and a full and free discussion of them should go far toward that end. Medicine can never be an exact science. Even into such a question as this, individuality, the expression of the immutable law of variation, enters and at the last moment gives a new and unexpected result to our calculations; but by the collection and analysis of a vast number of cases it should be possible to establish working rules, to which in certain cases a man of common sense would be able to make exceptions.

"Thus it would be brought within the power of an ordinary intelligence quickly, safely and certainly to remove what is to-day a great and ever-increasing barrier to the happiness and even success of thousands in the stern struggle for existence."

The first case I will cite in corroboration of these views is that of Dr. S., age 40, who applied to me for relief of a persistent hyperæmic condition of both bulbar and palpebral conjunctivæ, stating that he was of late almost unable to read, especially by artificial light. Oph. ex. showed de-

cided H., while as to astigmatism I was unable to state, as examination was made through undilated pupil V. o. u. $\frac{20}{20}$ some letters.

I suggested an error of refraction as the probable cause of all his trouble, and advised the use of glasses, to which he replied that he had been fitted with two or more pairs, the last by an eminent oculist of Chicago, and that he was unable to read with comfort with any of them. He stated, when asked, that mydriatics had never been used, and, yielding to persuasion, I instilled atropia 8 gr. ℥i. for three successive days, when V. (a) o. u. = 20-cc, and after repeated trials I found for RE + .4 s ⌒ + .50 cy ax 90 = 20-xx LE + 3.50 s ⌒ + 1 cy ax 90° = 20-xx. These glasses were ordered and proved eminently satisfactory, both for relief of the hyperæmic condition and for comfortable reading, and after the first few days they gave no annoyance even for distance, though at first they tended to elevate the sidewalk much to his annoyance.

1. May 5, 1888.—Mrs. C., age 26; since illness, six weeks ago, has suffered at times with double vision when attempting to read or sew, and any near work provokes a headache. V. R. E. = 20-xxx, L. E. = 20-xxx. Oph. ex. showed H. A. Atropia was instilled for three successive days, when the V. (a) R. E. = 20-L, V. (a) L. E. = 20-lxx. After repeated trials I found for R. E. + 2s ⌒ + 1.25 cy ax 90° = 20-xxx; L. E. + 2s ⌒ + 1.50 cy ax 90° = 20-xx, and these glasses were given her for constant use. At first she found difficulty in walking with them, though reading perfectly. The pavement seemed too near and all up-hill, specially going up or down steps or street crossings. A few weeks sufficed to overcome this difficulty. The evidences of accommodative and muscular asthenopia disappeared, and she was able to read or sew with impunity without headache. Her glasses are now an indispensable article of toilet. She had previously been fitted with two pairs of glasses at different times, which after a little while were discontinued as useless.

2. June, 1888.—M. E. S., age 22, school teacher, suffering from styes that have persisted for more than twelve months, with recurrent attacks of neuralgia, specially after close study. V. R. E. = 20-xxx nearly. Reads with either eye 20-xx with + 1.50 s., though could not distinguish between F. and P., while some of the spokes of astigmatic chart looked darker than others. Atropia was instilled, and after third trial the following result was obtained: V. (a) R. E. = 20-cc + 2s ⌒ — .25 cy ax 1.80° = 20-xx; V. (a) L. E. 20-cc + 2s ⌒ — .25 cy ax 1.55° = 20-xx, and these glasses were prescribed. After six weeks the condition of lids had been recovered from, and reading or other near work accomplished with ease, but the patient insisted that he could see at a distance better without them and wished a weaker pair for reading only, which, after some hesitation, was given. Later the styes returned, and headaches always resulted from late reading. The full correction was again adopted as advised, since when there has been no further complaint from eyes.

3. June, 1888.—Mrs. S., age 27, applied, complaining that she was unable to read or do embroidery without eyes burning and "crying." Reads 20-xx fairly with each eye, and rejects either plus or minus even 0.25s. Atropia was instilled for several successive days when evidences of astigmatism were apparant with oph., and V.(a) R. E. = 20-lx V.(a) L. E. = 20-l o. u.—75 cy ax 90° = $\frac{20}{xx}$, was found to fully correct refractive error, prescribed. These were only used for near work; sufficing, however, to give perfect relief from former trouble.

4. July, 1888.—V. McL., age 49, called at my office for treatment of eyes, and brings three pairs of glasses fitted without atropia, which had in turn been worn for a while and discarded. V o. u. 20-xx, though small print, could not be read nearer than fourteen inches without an effort, and eyes soon gave evidences of accomodative asthenopia.

Atropia was instilled, when patient could only read 20-c o. u.; but after repeated trials the following glasses were prescribed.

R. E. V.(a)=20-c + 3.25s ⌒ + 50 cy ax 90°=$\frac{20}{15}$. L. E. V. (a)=20-c + 2-75s ⌒ + 50 c ax 90°=$\frac{20}{xx}$, which have given entire satisfaction, and are still constantly used for near work.

There was nothing in this case to indicate the necessity of a mydriatic, except the fact that glasses prescribed without its use had failed to meet the indications.

5. Aug. 1888.—Miss L.W., age 16, school girl. Brought by her mother for a condition of occasional internal squint of left eye, which for past two years had sometimes annoyed her by giving rise to diplopia, which rendered it impossible for her to read, having first been noticed during her preparation for commencement exercises. Ordinarily it came on after night study, late in evenings, but passing off by next morning. Since June previous to her coming to my office she had been unable to exercise her eyes for any near work, while for almost a month she had found it difficult to go on the street, as the condition had become much more marked and the double vision now annoyed her, for *distant* objects as well as near work. Testing her eyes with colored glasses before each I found the image of left eye, the one deviating, was displaced downward 6 inches in 20 feet and 4 inches to the right of perpendicular line, while the right eye was the eye with which she fixed when both eyes were open.

Taking the eyes separately I found V. R. E. = 20-xx; L. E. = 20-xx some letters. She could not read ordinary print at any distance, as the lines ran one into the other, though by use of prism No. 6 she could for a short time read fairly well, both at distance of 14 inches or 20 feet. She could read with either + or — 0.50s for a short while, but soon accommodative asthenopia presented itself and both were alike rejected. A systematic course of gymnastic exercise was begun, practicing for 10 minutes on

Monday, Wednesday and Friday with prisms of varied strength, while on the alternate days the interrupted current was used, one pole being placed on nape of neck, the other over the site of each ocular muscle in turn.

Three weeks daily treatment by this combined method of gymnastics enabled my patient to overcome a prism of 8° on each eye, the double vision no longer annoyed her for distant objects, and she could read newspaper print for short periods of time with comparative ease, though still unable to read 20-xx at a distance, while I had forbidden her to attempt any near work at all.

Eight grains atropia solution was now instilled daily for one week, at the expiration of which time the refraction was thoroughly tested and found V.(a) R. E. 20-L+1S = $\frac{20}{xx}$ V. (a) L. E.=20-L + 1.50S=$\frac{20}{20}$. While o. u. she read line $\frac{20}{15}$, some letters. These glasses were prescribed, and the patient's eyes kept under influence of mydriatic for ten days longer; then allowed to wear off gradually.

She started to school again in October and has not since been annoyed with her eyes in any way. I saw her only a few days since, when she told me her glasses had been worn constantly with entire satisfaction.

The remarkable point in this case is the fact of so low a degree of H. (comparatively speaking) in a young subject, producing so much muscular and accommodative asthenopia, unless explained by the difference in the refraction of the two eyes.

6. Sept., 1881—J. P. T., age 20, student of medicine, complaining of a condition of L. E., which proved to be a small sub-conjunctival hemorrhage in ocular conjunctive to the outer side, evidently due to rupture of one of the more delicate capillaries. This he said had occurred more than once after persistent night reading, and after these indulgences his eyes burned, while the ocular conjunctive was quite congested. V. o. u.=20-xx and all glasses either+or — were promptly rejected. Atropia (8gr. solution) was instilled for 3 days, when V. (a) R. E.=20-lx V.(a) L. E.=

20-lxx, after repeated trials for R. E. + 0.75s = $\frac{20}{15}$ and for L. E. + 0.75s ⌒ + 0.25 cy ax 55°= $\frac{20}{15}$, some letters. These glasses were prescribed and worn constantly, giving perfect relief both from the inconvenience in reading and the eccemosis beneath the ocular cojunctive.

7. Sept.—J. M., age 22, bookkeeper, applied for relief from a blepharitis that had persisted for 12 months, resisting all treatment and leaving the lids deprived of almost every lash, while their margins were thick, red, ungainly enough. An error of refraction was suspected. V. R. E. = $\frac{20}{xxx}$—L. E. = $\frac{20}{xx}$. Every plus glass was rejected, but — 0.75 o. u. gave $\frac{20}{xx}$ well, though after a short time evidences of accommodative asthenopia were seen. Eight gr. solution atropia was prescribed, to be used night and morning, and on third day V.(a) R. E. = 20-l, V.(a) L. E. = $\frac{20}{xxx}$. Now, no — glass could be used, but on the contrary the following was prescribed for constant use: O. u. + 0.50 s ⌒ + 0.25 cy ax 90°= $\frac{20}{xx}$. The accommodative spasm in this case had developed what appeared to be a myopia of ¾ D.

He uses the glasses constantly, and tells me he has had no further trouble; his lids being quite recovered, with full growth of lashes again.

8. Nov., 1888—Mrs. A., age 30, who for years had been a martyr to frontal headache and neuralgia, had been sent to me by a recent convert to glasses. The lady was the picture of health, but could not since a college girl read or do needlework for any length of time, even an hour sufficing to bring on a return of her malady.

V. L. E. = $\frac{20}{xx}$ some letters R. E. = 20-xl. She was opposed to having atropia in her eyes, because as a young lady she had used it (or rather belladonna) for its cosmetic effect upon her eyes on a state occasion, and the effects had been altogether unsatisfactory and unpleasant.

Upon testing her on two or more occasions without mydriatic the following glass was given: R. E. + 1.25 s = $\frac{20}{xx}$ fairly L. E. + 75 s = $\frac{20}{xx}$.

These glasses gave considerable relief. The headaches were less frequent, while reading and needlework were accomplished with more comfort than she had ever done, though at times the glasses were very uncomfortable, and accommodative asthenopia returning, when patient yielded to persuasion; the mydriatic was instilled, and on the fourth day I found V (a) R. E. = 20-lxx, L. E. = 20-lxx. Later I prescribed for R. E. + 1.50 s ⌒ — .75 cy ax 1.80° = $\frac{20}{20}$, L. E. + 1.00 s ⌒ .25 cy ax 1.80° = $\frac{20}{15}$. She has worn them constantly ever since, except for two days at one time, when she by accident got them broken, and has only had one attack of headache since glasses were prescribed, for which she applied to me for relief.

Hospital Reports and Clinical Notes.

A CASE OF FRACTURED PATELLA.

Reported by John R. Fridge, M. D.

On the 21st day of March last, at 12 o'clock at night, I was called to see Richard Hall, colored, aged 30, who had been coon hunting that night, and after finding his dogs had driven a coon up a tree of considerable size he climbed up the tree some 50 feet, shot the coon and was making his way back to the ground, when about 25 feet from the ground he placed his weight upon a rotten limb, which broke, and he fell, striking upon the left knee. This knee fell directly on a small root, which projected some two inches above the surface of the ground, fracturing the patella transversely through the centre; also fractured the fibula at the junction of the upper and middle third, the fractured end of fibula projecting strongly against the muscles and integument, but not coming through, making only a simple fracture of the fibula, and also dislocating the head of the fibula from the tibia, and throwing the head of the fibula back into the popliteal space. The

fractured ends of the patella were drawn fully two inches apart, the upper fragment being drawn up above the knee, while the lower was drawn downwards. This was the condition in which I found my patient. I was surrounded only by some half dozen ignorant negroes, not a medical man within ten miles of me, and being left to my own resources I operated as follows:

First, I placed patient on a dining table so I could get all around him. I next administered chloroform myself; then I instructed a negro who was standing by to continue its administration, for, indeed, I could do nothing else. But before giving chloroform I gave one ounce of good whisky and morphine one-fourth grain, and atropia one one-hundred and twentieth grain, hypodermically. I then made a longitudinal incision some four inches long down to the fractured patella, and having no wire or drills with which to wire the patella together, according to Lister's operation, I cut through the ligamentous fibres of the accessory band of the vastus internus and capular ligament to both inside and outside of the limb, and lifted the fragments of the patella, both above and below, from their position. I then took a curved needle, armed with a strong double silk thread, such as is used generally by surgeons for tying vessels. I passed this above and behind the superior fragment of the patella and then passed it inside and under the lower fragment of the patella. I used three sutures like this—an internal, middle and external—which were drawn down tight while the limb was fully extended, leaving the suture ends projecting out of the incision. I then sutured the skin and reduced the dislocation of the fibula by proper manipulations, and placed three splints along the limb—one extending from the hip down to below the heel; a posterior one from the buttock extending to heel, and an external lateral one extending the full length of leg to below the foot, and then a common roller bandage around

the whole. This kept the knee quiet, reduced the dislocation, or prevented its recurrence, and kept the fragments of the fractured fibula together. There was little or no reaction following the operation and at no time did the temperature go above 100° F. I watched him carefully and kept him in bed in the dorsal position for twenty-five days, and then fearing his general health would decline I put on a plaster of Paris bandage, extending the full length of leg, clear down to foot, and put patient on crutches for two weeks longer.

To-day my patient can walk almost as well as ever. He can follow his plow all day, and says his knee is as good as ever but for a slight stiffness, which is, however, scarcely perceptible and which I think will in time entirely pass away.

Not having as yet seen anything like this described in any work or monograph I think it in many respects original. The main advantage of this operation is its simplicity. It can be done in a few seconds only and thus do away with drilling holes in the fractured patella. All one has to do is cut down to the fragments, pass the three sutures above the superior and below the inferior fragments, bring them together and the work is over. An old adage says "necessity is the mother of invention," and it was truly so in this case, for if I had had wires, drills and assistance, etc., I should have followed the old Lister operation and been no wiser after it was over.

I hope some of my professional brethren will try my little plan and report results through your journal.

Gonzales, La., June 12, 1889.

Huchard says that calomel given to produce diuresis (in doses of 4 grains four times a day for two days) is useless in cardiac disease complicated with cirrhosis of the liver, and it is positively hurtful in renal disease or heart disease associated with albuminuria.

CORRESPONDENCE.

LONDON LETTER.

[Our Regular Correspondent.]

It is a long time since any public document has excited so much interest in the medical world of London as the report of the Royal Commission on University Education in London. In previous letters some account has been given of the circumstances which led to the appointment of this commission of inquiry. The University of London, which was founded about 60 years ago, has been for half a century a University for the British Empire, not for London in particular, and degrees are difficult to obtain, owing partly to the severity of the examination and partly to the rigidity of its regulations. The net result as regards medical students in London is that very few take the degree of the London University, the majority being content with the conjoined licenses of the Royal Colleges of Physicians and Surgeons.

These two colleges applied for a charter practically converting them into a Medical University, with power to grant the medical degrees of M. B., M. D. and M. Ch. The scheme submitted to the Privy Council was curiously crude, and was strenuously opposed by the majority of the teachers in arts and laws, as well as medicine, and has been, for the time at least, defeated.

This is a great mortification to some of the most prominent officers of the two colleges, who believed that their influence was so great that they had only to ask and the privileges would be granted. The commissioners have, indeed, expressed their refusal to accept the proposition in such decisive language that it can hardly be revived. The University of London was, however, recommended to reform itself and has gone to work with a will, so that in all probability before another year is over we may see the medical scoools of London intregal parts with colleges

which give instruction also in art, science and law, of a great London University. If this comes about it will be the beginning of the end of the domination of the College of Surgeons, which has rested like a blight on the medical schools of London for well nigh half a century.

The present age is a time of crises in the affairs of the medical profession of the United Kingdom; the old order is changing; the old hierarchy of physican, surgeon and apothecary has passed away; the number of consulting physicians and consulting surgeons in London, Liverpool, Manchester, Leeds, Edinbugh, Glasgow and Dublin has multiplied greatly, and at the same time a large crop of specialists has sprung up. Not only so, but the improved education of the general practitioner is an important factor in the case. For all these reasons it is less easy than formerly to make a living as a consultant. Hence many so-called consultants are really general practitioners, and many specialists practically take any patient they can get. The general practitioner in the near towns also complains bitterly of the competition of the out-patient departments of hospitals and dispensaries. The medical schools still continue to rival each other in bidding for students, and the number of newly fledged medical men annually added to the *Register* is far in excess of the needs of the country. What the ultimate result will be no one can at the present moment pretend to foresee.

The life and death of Dr. Leonard Woodridge is an example of how we treat men who wish to study medicine from the purely scientific point of view. True, he had certain faults and deficiencies in his intellectual outfit; he was visionary, reserved, too dogmatic for a young man, and had not the faculty of clear exposition, but he was a hard worker, a good experimenter, full of originality—almost a genius. For years he worked in German laboratories; then having married (the daughter of Sir Edward Sieveking, M. D.) he had to settle down.

As a teacher and worker in physiology and pathology

he would have been in his element, but in neither direction was there any opening or any prospect of an opening, except under very onerous conditions. If he could become assistant physician to Guy's Hospital, where he received his medical education, he might be allowed to teach practical physiology and after a time be led away into seeking "consulting practice." Unfortunately the series of deaths among the younger physicians at Guy's opened the road in this direction, and he became responsible for a large share of the out-patient practice. A few months, barely more than a year, of this drudgery, combined with persevering continuance in laboratory work, exhausted his strength, and he succumbed to an attack of diarrhœa, which a man in ordinary health would have thrown off without danger. There are, in fact, very few appointments open to physiologists in this country, and the same may be said with even greater truth of experimental pathology.

There is an important section of society which is bitterly opposed to any form of scientific inquiry which involves experiments on animals. The Queen, whose influence grows year by year as that of Parliament declines, is known to be in sympathy with the extremists, and it has therefore been rather a surprise to find her eldest son heading a movement to afford some recognition to M. Pasteur for his discovery of a method of preventing the development of hydrophobia. A large number of English patients have gone to the Pasteur Institute for treatment, and it has been felt that some national contribution ought to be made. At first it was proposed to found a Pasteur Institute in England, but this has been given up in deference to the illogical sentiment above referred to. It is, moreover, a fact that a patient can reach Paris from London in nine hours, so that the necessity for a separate institution is not very urgent.

According to a statistical statement put forward by Prof. Ray Lankester, the biologist, Pasteur has now treated 6950

patients, with 71 deaths, a fact which seems to me to entirely do away with the objection, to which some of his opponents at one time attached much weight, namely, that the treatment was in itself dangerous.

Since, in a large proportion of cases, it could not be conclusively proved that the dogs were rabid, the figures above given must not be quoted as proving more. But in 1077 cases the dogs inflicting the bites were caught and killed, and their brains used for experimental inoculations, with result that rabies was thus communicated to the experimental animals. There is therefore no sort of doubt as to the fact that these 1077 persons were bitten by rabid dogs. They were treated by Pasteur's method and only 15 died—a mortality of 1.39 per cent; four of the cases, however, resorted to the treatment very late. Nobody, with even an elementary acquaintance with the subject, will contend that only so small a percentage would have died if untreated or treated by any other method than the Pasteurian. The number of deaths would have been not 15, but 150 at least.

Another interesting fact which I have not noticed elsewhere is with regard to the people bitten in Paris in 1886-87. They numbered 350; Pasteur treated 306, with 2 deaths, which is a mortality of 0.65 per cent.; the remainder were not so treated, but were subjected to various forms of medical treatment after the disease had developed, as it did in seven cases, all of whom, of course, died. The two sets of cases came from the same classes, bitten under similar circumstances. If it is assumed, as it fairly may be, that the same proportion would have ultimately developed the disease among those treated by M. Pasteur as among those not so treated then 48 or 49 would have developed the disease and all would have died, showing a net saving to be credited to Pasteur of 46 or 47 lives.

We have had a regular scare about leprosy. The noble life of Father Damien aroused public admiration, and the

Prince of Wales warmly backed up the proposal that England should do something to perpetuate the memory of his good works. A public meeting was held and the Prince, who presided, made a strong speech, and stated that a man suffering from leprosy was actually at the present time employed in the London Central Meat Market.

The statement which appears to have been made on the authority of the President of the Epidemiological Society turns out to have been a slight exaggeration; the man in question earns a precarious living by purchasing sheep's trotters and odds and ends, which he retails. Even so the fact is disquieting enough, though there are no grounds at all for supposing that the disease prevails in this country epidemically. The most careful search has only lead to discovery of a single case in which the patient can be proved to have contracted the disease in the British Isles. All other cases observed, and the number is very limited, have been in persons who have been born or who have long resided in foreign areas where the disease is epidemic. The facts and statistics published by Dr. Blanc in the New Orleans Medical and Surgical Journal were reproduced by the *British Medical Journal* and attracted a good deal of attention, as few were aware that the disease prevailed in Louisiana to an extent which, though no doubt limited, is yet considerable.

An attempt was made to exploit the death of Father Damien and the leprosy scare in the interests of the *Fortnightly Review* and of an obscure and recently-founded *Skin Hospital*. So far as the latter goes this has been put a stop to, though nothing could stop the evening papers from filling their pages with minute details about the life and malady of the meat man and even with his portraits.

The success of the annual meeting of the British Medical Association in Leeds has been somewhat endangered by postponement of the date of opening from July 29 to August 12. There will, however, be several good discussions. In the section of medicine there will be a debate

on the prognosis of cases of albuminuria, with special reference to life insurance. This will be opened by Dr. Pavy, and I hear that several well-known physicians and medical chemists are prepared to maintain the thesis that albumen is seldom or never found as a physiological product—*i. e.*, that it is almost invariably an evidence of disease. The section on obstetric medicine and gynecology will discuss placenta previa and corporeal endometritis, while the section of therapeutics has two subjects likely to attract much general interest in "New Hypnotics and Analgesics," and "Food for Invalids and Infants."

RICHMOND LETTER.

[Our Special Correspondent.]

During the past session of the University of Virginia the dissecting hall was enlarged and improved, while other improvements for the next session are contemplated. It is proposed to fit up the basement of the medical hall for the convenience of students, and a library will be placed in the building. Handsome memorial windows will probably be put in the chapel—one to Dr. Gessner Harrison, one to Dr. John S. Davis and one to the latter's father, Dr. John A. G. Davis. Other windows are also proposed.

The usual spring lectures at the Medical College of Virginia were omitted this year. The Alumni Society, organized at the close of the last session, has the following officers for the first year: President, Rev. Dr. John B. Newton, Richmond; 1st vice-president, Dr. W. L. Devany, Sussex Co.; 2d vice-president, Dr. C. W. P. Brock, Richmond; 3d vice-president, Dr. F. W. Dickinson, Marion, Va.; 4th vice-president, Dr. Geo. A. Foote, Warrenton, N. C.; secretary, Dr. W. F. Mercer, Richmond; treasurer, Dr. Edward McCarthy, Richmond. It was decided by the society to award each year a gold medal to the most proficient student in the graduating class. Dr. C. W. P. Brock was chosen as the orator for the first annual meeting, which will occur in March, 1890.

Recent appointments to the State Examining Board are as follows: Dr. L. Ashton of Falmouth, to fill the vacancy caused by the resignation of Dr. Thos. J. Moore; Dr. T. M. Bowyer of Liberty, in place of Dr. H. Grey Latham of Lynchburg, who resigned, and Dr. R. I. Hicks of Warrenton, in place of Dr. Alexander Harris, who died in May.

The coming meeting of the State Medical Society in Roanake, Sept. 3, promises to be one of the most pleasurable and profitable ever held. The president, Dr. E. W. Row of Orange, and the physicians of Roanoke, with others are actively working for the end in view. It is expected that the number of distinguished visitors will be greater than heretofore.

Dr. Benjamin Blackford of Lynchburg was unanimously elected in April Superintendent of the Western Lunatic Asylum to succeed Dr. D. B. Conrad. Dr. Blackford will prove an efficient officer.

The Medical and Surgical Society of this city has adjourned until September, and the attendance at the Academy will be thin during the summer. There is little to report so far as epidemics or unusual cases are concerned. Malarial fever and dysentery, due in a large measure to the recent unhealthy condition of the atmosphere, have been present here to some extent, but in June the summer complaint of children was less marked than usual. Cool weather in the month mentioned, and a speedier removal of infants to a purer atmosphere, largely account for the diminished death rate.

For the week ending June 10 Dr. W. T. Oppenheimer, President of the Board of Health, reported thirty-one deaths—twenty-one whites and ten blacks. This is the first instance for some time when the deaths of the whites exceeded those of the blacks. The number of stillbirths, especially among the blacks, has been unusually large of late.

Dr. Horace P. Taylor of Norfolk has been appointed assistant surgeon to Ward's Island Hospital, N. Y. Dr. Walter F. Jones (of the well-known Catesby Jones family) died June 27, in Gloucester county.

Cards are out for the marriage, on July 25, of Miss Blanche Elbert Trevilian of Williamsburg to Dr. James D. Moncure, Superintendent of the Eastern Lunatic Asylum at Williamsburg.

W. J. G.

LEADING ARTICLES.

PRELIMINARY EDUCATION.

No one can spend any length of time in Germany at the present day without being impressed with the thoroughness of education in general and of medical education in particular. A boy enters the gymnasium at the age of 7 or 8 or 9 years, and must continue in attendance for nine years, or until he is 16 or 17 years of age. Then he may enter a university and complete his study. The system of teaching in the gymnasium is quite thorough, as the writer of this has had opportunity of ascertaining. Latin and Greek are learned, *as a rule*, much more thoroughly than in our first-class American colleges; the modern languages—that is, English and French—are fairly well taught, especially the latter, for very obvious reasons; mathematics are well grounded, and the natural sciences, including physics and chemistry, are practically inculcated. The facilities for teaching are excellent and the discipline strict. A boy with ambition has great opportunities, and one without it *must* give evidence of a certain amount of industry. Nine years' attendance is required, but a student may be compelled to remain at the gymnasium a much longer time, or until he has satisfactorily stood his examination.

Having finished his gymnastic course he is prepared to

enter the university. On the threshold of the university he is confronted with a regulation which is, we think, a very wise requirement, and one that might with immense advantage be adopted in America. Suppose the young gentleman wishes to enter the university as a student of medicine. He must furnish a certificate, made out in some detail, of a satisfactory course and graduation in a German gymnasium Without this evidence of honorable dismissal from the gymnasium, or *abgangszeugniss*, as it is called in Germany, he cannot be matriculated at the university. We have heard in Germany from good authority —that, is from a gymnasium professor—that a German, who had left the gymnasium before finishing his course, but had by private work made himself quite competent to begin the study of medicine, was refused admission into the university of the place because he was unable to furnish the required certificate. Exception is made in the case of foreigners, so far as the doctor's degree is concerned, but these are debarred from the state examination, which alone confers the right to practice in Germany. In order to enter this examination an American or other foreigner must first undergo the gymnasium examination and obtain the usual certificate.

Every university in the German Empire recognizes the certificate of a German gymnasium as sufficient evidence that the student is sufficiently prepared to begin the special study of medicine, law or any other, but this evidence he must furnish.

Under such a system it is rare to find a man who is not prepared to study medicine and one, too, who has already some mental training, which is probably more valuable to him than even the accumulation of useful knowledge. The requirement of this preliminary education makes it impossible that a man can get his license to practice medicine and be not only ignorant of the most fundamental facts of physics or chemistry, but actually incapable of spelling and writing his own language correctly.

That such *is* possible in America it would be only too easy to bring evidence to prove, and it is matter of considerable comment among medical men, and even medical students in Germany, that Americans, graduated doctors, with the full rights conferred by law to practice medicine, often come to their universities, ignorant of some of the most elementary facts in chemistry and physics, which are absolutely essential to the thorough comprehension of the simplest physiological processes.

The adoption of a modification of the German plan in America would be quite practicable, and it would certainly redound very much to the good of the profession. A preliminary examination or a certificate from a respectable college of proficiency in English grammar and composition, of an elementary knowledge of Latin, of the ability to *read* one of the modern languages, preferably German or French, and of a thorough grounding in physics and in chemistry, would work no injustice to the student of medicine, and would certainly command the cordial approval of the majority of right-thinking medical men. To be sure the emoluments of the medical schools, which are not here, as in Europe, supported and maintained as governmental institutions, would be largely diminished, but we believe that any medical school, by advancing this miserable argument as a plea for the present system of conferring diplomas, would thereby confess its mercenary character and deserve to lose the support of the honorable and the cultivated of the profession.

There are other aspects of this subject of medical education deserving of serious consideration, but we have preferred to confine our remarks for the present to the advisability of a preliminary requirement which shall insure a better preparation than now obtains on the part of those seeking admission into the ranks of medical practitioners.

THE RECENT SUNSTROKES IN NEW ORLEANS.

In New Orleans the warm season is not so remarkable for the intesity of the heat as for the length of the heated term. Here the temperature never rises to 100°, but scarcely a summer passes in New York that the thermometer does not touch that mark. Our people are accustomed to hot weather, and it is well nigh impossible for a person of correct habits to be prostrated by the heat in our midst. In New York and other large cities up North, in which many thousands of people are crowded together in brick and stone buildings with no surrounding breathing space, cases of sunstroke in midsummer are quite numerous. The occurrence of thirteen deaths from sunstroke in New Orleans in a period of time extending from July 17 to July 23, 1889, has been a cause of much wonderment to our people. The records of the Board of Health show the following: On July 17, two deaths; July 18, three deaths; July 20, five deaths; July 21, two deaths; July 23, one death. The range of maximum and average temperature for ten days, as shown by the signal office, was as follows: July 14, maximum 92, average 84; July 15, maximum 93, average 85; 16, maximum 92, average 85; 17, maximum 93, average 86; 18, maximum 95, average 86; 19, maximum 94, average 86: 20, maximum 94, average 83; 21, maximum 95, average 84; 22, maximum 90, average 84; 23, maximum 91, average 84.

During this period of ten days the temperature was remarkable, first, for an average range of three degrees above what it has been heretofore; second, for the great length of time it lasted. Last year, in the latter part of July, there were four days almost as hot as those we have just lived through. There was nothing remarkable about the amount of moisture of the atmosphere during the excessively warm days; it was not fluctuating and not different from the averages of former years.

Most of the cases of sunstroke were taken to the Charity Hospital for treatment. Here it became evident that there

was another force at work besides solar heat—namely, alcohol. In one case the stomach-pump relieved the stomach of a large amount of liquid well flavored with whisky, and in the majority of the cases at least there was a clear history of alcoholic indulgences.

For many years New Orleans has enjoyed (or labored under) an undeserved reputation for extreme insalubrity. While it is true that our semi-tropical heat causes our people to be less energetic than our neighbors in more northerly latitudes, it is no less true that with a fair amount of attention to the mode of living one can enjoy as complete a degree of health in New Orleans as in any other part of the globe. The magnificent physique of the average, well-behaved, laboring man, in New Orleans, leading a simple life, shows that the climate itself is not hostile to perfect bodily development; but an abuse of one's health will inevitably lead to disastrous consequences, even in our own genial climate.

FATHER DAMIEN MEMORIAL COMMITTEE.

Our good deeds are not always interred with our bones; at all events the influence of them may sometimes live after us, as witness the effect of the death of the good priest, Father Damien. Not only has every medical journal, every lay publication, scattered abroad the good man's heroic life, but in some places, notably in England, admiration for the man is resulting in movements which, besides perpetuating the martyr's memory, will tend to prevent much of the disease and suffering for which he did so much and finally laid down his life.

In England there has been formed the "Father Damien Memorial Committee," whose objects are—first, to select some suitable method of commemorating the priest's life and death; and, second, to secure means by which the disease may be thoroughly and scientifically investigated. At present the plan is to establish two studentships of three

years' duration each. One is to be filled by a man who must devote his time exclusively to the study of the disease in Europe, England, Norway and the Continent generally; the beneficiary of the other pursuing his investigations in distant lands, more especially Asia and the Pacific Islands. An investigator may secure more than one term should it appear necessary for the completion of his researches.

Such a movement as this must command the approbation of all, and the good Father himself, were he alive, could scarcely ask anything more in keeping with his life's work. He was always trying to learn of something which would serve to "ameliorate the condition," as he would express it, of the poor unfortunates. He was the first outside of the flowery kingdom to use the Chinese remedy, *Hoang Nan*, and whenever he heard of anything that was reported to be of value in the malady he would at once ask for a supply.

But our object was not to write a further notice of Father Damien, but to express our gratification at the promotion of such a plan as noted, and we hope that it will be fully carried out. For there are many disputed points about leprosy, and especially that of its contagiousness.

Is it contagious in any sense of the term? The writer has always contended that it is inoculable and may be inherited, and heredity and inoculability are after all nearly related to each other. But he has never seen any reason to conclude that the disease was infectious or in any manner communicable from one person to another except by actual contact. In other words, it is transmissible just as is syphilis. It may be contracted by actual contact, which includes inoculability, and it may be inherited. Father Damien's contraction of the malady is no argument against this view; on the contrary, if it proves anything, it supports it; for not only was he a prisoner at Kalawao with them, but he was constantly visiting their huts, dressing their wounds, and in every way exposing himself to every form and feature of the virus; he was priest, physician and nurse, all in one.

No physician on the Hawaiian Islands has ever shown any evidence of the disease, and yet there are several, personally known to the writer, whose business it is to examine every leper before he is sent to the asylum, and who, in the last ten or fifteen years, must have critically *handled* several hundreds of cases.

Still there are many who think the disease is contagious, and especially are there cases which seem to arise almost spontaneously, and for this reason investigation as to the manner of its propagation is much to be desired.

Again, the pathology and histology of the disease may be thoroughly studied and much valuable knowledge added to our present store; but what will be the result so far as treatment is concerned? It is right here that we look for very little, save in so far as hygienic rules may be established as preventives.

Abstracts, Extracts and Annotations.

MEDICINE.

HYDROCHLORATE OF PILOCARPINE AS A SPECIFIC FOR HEPATOGENOUS JAUNDICE.

In the Polish monthly, *Nowiny Lekarskie*, May, 1889, p. 230, Dr. Wl. Witkowski (pronounced "Vitkovskee") of Ostrov writes that hydrochlorate of pilocarpine represents a specific remedy for simple hepatogenous jaundice, except cases of malignant or benign new growths of the liver. He uses the drug hypodermically, in the shape of a 2 per cent. solution, which he injects a (Pravaz) syringeful once a day in delicate persons, and twice daily in stronger ones. From the fourth or fifth day of the treatment the individual dose is increased to one-and-a-half syringeful. All subjective symptoms (intolerable itching of the skin, hepatic and gastric pain, etc.) are strikingly alleviated even after the very first injection. Catarrh of the stomach, duodenum and biliary ducts and jaundice disappear in from one to three weeks. The most striking results are observed in cases of inveterate severe catarrhal jaundice of several

months' standing, in which all ordinary means fail to bring any relief to itching, hepatic colics and gastric spasms. On the other hand, in such cases where the pilocarpine treatment does not bring about any improvement in the course of from ten to fourteen days, the practitioner can be pretty sure that he has to deal not with simple icterus, but with a case of malignant disease of the liver, as a subsequent course of events will prove. Hence, pilocarpine may be conveniently used as a means for the differential diagnosis. The drug may be resorted to in all cases where the patient's heart is found to be more or less sound. Dr. Witkowski's statements are based on nearly thirty consecutive cases of jaundice treated successfully by the remedy during the last three years. One case—his first one of the kind—is adduced in detail. It refers to a woman of 41 suffering from severe nephritis complicated with wandering enlarged liver, gall-stones, ascites, œdema of the lower limbs and recurrent jaundice of four years' standing. The patient had been previously treated more or less unsuccessfully by Carlsbad waters, Priessnitz's compresses, abdominal belt, etc. Pilocarpine was resorted to in the dose of one-sixth of a grain, once or twice daily. The results surpassed all expectations. In three weeks the patient was practically well. The woman enjoys good health ever since (three years have elapsed).—*Prov. Med Jour.*

VERATRUM VIRIDE IN DIPHTHERIA.

In a case of malignant diphtheria occurring in a child four months old Dr. Boyol tried the tincture of veratrum viride internally, one drop every two hours. About the third or fourth dose he found that the pulse had fallen from 180 to 89 beats, while the false membranes had melted with exceptional rapidity, so that in 24 hours the occlusion of the nose and larynx had disappeared, permitting the child to take the breast. Dr. Boyol has since tried veratrum in not less than 60 cases, and has always had excellent results from the careful administration of the drug in appropriate doses. Experience has shown him that the tincture should be pushed when there is marked increase in the frequency of the pulse-beat. If the frequency of the pulse diminishes under the use of the drug the rapidity of the circulation is much reduced and the lo-

cal inflammatory processes are mitigated. Moreover, the organism seems to acquire a certain resistance to the later progress of the disease and against the spreading of the false membrane.

SULPHONAL.

Verhoogen (*London Medical Recorder*, May 20, 1889) insists on the excellent results obtained with sulphonal in the treatment of certain cases of insomnia in which opiates were formally contraindicated. In doses of 15 grains, administered *per rectum*, sleep invariably supervened within twenty minutes, and lasted six hours or thereabouts. The patients complained of no disagreeable after-effects, and improved in condition. Occasionally it was found necessary to repeat the dose during the night. He mentions the case of a patient who was given the drug in this way for six weeks consecutively. The injection was usually given at 9:30 P. M. On several occasions she fell asleep before the time arrived for the injection, and this was consequently dispensed with, but it was always easy to see from her fatigued and comfortless face in the morning that the same amount of repose had not been experienced as with the drug. He asserts that no contraindication exists to the use of sulphonal. Cardiac and arthritic cases, renal and dyspeptic cases, are all amenable to its influence under all circumstances, and neither intolerance nor tolerance are to be apprehended. The usual dose is a gramme (15½ grains), and this always proved sufficient to induce sleep. It is not easily taken by the mouth on account of its relative insolubility, and it is best given suspended in tepid water *per rectum*, though it is rarely possible to secure that all the drug shall find its way into the gut. Some difference has been noted in the effects obtained from the drug, which, it is suggested, may be due to variations in the quality.—*Therapeutic Gazette.*

SPINAL LOCALIZATIONS AS INDICATED BY SPINAL INJURIES IN THE LUMBO-SACRAL REGION.

Wm. Thorburn (*Brit. Med. Journ.*, 1888, i. 993) has compared a number of clinical records of cases of spinal injury, in the endeavor to determine the functions of various nerve-roots of the crural plexus. In a previous publication he discussed the cervical region in the same

way. He describes the clinical material at his disposal as of two kinds: First, injuries of the cord itself, in which, given the region of the injury and the extent of the paralysis, we can deduce the region of origin of the affected roots; second, injuries of the cauda equina, in which we may localize the more completely paralyzed nerves at a lower level than those which escape.

The analysis of a number of cases of spinal injury belonging to both these classes leads him to certain conclusions as to the functions of the various nerve-roots. These he summarizes in a useful table, which we copy nearly as it stands.

Root.	Motor Distribution.	Sensory Distribution.
First lumbar.	None.	Ilio-hypogastric and ilio-inguinal nerves.
Second lumbar.	None.	Outer [?] and upper part of thigh.
Third lumbar.	Sartorius; abductors of thigh; flexors of thigh.	Anterior aspect of thigh below second lumbar.
Fourth lumbar.	Extensors of knee; abductors of thigh.	Anterior part of leg.
Fifth lumbar.	Hamstring muscles.	Part of back of thigh.
First sacral.	Calf muscles, glutei peronei.	A narrow strip on back of thigh; back of leg and ankle; sole; part of dorsum of foot.
Second sacral.	Extensors of ankle; intrinsic muscles of foot.	
Third sacral.	Perineal muscles [except levator ani.]	Perineum; external genitals; inner and upper part of back of thigh.
Fourth sacral.	Bladder and rectum.	

—*American Jour. Med. Science.*

THE DYSPEPSIA OF PHTHISICAL PATIENTS.

Klemperer (*Berl. klin. Wochenschr.*, No. 11, 1889) concludes as a result of careful investigations that in the first stage of phthisis the hydrochloric acid secretion of the stomach is normal or increased, and that consequently in incipient phthisis the administration of hydrochloric acid is to be avoided, though proper in the terminal dyspepsia of the disease. The use of alkalines is perhaps indicated for the suppression of pyrosis, but this opens the door to fermentative processes, and thus increases the irritation of the mucous membrane. Especially advisable is the prescribing of drugs which are suited to remove the gastric weakness. Such are alcohol in any form, particularly cognac, and especially bitter drugs. According to

the author's latest researches creasote takes the first place among these; it should be given in capsules or pills, or in alcoholic solution, a quarter of an hour after meals, three times a day, in doses increasing from 0.005 to 0.2 gramme. It possesses a remarkable actior on the diminished motor power of the stomach; the alcoholic solution being the best when it is well borne. The author believes that the favorable results so generally experienced from the use of creasote in phthisis are not due to a problematic antibacillary action, but to its power of increasing the strength of the stomach. Besides creasote, strychnine, rhubarb, gentian, etc., are useful, as are electricity and massage. Of especial importance in the dyspepsia of phthisis is the condition of the general nutrition. If the body-weight increases and the character of the blood improves one can be sure that the evidences of dyspepsia will disappear. Too much attention, however, must not be paid to the subjective sensations of the patient in the initial stage of the pulmonary disease; as the appetite comes to the phthisical with the effort to eat. Finally, it is to be borne in mind that the motor function of the stomach is under the control of the nervous apparatus, which in its turn communicates with the brain. Psychic treatment is, therefore, to receive proper consideration.—*American Jour. Med. Science.*

SUSPENSION IN THE TREATMENT OF PROGRESSIVE LOCOMOTOR ATAXY.

Prof. Charcot recently gave a clinical lecture on vertical suspension of the body in the treatment of progressive locomotor ataxy and some other diseases of the nervous system. This novel method of treating tabes dorsalis was first initiated by Dr. Motchoukowsky of Odessa, who published a *brochure* on the subject in 1883; but it received no attention in Western Europe till 1888, when Prof. Raymond of Paris, while on a scientific mission in Russia, was struck with the results presented to him. Dr. Ouanoff, his fellow-traveller (a pupil of the Salpétrière clinic), showed its practical application there. In Motchoukowsky's pamphlet considerable improvement was ascribed to it in twelve tabetic persons; also in various neurasthenias, independent of tabes, in which the sexual functions were reëstablished by this treatment. The patient is suspended for about three minutes by a Sayre's apparatus, and the arms of the

patient while suspended are raised every fifteen or twenty seconds to increase the traction on the spinal column.

Charcot's tabetic patients numbered eighteen, with 400 *séances*. Of these four were only suspended each three times; the rest went on regularly. Of these Prof. Charcot says: "The remaining fourteen have experienced in varying degrees an improvement, which in eight has been quite remarkable." All were pronounced tabetics. Walking is improved to begin with; the patients say they can walk better after the first suspension. This improvement at first lasts only a few hours, but after eight or ten sittings persists. After twenty or thirty sittings Romberg's sign disappears. Then vesical troubles are lessened or removed; also the lightning pains. Sexual impotence gives place to sexual desires and erections. (Experiments by Dr. Ouanoff on healthy persons have shown that this method has an exaggerating effect on virility.) The cotton-wool feeling in the feet gives way more or less to healthy sensations, and in general the whole health improves. Every patient steadily improved, with one exception, a young tabetic, aged 32, who at first improved, then fell off, then again improved somewhat. But the knee-jerks have not reappeared in any of the patients after three months' treatment, nor are the pupillary symptoms altered. As to other diseases, a young female with Friedreich's disease was greatly improved by the treatment. In two neurasthenic and impotent patients the sexual functious were re-established. But a patient with disseminated sclerosis was made worse, for, after two sittings, a spasmodic paraplegia appeared, which, however, gave way in three days. Further trial of this method is required before an opinion of its value can be given. The results are most encouraging so far, and at any rate perfectly harmless.

After the favorable report of Prof. Charcot on this treatment requests were daily received at the Salpetrière for an account of its practical application. In answer to these Dr. Gilles de la Tourette has written the article of which this is an abstract, and begins by reminding us that the treatment was first tried in 1883, by Dr. Motchoukowsky of Odessa. The author has superintended about 800 suspensions of forty patients. The suspension is easily effected when conducted in the proper way, but that way must be known. Sayre's apparatus is the one made use of (no corset is required), and its construction is well known.

The weight of the body is borne partly by padded broad straps, beneath the chin and occiput, forming one piece, and partly by two separate shoulder-straps. The rings supporting the head-straps are capable of adjustment, and the fixation of the apparatus generally requires great care. The size and shape of the patient's head must be taken into account, and soft pads may be interposed where necessary. The length of the shoulder-straps is a most important consideration. If too long the brachial plexus is compressed, and tingling and pain in the arm is set up; if too short, on the other hand, the muscles of the neck are stretched to an intolerable degree. Two or three trials have to be made before the exact disposition of each strap and ring for a particular patient is known. The operator then very quietly raises the patient from the ground by the pulley just far enough to prevent the extended toes from touching the floor; he is then steadied to prevent oscillation, and the operator fixes his eyes on a second's watch to determine accurately the duration of the *séance*. While the patient is thus suspended he is directed to raise his arms gently from time to time; if this can be done it renders the suspension and traction more efficient. The average time of suspension is three minutes, and it ought in no case to exceed four. At first, indeed, half a minute is enough, and the time is gradually prolonged at each subsequent sitting, till, after the sixth or eighth, the period of three minutes is attained. Even here individual susceptibilities must be taken into account—*e. g.*, a heavy patient will not bear a long suspension so well as a lighter one. When the operation has been well conducted no painful traction of the neck-muscles is felt next day. Neither pain nor even fatigue should be occasioned.

Daily "sittings" are harmful; every other day is quite often enough. The patient must be let down with extreme gentleness, and not by a succession of shocks. He should be supported while being relieved of the apparatus, and should afterwards rest a short time in an arm-chair placed ready. The patient's costume is not important. He should take off his coat before the suspension, and his neck should be bare, or at any rate not compressed. The traction by the operator should of course be made from the upper pulley, not the lower, if the portable tripod suspension apparatus is used. But this tripod is not the best arrangement here, though very convenient in applying a plaster-

jacket; for the patients may grasp one or other leg of the tripod with convulsive force when they find themselves off the ground, and may even overturn the apparatus. As to the duration of the treatment, this is a point not yet settled. Patients who began it four months ago at the Salpetrière are still attending there for it, and appear to improve steadily (*et semblent s'améliorer d'une façon progressive*). In any case, as Prof. Charcot says, the treatment may be boldly tried with perfect confidence as to its harmlessness when the proper procedure is adopted.—*London Medical Recorder*, March 20, 1889.

THE PURGATIVE EFFECTS OF GLYCERIN ENEMATA AND SUPPOSITORIES.

In the *Novosti Terapii*, No. 4, 1889, p. 49, Dr. F. F. Mïlëëff of St. Petersburg details his extensive experience concerning the use of small glycerin enemata and suppositories in habitual constipations of various kinds. The main results of his observations may be condensed as follows:

1. In those cases where accumulation of fæcal masses takes place in the lower portion of the large bowel a rectal injection of 1 or 2 drachms of pure glycerin in an adult, and of ½ to 1 drachm in a child, is invariably followed by stools occurring in two or three minutes.

2. The fæcal masses do not show any signs of liquefaction or even softening; still, owing to lubricant properties of the drug, the act of defecation proves to be fairly easy and comfortable.

3. The enemata do not give rise to any slightest painful or unpleasant sensations about the rectum. Neither do any phenomena of rectal irritation supervene, even on a prolonged employment of the injections.

4. The purgative effects of glycerin should be attributed to its stimulating action on the nervous and muscular apparatus of the large bowel, which action is probably determined by the drug greedily extracting water from the intestinal mucous membranes with its nerve fibres. The desiccation irritates the latter, and thus excites a reflex contraction of the intestinal muscular coat. The hypothesis finds a strong support in the fact that any dilution of glycerin with water markedly weakens its purgative action, and that the more in proportion the larger is the amount of water added.

5. Glycerin enemata are especially indicated (*a*) in the constipations of pregnancy, where ordinary water enemata are inconvenient on account of their considerable bulk, which causes discomfort to the woman; and (*b*) in infantile constipation caused by unduly prolonged feeding on milk alone, and associated with fæcal accumulations in and consecutive distension of the sigmoid bowel. In cases of the kind glycerin enemata are very useful on account of their energetic action on the intestinal muscles, and convenient because of their small bulk.

6. As to glycerin suppositories (containing half a drachm of the drug each), they are said to act well (in five minutes or so) only in such cases where no pure glycerin enemata were previously employed, otherwise they remain inactive. Hence, Dr. Mïëëff is accustomed to commence the glycerin treatment of constipation with suppositories (a piece at bedtime), and passes to enemata as soon as the former cease to secure the result desirable.

7. As regards the apparatus for the enemata Dr. Mïëëff thinks that any special contrivances are quite superfluous. At all events he uses for the purpose an India-rubber urethral syringe, with a piece of thick-walled elastic-tube on the nozzle.

[*Cf.* Dr. A. S. Polübinsky's paper on the subject in the *London Medical Recorder*, March, 1889, p. 91. In the *British Medical Journal*, Dec. 22, 1888, p. 1424, Dr. George Grewcock of Brighton says that he "found out quite accidentally a novel method of applying glycerin," which is "equally efficacious with the clyster . . . If a piece of cotton-wool alone, the size of a nut, is well saturated with glycerin and inserted as a suppository, in a short time a copious motion is produced." Certainly it would be worth while to give a fair trial to the plan which makes superfluous any appliances, including Dr. Mïëëff's urethral syringes.— Rep.] — *London Medical Recorder.— Ther. Gazette.*

TREATMENT OF GALL-STONE SUCCESSFUL BY MASSAGE OR "PUMPING THE LIVER."

As the treatment of gall-stones is now being freely discussed in the medical journals I have a case in mind that might be of interest to the profession: The patient, a doctor, 50 years of age, from exposure in November,

1885, was suddenly stricken down with the usual symptoms of obstruction of the gall-duct. Of course jaundice followed. He was treated eleven weeks before I saw him. From his attendants I received the history of his case and their treatment. The treatment was so full and complete that there was nothing I could think of to suggest in the therapeutic line that they had not used. I therefore suggested that we apply the principle of massage to the case. This we did, and after we were through with the movements it reminded me so strikingly of pumping that I called it "pumping the liver." I proceeded by placing my hands on the ribs over the liver, making firm and quick pressure downwards, letting up and repeating, say for five minutes, and then requested that it be repeated two or three times during the night. Up to that time no trace of bile had been discovered in the dejections. The following day a large quantity of dark bilious matter passed from the bowels, soon followed by scores of gall-stones. Improvement set in from that day and continued for at least a fortnight, when from some unknown cause another blockade was on hand. The pumping process was resorted to again with the same desirable result as on the former occasion. After this the patient experienced no further trouble and made a complete recovery. The principle of the treatment and its application laid down are so simple, and the results in the case above reported were so satisfactory that the treatment suggested seems worthy of further trial and reports from those who may adopt it.—*Dr. J. A. Comingor in Va. Med. Monthly.*

GOLGI ON THE DEVELOPMENT CYCLE OF MALARIA PARASITES IN TERTIAN FEVER.

After a few interesting remarks on his previous contributions to the life history of the germs of quartan fever Prof. Golgi enters into the substance of his thesis, which is in the main that tertian fever is caused by amœboid parasite whose life history differs from that of the quartan germ, and can be traced pretty definitely in the red blood corpuscles. In a typical tertain fever the red blood is methodically examined every few hours, and the germ so traced from it first appearance till the occurrence of cleavage. With cleavage of the germs the fever commences, the onsets corresponding with cleavage period of the germs, and the intervals with their growth in the red blood corpuscles.

In the development of the parasites there are three stages.

Stage 1.—Examine the blood of a patient who has had an attack of tertain fever some hours before (say he has had the attack at 1 A. M., ending towards 12 A. M., examine the blood after 2 P. M. up to the evening), and you will find the germs in the red blood corpuscles. The little mass of protoplasm, one-quarter to one-fifth diameter of a red blood corpuscle at this stage, is distinguished from the cell substance by its white color, brilliant refraction and lively motion, rather than by any definite outline. In fact, its lively amœboid movements are characteristic. At first, and that without any warm stage, these amœboid movements are so rapid that it is difficult to make out the various shapes assumed by the parasite. The tiny bright protoplasmic mass sends out its branching pseudopodia, continually extending and withdrawing them, in all directions, through the substance of the corpuscle, out even to its very circumference. These pseudopodia assume sometimes a netted or even granular appearance, but this is due to their crossing each other, and possibly, in some cases, to the presence of two or three parasites embedded in the same corpuscle. At this stage the parasites contain as a rule no pigment, or at the most only a few granules, and these mainly at the club-shaped ends of the pseudopodia. Those with least pigment are most lively. At this stage also the affected red blood corpuscles are not so easily distinguished amongst the others as afterwards. They are only a little larger and keep there rounded appearance longer than the general mass.

Stage 2.—This stage is by no means so well defined, and simply includes all the changes undergone by the germ during the course of the day intervening between the two attacks. During this period the parasites become considerably enlarged, so that they take up one-half to two-thirds of the red blood corpuscle. Their outline is more distinct, they contain more pigment and their amœboid movements are less lively. During these changes the blood corpuscle gradually loses its hæmoglobin, which is found as granules of melanin in the substance of the parasite. A few hours before the fever begins, the red blood disc has become so pale a halo round its parasite that with difficulty a faint trace of a circle can be made out bounding the colorless stroma.

Stage 3.—This includes the various changes leading to cleavage, and is important inasmuch as the fever—not the rigor—follows sharply after the cleavage. Of this cleavage, diagnosable with ease from that of quartan fever, there are three kinds. Into these, which he figures beautifully in a plate accompanying the paper, it is impossible to enter fully here. In the main, cleavage takes place by the parasite getting rounded and forming a ring of cells with the melanin pigment granules lying in a mass inside. The cells, at first oval, get rounded, and finally free of each other. They leave the pigment behind to be devoured by the leucocytes —at that time very numerous in the blood—whilst they themselves, it is supposed, enter fresh red blood corpuscles to repeat a series of transformations similiar to that which produced them.

But all cases of tertian fever are not typical. How are the exceptions to be explained? In such cases Golgi has found more than one swarm of germs, the two or three sets undergoing cleavage at different times.

In this short abstract many inportant points have been omitted, such as the differential diagnosis from the germ between the quartan and tertian fever, and the problem of their co-existence, only these parts are as yet somewhat *sub judice.—Chronicle.*

A NEW ELIXIR OF LIFE.

Twice in the month of June, 1889, has Dr. Brown-Séquard made communications of a most extraordinary nature to the Société de Biologie of Paris. The statements he made, as the *British Medical Journal*, June 22, says, recall the wild imaginings of mediæval philosophers in search of an *elixir vitæ*. He obtained by compression and washing from the testicles of young animals a fluid which he injected into the subcutaneous cellular tissue with a hypodermic syringe. He performed the experiment on himself, repeating the injection almost every day for a fortnight, with results which appeared to him to warrant an immediate communication to the society. He stated that he had experienced a rejuvenescence of all his forces, physical and psychic; all that had become difficult or impossible for him owing to advancing age became once more easy, and he found himself possessed of the same vigor as he had had thirty years before. He could undergo fatigue

in standing, traveling and in intellectual labor previously impossible; the functions of defection and micturition also were discharged with greater ease. MM. Féré and Dumontpallier, in commenting on M. Brown-Séquard's statements, observed that they would have to be rigidly tested and fully confirmed by other self-exprimenters before they were likely to meet with general acceptance.

This communication will strike all thinking men as it does the contemporary from which the above is quoted. The reserve of Dr. Brown-Séquard's colleagues are politely and temperately expressed; but his statements are so remarkable that it is hard to see how they could be so patiently passed by.

And yet a community which could accept the style of argument adopted by Pasteur in regard to his anti-rabic inoculations is hardly the one to refuse a hearing to even so strange a proposition as the one of Brown-Séquard.—*Medical Surgical Reporter.*

TOXIC EFFECTS OF ANTIPYRIN IN CHILDREN.

The marked success which followed the introduction of this drug in the treatment of whooping-cough has now led to its general use in that distressing affection. Its administration, however, requires caution, as it possesses to a certain extent a cumulative action: whilst the following cases confirm the truth of Dujardin-Beaumetz's statement that it is a dangerous remedy, and ought to be given with especial caution to children. Tuezek reports the case of one of his own children, a strong, healthy boy, 4 years old, who had never had convulsions, rickets or worms. He had been suffering from pertussis, and had taken for three weeks with marked benefit 18 grains of antipyrin daily, when he fell into a condition of somnolence, which had been preceded by lassitude and vomiting and passed next day into sopor. In this condition he showed grave motor systems—paroxysmal epileptic attacks, some of which were complete, with general convulsions following in regular order, others incomplete, with partial unilateral twitching—contraction of the muscles, chattering of teeth, and throwing the limbs about, a peculiar type of breathing somewhat resembling Cheyne-Stokes, cardiac irregularity and dilatation of the pupils. At the same time a macular eruption of scarlet-

red appearance made its appearance with subnormal temperature and slow tense pulse. On the third day consciousness returned, the attacks lessened, and from the fourth day there was no return. The antipyrin was discontinued at the outset of the seizure. No doubt was here entertained that the case was one of antipyrin poisoning, this being confirmed by the characteristic eruption and the favorable termination. (*Berlin. klin. Wochensch.*)

In an extensive use of antipyrin in the treatment of whooping-cough Lœwe met with three cases where the action was injurious and attended by alarming symptoms. In one child of fourteen months a state of great excitement set in after the first dose. The attacks were increased and accompanied by vomiting, the child crying continuously, and being thought to be dying. Hydropathic treatment relieved the condition. A second infant, six months old, after the second or third dose showed cyanosis and collapse, which the same treatment removed. To satisfy himself as to the drug being the cause of these symptoms Lœwe administered a dose himself, when they shortly set in again. In a third child, 2 years of age, the attacks appeared to be increased by antipyrin; so that besides laryngeal spasm and vomiting, general convulsions of marked severity followed the use of the drug.—*Therapeutische Monatshefte.*

DEATH FROM SUSPENSION IN LOCOMOTOR ATAXY.

Dr. Gorecki reports a case where a man, æt. 40, who had had some symptoms of locomotor ataxy for five years, after reading a popular article in the *Petit Journal* on its possible cure by suspension, bought the apparatus and attempted his own treatment. He had almost entirely lost the use of his legs, but no symptoms of mental incapacity had been observed. After the first seven suspensions there was some relief; they had lasted two or three minutes every day, and had been supervised by his footman. During the eighth trial, whilst he was still in the air, he had lost all power of speech and hearing, but kept his sight, intelligence and power of movement. A doctor was sent for, who tried to restore him with subcutaneous injections of ether, etc. Swallowing was impossible, and he went from bad to worse. The same evening he lost his sight,

and then paralysis of the arms and thoracic muscles led up to death from apnœa within twenty-four hours. This is the first recorded case of death from this treatment, and it is noteworthy that the application was not undertaken under medical advice.—*Le Practicien.*

SURGERY.

INCURABILITY OF SYPHILIS.

Dr. W. R. Gowers, in the concluding Lettsomian lecture upon syphilis and the nervous system (*British Med. Journal*, Feb. 16, 1889), says: "I believe it is literally correct to say that we have no evidence that syphilis ever is or ever has been cured." Again he says: "The conclusion that the essential element in the disease resists treatment, and runs its course uninfluenced by our efforts, is in harmony with what we know of other specific diseases due to a poison introduced from without, and communicable from one person to another. There is not any fact whatever to show that a single disease of this kind can be cut short. The course of the acute exanthemata cannot be arrested by any means at our disposal at any stage of their course, and the same seems true of this chronic exanthematous disease. This is eminently true also of the disease that stands perhaps nearer to syphilis than any other known malady—leprosy."

With regard to the methods of administration of mercury he says: "The old method of inunction seems to me to bring the patient under the influence of the drug as speedily as it can be done with safety, and with a certainty incomparably greater than the administration by the mouth. I have been deterred from a trial by the hypodermic method because the published evidence seemed to me not to afford any satisfactory proof of superiority, being destitute of the element of comparison essential to such proof, and because this method seems to afford an opportunity for psychical influences not free from risk of that which is undesirable. But I would not for one moment suggest that such an influence has entered into the motives or action of those who have used this method." Dr. Gowers believes that full doses of mercury and iodide of potash for from six to ten weeks will affect all that can be achieved in the removal of the syphilitic process. They should be continued only a

little longer than is necessary to remove the lesion, being repeated, it may be, after an interval occupied by tonic treatment or by the other of the two chief drugs.

With reference to the consequences of the belief in the incurability of syphilis he says: "If it is true that we cannot cure syphilis it is most important to consider how it can best be kept in check. This is why the fact of incurability, if true, is so important. A mistaken belief in curability may dangerously hinder attempts at prevention. If no present treatment can prevent future developments then it is wise, whether these come or not, to anticipate them. I think a custom, sometimes recommended, is prudent, that every syphilitic subject, for at least five years after the date of his last symptoms, should have a three weeks' course of treatment twice every year, taking, for that time, 20 or 30 grains of iodide a day. If this practice were adopted generally is it not reasonable to anticipate grave lesions would be much more rare?"—*Med. and Surg. Rep.*

A NEW TREATMENT OF THE TRANSVERSE FRACTURE OF THE PATELLA.

At the meeting of the Clinical Society of London, held May 24, 1889, Mr. Mayo Robson related a case of transverse fracture, which he treated by a new method to secure bony union without opening the joint (*Lancet*, June 1, 1889). The bone was broken just below the middle, as the indirect effect of a fall. He pointed out how unsatisfactory were the results obtained by the methods usually resorted to, and added that although he had never met with an accident in wiring the fragments, yet it was impossible to shut one's eyes to the fact that the patient was exposed to a great risk. He had, therefore, applied himself to the discovery of a method whereby the advantages of bony union might be secured without incurring the risk of opening the joint. In this case the skin over and around the joint was cleaned and rendered aseptic, and the joint was then aspirated. He then obtained two long steel pins with glass heads, such as ladies use for fastening the bonnet, and having thoroughly purified them he drew the skin well up over the upper fragment, and introduced the needle transversely through the skin and muscle just above the level of the upper fragment, repeating the operation with

the other needle at the upper end of the ligamentum patellæ. Gentle traction on the pins then easily brought the fragments into apposition. The ends of the pins were then clipped off, leaving about half an inch on either side, and the whole covered with antiseptic gauze. This dressing was left undisturbed for three weeks, and when it was removed there was no redness or other sign of irritation having been caused. Temperature was never above normal, and the patient felt very comfortable all the time. The fragments seemed well united, and the needles were, therefore, withdrawn, a plaster of Paris splint applied, and the patient allowed to go home. We pointed out that the only precaution necessary was to draw up the skin over the upper fragment, in order to avoid undue traction upon it when the fragments were approximated. The integument should be rendered aseptic as well as the pins, and the latter should be stout enough not to bend when drawn upon. If there was much effusion it would be desirable to aspirate. As union occurred without the throwing out of any amount of provisional callus, it was always well to insist upon the use of a Thomas splint for some time after. The advantages of the operation were its simplicity, the absence of risk and the obtaining bony union. He said that this was the second case of the kind upon which he had operated, and more recently he had performed the same operation in a case of fracture of the olecranon, but it was as yet too early to say anything as to the result.—*Therapeutic Gazette.*

GRAFTS OF FROG SKIN IN CHRONIC ULCERS.

In the *Russkaia Meditzina* Dr. Nesteroosky relates four cases of old-standing, intractable, extensive and deep ulcers of the leg, foot and thigh, where, after all ordinary means had failed, the transplantation of grafts of frog's skin was invariably followed by a permanent healing in from nine to fourteen days. Dr. Nesteroosky takes an ordinary water frog and keeps the lower portion of its body immersed in a sublimate solution (1 to 1000) for five minutes; then he pinches up a piece of skin on the abdomen with forceps and cuts out as many grafts as are required, each the size of a finger nail. Having washed the pieces as well as the ulcer with a 4 per cent. solution of boracic acid he carefully places the grafts on the granulating surface and cov-

ers the part with a layer of boracic gauze and a piece of tow, fixing the whole with wax cloth and a starched gauze roller. The dressing is changed and the ulcer washed first on the third or fifth day. The writer summarizes his experience as follows: 1. In all cases of extensive and badly cicatrizing ulcers skin grafting is indicated. 2. Skin which is quite free from glands and hairs is most suitable for the purpose. 3. Frog's skin completely satisfies those conditions. 4. The method is simple, safe, easily used everywhere, cheap and most effective.—*British Med. Journal.*

REPRODUCTION OF THE ENTIRE UNGUAL PHALANX OF THE THUMB BY A SINGLE BONE GRAFT.

Dr. Harry M. Sherman reports the following interesting case: A boy, thirteen years old, working in a tin shop, had a punch driven through the ungual phalanx of the thumb. The instrument entered at the inner side of the base of the nail by a small aperture of entrance, passed directly through the thumb and came out, by a large and lacerated aperture of exit, on the outer border of the pulp, comminuting and carrying out with it the entire phalanx, except a very small scab attached to the flexor tendon. The nail was torn away and there was much contusion of the soft parts. A wedge, containing bone and cartilage, and the line of ossification, was taken from the scapula of a healthy Newfoundland puppy and cut to the shape and size of the lost phalanx and implanted in the cavity. The result was very good. Extension of the phalanx was complete and there was flexion of about forty-five degrees, a little lateral motion existed, but this was progressively less and the thumb could bear increasing amounts of pressure on the tip. There was also an abortive attempt at the reproduction of the nail.—*Pacific Medical Journal.*

INOCULATIONS OF CANCER.

Dr. Hanau of Zurich inoculated rats with cancerous matter obtained from a rat who had died of spontaneous carcinoma of the vulva, with glandular enlargement. Portions of the glands were introduced into the tunica vaginalis of two rats. The first died in fourteen days of extensive carcinoma of the peritoneum; the second presented

cancerous deposits in the epididymis, as was shown by microscopic examination. A third rat was successfully inoculated with cancerous matter obtained from the second. In making these experiments old animals of the same species should be chosen, and the inoculated matter should be introduced into one of the cavities of the body. Dr. Wehr has also succeeded in inoculating cancer from one dog to another.—*Proceedings of the Congress of the German Surgical Society.—Berliner Klinische Wochenschrift.*

FRACTURE OF THE THYROID AND CRICOID CARTILAGES; RECOVERY.

An interesting and rare case, reported in the *Lancet* of June 8, 1889, was recently exhibited by Dr. Sokolovski at the Warsaw Medical Society, of a woman in whom the anterior portion of the thyroid and both halves of the cricoid had been fractured through an accident with the strap of a mill. The immediate symptoms were severe pain in the throat, cough and the expectoration of a considerable quantity of blood, also marked dyspnœa. Tracheotomy (inferior) was performed the second day. During the fourth week portions of the necrosed cartilage came away. After two months both halves of the thyroid were removed with forceps, and it was found that no trace of the cricoid remained, the posterior wall of the glottis being formed by the anterior mucous coat of the œsophagus. The patient made a good recovery and was soon able to swallow food without difficulty. It is noteworthy that the condition of the larnyx was accurately ascertained on the second day after the accident by means of the laryngoscope, and also that cases of fracture of the cricoid are almost invariably fatal.

THE INFLUENCE OF FLIES IN THE SPREAD OF EGYPTIAN OPHTHALMIA.

Egytian ophthalmia is not a granular conjunctivitis or trachoma, but an acute purulent catarrh, although the former condition is often associated with it. It is epidemic in character, being rare, and only occurring sporadically in November, December and January; it increases in severity and numbers slowly but surely up to July or August, and then decreases gradually with the approach of the cold weather.

There is strong tendency to corneal complications. He believes he has found the cause of its epidemic character in the swarms of flies, which convey and spread the disease; the increase of the disease and of the flies coincide in regard to the season of the year and also locality, the former occurring principally in the Delta and near the rivers, and being rare among the Bedouins and in the desert where flies do not abound. For the sake of information on this point he made two trips in the desert for twelve days. In temperate climes flies are of course comparatively few, and when a single specimen alights on the face one instinctively flicks it away; in Egypt the flies are in swarms, and the faces of the natives are covered with them, and Howe says they never seem to take the least trouble to brush them off. He fastened a pin to a fly and made it walk over a prepared gelatine plate, and having thus thoroughly cleansed its feet, allowed it to walk on conjunctiva and again put it on jelly, when he was able to show the presence of several forms of bacteria known to exist on the conjunctiva, demonstrating by this experiment how easily contagion might be carried by the feet of flies.—*Chronicle.*

A READY AND EFFECTUAL METHOD OF APPLYING THE PRINCIPLES OF MANIPULATION IN THE REDUCTION OF RECENT DISLOCATIONS OF THE SHOULDER-JOINT.

The patient—suppose the right humerus is dislocated (subcoracoid)—is placed on the floor on his left side, and the surgeon stoops or kneels beside him, and taking the patient's right arm, places it with the forearm lying over the operator's neck, whilst the patient is directed to grasp the wrist of the injured arm with his left hand, or lock his fingers together. The surgeon is thus hugged by the arms of the patient. Now, in order to effect reduction traction should be made "in the axis of the bone perpendicular to the glenoid fossa," as this allows relaxing of the muscles (the main obstacles to reduction), and is the best method of overcoming the mechanical difficulties preventing reduction. By gently raising himself into a more erect position the surgeon makes traction on the extremity in a gradual, continuous, steady pull, and the weight of the patient's body acts as the counter-extending force, whilst the right hand of the operator, placed in the axilla, feels the head

of the bone, and with a gentle touch of his finger the bone slips into its place. Both hands help the mind to change the direction of the traction into the line of least resistance by the swaying motion the surgeon can impart to his body in the "hunkering" position in which he acts.—*British Medical Journal.*

["Hunkering" is an excellent term to apply to all such crude and unscientific methods for the reduction of subcoracoid laxations. Space is given to this description simply because it affords us an opportunity to strongly advise that it should never be employed. "Kocher's method" should be used in all subcoracoid dislocations. It has been noted in a recent issue of this journal, and is described in full in the *Medical Record* for March 30, 1889.—C. A. P.].—*Analectic.*

A CONTRIBUTION TO THE STUDY OF GUNSHOT WOUNDS OF THE LUNGS.

If a man be shot through the lung place him in a recumbent position in such a way as to favor the escape of blood, give morphia hypodermically to allay pain and relieve anxiety, apply cold to the chest, admit fresh air freely, darken the room and guard against noise and conversation, give ergot hypodermically if there be much hemorrhage. Give no stimulants and apply nothing to the wounds but small pieces of lint or cotton wetted with cold water either pure or medicated with carbolic acid or bichloride of mercury. Frictions to the extremities may be permitted, and may be of service. By this treatment shocks slowly pass away and the checking of hemorrhage is favored. If hemorrhage continues, either externally or internally (the latter must be judged of by the increasing dyspnœa, the pallor of the face, the feeble pulse and the physical signs of an effusion within the chest), enlarge the posterior opening and proceed to plug the track of the ball with styptic silk, provided that hot water or hot solution of tannin do not succeed.

I do not favor the closing of the external wound for hemorrhage under any circumstances, for the following reasons: The procedure is unsatisfactory—worse than useless generally speaking—for the lung is compressed and a subsequent opening is rendered necessary on account of threatened asphyxia; and, moreover, hemorrhage within

the chest may be, in fact often is, so extensive as to prove fatal; and, further, supposing the bleeding is stopped from pressure of clotted blood in the pleural cavity, which explanation, in some cases at least, must be open to doubt, this blood must be gotten rid of finally, and empyema is more than probable.

My idea is that the external wound should be enlarged if necessary and kept open so as to see just how much bleeding is going on, and often it has been allowed to go on for a reasonable time, and clotting refuses to take place and arrest the bleeding, lose no time in plugging the bullet track before the patient dies of exhaustion. When the hemorrhage is thus controlled the chest is left clean, and attention to the drainage will render empyema very improbable as a sequel. Traumatic pneumonia must be treated on general principles, symptoms and conditions being met with appropriate remedies; the general treatment, with the exception of attention to drainage from the wounds, being very similar to that of idiopathic pneumonia—*Coll. and Clinical Record.*

CATGUT OR SILK.

Dr. E. Braatz declares that the want of success with catgut ligatures is due to insufficient sterilization. He shows that it is necessary to free the gut completely from all fatty matter before placing the same in the sublimate solution, because aqueous solutions will not act on the gut if oil or fat be present. His directions are as follows: Roll the catgut upon a glass cylinder and place it for twelve hours in chloroform or ether, then shake well and immerse in 95 per cent. alcohol, leave it there twelve hours; transfer it while still moist to a 1 to 1000 sublimate solution, in which it may be allowed to remain for twenty-four hours. From the bichloride solution it may be placed in 95 per cent. alcohol to keep, or it may be dried and rolled in sterilized linen compresses, and kept in a suitable glass bottle.

Silk likewise contains more or less oil or fat, from the hands of the workmen, and it must therefore be treated like catgut. The modus operandi may be modified, and possibly another antiseptic than sublimate substituted, according to the taste of the operator, but the main point is to free the silk or catgut from all fat and oil before sterilizing it.—*St. Peterberger Med. Woch.*

GYNÆCOLOGY.

THE PASSAGE OF VIRUS THROUGH THE PLACENTA.

Dr. Prospero Demateis. in *Centralblatt für Bakteriologie und Parasitenkunde.*—In the sixty-first congress of German physicians and naturalists held in Cologne, Sept. 18–22, 1888, Birch-Hirschfeld spoke of the transmission of infection through the placenta. It seems, though, that at this meeting, at which Virchow and other eminent men assisted, it was forgotten that investigations on this point had already been made in Italy. This is rather singular, since the observations made in Italy are much older than those of Birch-Hirschfeld and the French investigators. The observations in question were made by a prominent Italian pathologist. They were made with the bacillus of splenic fever, and were numerous and more varied than those of other investigators.

Prof. Perroncito, at the meeting of the Royal Academy of Medicine at Turin, held Dec. 15, 1882, reported his experiments made upon twenty-nine pregnant guinea pigs. He concluded from his experience that the passage of the charbon-virus from the mother to the fœtus can take place, though only occasionally, and in the bacillary condition.

Perroncito took the fœtuses out of their coverings and plunged them into an ordinary alcoholic solution of thymol, or in a 3 or 5 per cent. solution of carbolate of soda. He allowed them to remain long enough to kill the bacteria which might have become attached to the surface. He then washed them in a solution of table salt and dissected them with great care upon a well-cleaned glass plate, purified by flame, using instruments which had also been passed through the flame of a Bunsen burner. Prepared in this manner the fœtuses were subjected to a careful microscopical investigation, and inoculations of the heart blood, the substance of the liver and spleen, considerably diluted with 75 per cent. solution of table salt, were made; also inoculations of cultures, made in sterilized chicken broth and rabbit broth. Furthermore, in order more precisely to determine the form in which the virus is transmitted from the mother Perroncito made double inoculations—first, with dilutions of simple fluids, and second, with dilutions of liquids that had been treated

with agents known to be capable of destroying the bacilli, but incapable of destroying the spores; for instance, saturated aqueous solution of thymol, alcohol, 1 to 3 per cent. solution of carbolate of soda, 3 to 5 per cent. solution of sulphurous acid, 5 per cent. solution of caustic potash. The treatment with these agents lasted long enough to kill the bacteria.

He succeeded in demonstrating the *passage of the virus from the mother to the fœtus* in eight out of twenty-four cases. He proved beyond doubt, by means of his control-experiments, that the virus transmitted from parent to offspring *consisted only of bacilli, and not of spores.*

UTERINE MEDICINES.

It can be safely said that no medicines are so disappointing in their action as those which are supposed to act upon the uterus and its appendages, and influence the menstrual habit in women. These remedies, so formidable in number, look very imposing when the long list is scanned; but is there not something in the multitudinous array suggestive of conscious weakness—of individual feebleness hidden in a crowd?

Borax, cantharidis, ergot, aconite, pulsatilla, caulophyllin, permanganate of potash or soda, peroxide of manganese, santonin, rue, savin, cimicifuga rac., sanguinaria, megarthes, pot. iodi, apiol, iron and the various cathartics.

Now of all these remedies have any of them shown a disposition to act consistently when given to different patients apparently suffering from identical troubles? It would be affectation to pretend that they have, generally, any such characteristics. Take borax as a sample. Given at one time it does good, without any unpleasant consequences, in the desired way; and the next time it is given, for the same purpose, it makes the patient very sick, and ends its eccentric usefulness at that distressing point. Cantharidis and ergot exemplify a similar want of consistent action, and when you give the one or other it is impossible to tell what the result will be. Then their failure is put down to a bad sample of these medicines, or to a want of diagnostic insight on the part of the physician. Aconite, it is true, can be depended upon to lower the plethoric state which sometimes interferes with the current of the natural function; but in this action it is a general depressant and

not a special agent, although it brings about the same end as a classical emmenagogue would probably fail to produce. But if it is given for any specific effect it may be supposed to have upon the menstrual organs, under other conditions it fails lamentably. But here the fault would be in the application and not in the remedy, although its want of success under such circumstances would show the weakness of its claim to rank as an emmenagogue.

When the permanganates were introduced by Dr. Sidney Ringer and Dr. Murrell they obtained a great many tentative believers anxious to become permanent converts, and few were they who did not hope for great things from the use of these "new remedies."

But time destroys many illusions, and it is to be feared that this pleasant one has not been spared. It was claimed for the permanganate treatment that it "succeeded equally well in plethoric or anæmic cases." This paradoxical introduction to these remedies disposed some of the more sceptical to look upon their virtues with doubt, for, like mother Siegel's wonderful syrup, they pretended to work all-round miracles. First in the anæmic and then in the plethoric type of case the permanganates completely failed in numerous instances, without one partial success to redeem them from the limbo of utter worthlessness as special uterine agents. This was my own experience, although I am aware that they have partially and sporadically succeeded in the hands of others, and notably in the hands of their sponsors. Their occasional success, however, does not make amends for their provoking and frequent failure, nor take them out of the list of unreliable remedies. Frequently, too, the disagreeable effect of permanganate upon the stomach is its most marked feature. Indeed, Dr. Marshall of San Francisco suggests that it should be given with cocaine, cerium and bismuth to correct its tendency to produce nausea.

Peroxide of manganese is said to be more effectual than the salts of the metal; but as these partake of the general inconsistency of their class, and lead one to expect of them more than they enable one to realize, their constant action cannot be spoken of with any degree of confidence.

Santonin, introduced by Dr Cheron, shows the same characteristic indecision and waywardness in its effects. Dr. Cheron found good results following its administration in "amenorrhœa and dysmenorrhœa, more especially in

cases characterized by anæmia, about the period of puberty." In similar cases Dr. Amand Routh found it failed seventeen times out of twenty. How is this divergence of experience to be reconciled with any idea of consistency in the action of santonin as an emmenagogue? If it can be done then the special virtues of santonin may be provisionally suspected to exist.

Rue, savin, cimicifuga rac. produce more certainly than any other agents, with the exception, perhaps, of ergot, a direct effect upon the uterus and its appendages, and specially stimulates the ovaries in a varying degree not always in proportion to the dose. In this way the menstrual flow is sometimes brought about, but not always even in favorable cases, for an inflammatory state of the menstrual apparatus may be induced by the vigorous action of one of these agents, and yet leave the erring functions untouched. Here we have a fresh disappointment; the production of an effect certainly but not the effect desired. We have not to complain of a want of action, but of an uncertainty of action. Savin is notoriously unreliable in its effects, and I have known at least one death resulting from incautious self-administration of the drug for the purpose of "bringing on the period."

Sanguinaria, megarthes (marsh trefoil), pot. iodide, apiol, iron and various cathartics have all had and still have their advocates, and the most that can be said of them is that they are sometimes successful, and oftener unsuccessful, whether it be from the peculiarities of the case treated or from their own inherent defects. Of the long list of remedies noticed there remain caulophylla and pulsatilla, and of these much can be said of a favorable nature. Caulophyllin, the resinoid prepared from caulophyllum thalictroides, known in America under the various names of squaw root, pappoose root, blue berry, has been recognized in that country as a valuable therapeutic agent from very early times, and has been highly spoken of by many American physicians of note. Its name, "pappoose root," suggests the use it was put to by the natives long before the cultured minds of our American cousins investigated its properties and catalogued its claims. There seems to be a general agreement amongst those who have studied its action that its effect is chiefly felt by those motor nerves which are connected sympathetically with the menstrual organs, and that this action is of a sedative character,

allaying that irritable condition of the generative system which so often lies at the root of functional irregularities. As a remedy in these derangements, in "irritable neurotics," especially when they are marked by disturbances in the sacral plexus, it has undoubtedly acquired a sounder reputation than most of its competitors, and deserves a permanent place in the select circle of approved remedies.

But its action, although often favorable when administered alone, is much more reliable when given in combination with pulsatilla (anemone, Pasque flowers), which has long been known as a popular and effective remedy in uterine functional derangements. I remember not long ago being consulted by an old lady about a young friend of hers who was suffering from advanced anæmic symptoms, and had been the subject of long-standing amenorrhœa. She told me the patient had been treated by several eminent doctors, and they had failed to bring on the "period." "So I gave her some pulsatilla," remarked the old lady, "and brought nature to its senses." This story served to fix a remedy in my mind, and encouraged me to test its efficacy, which I have since done with good results. A few years ago it was well spoken of by Dr. Brunton and Dr. Gerard Smith as a sedative agent of much power in the treatment of inflammatory states of the testicle and spermatic cord, producing such rapid abatement of pain as to supersede even the necessity for morphine. As pulsatilla increases the beneficial action of caulophyllin, so the latter increases the action of the former, and it is, therefore, when they are both combined that we get the most perfect emmenagogue that our present state of knowledge has yet suggested. Indeed, it is not too much to say that this compound emmenagogue redeems from the charge of imposture the reputation of its dilapidated class.

In suitable cases I have used for a considerable time, and with gratifying success, the liq. caulophyllin et pulsatilla co.

It is not the purpose of this paper to enter into the treatment of the various forms of amenorrhœa and its allied complaints, but it may not be out of place to suggest that special remedies may fail when the cause is constitutional, and *vice versa*. Many of the foregoing remedies have found their way into the special class of emmenagogues, because they have been used to treat some constitutional

obstacle to the performance of the uterine functions, and because the imperfect function has been accidently restored in this indirect way, they have come to be misnamed and misused as direct remedial agents. Hence, we have one good reason for the low estate to which the class has fallen. All of them may have their uses as indirect agents; while many of them may be used to the end of time, uselessly, if they are given upon no better ground than a simple faith in their use as emmenagogues. My own experience in the use of liq. caulophyllin et pulsatilla co. is most encouraging, and, while I urge with much confidence its use by my *confreres*, I would at the same time beg them to make their experiences known.—*Provincial Medical Journal.*

THE RECOGNITION OF VULVO-VAGINITIS IN CHILDHOOD.

F. Spaeth (*Münchener med. Wochenschrift*, May 28, 1889), examining the discharge in twenty-one cases of vulvo-vaginitis, occurring to the girls between the ages of 3 and 11, found Neisser's cocus in fourteen. In none of the other seven patients did the inflammatory process extend to the urethral mucuous membrane—an extremely important diagnostic point. In adult females with gonorrhœa the urethral discharge always contains the most characteristic gonococci. A specimen of this discharge is obtained for examination in children by first thoroughly irrigating the vagina with a sublimate solution, a small glass catheter being used for the purpose; as the catheter is withdrawn its inner end is pressed along the urethra until, as it emerges, a drop of pus is squeezed from the meatus.

It is not always easy to discover the source of the infection. In eleven cases the mother had gonorrhœa, in two the father; in three only had the child been violated. Epidemics in families and hospitals are usually traceable to infected clothing, sponges, thermometers, etc.

The writer raises an interesting question, viz.: whether in children there is danger of the specific inflammation extending from the vagina to the uterus and tubes. In general the trouble is limited to the lower portion of the genital tract, although a few cases of pyosalpinx of gonorrhœal origin have been reported.

The treatment of vulvo-vaginitis in children varies. Vaginal injections of carbolic acid, sublimate and boro-

salicylic solutions, pencils of thallin and iodoform, and soothing ointments are useful. The vagina is syringed out two or three times a week with a solution of bichloride (1 : 2000), after which a small iodoform pencil, containing a little sulphocarbolate of zinc, is introduced into both the vagina and urethra, the pencils being kept in position by a small tampon.

The progress of these cases is slow, the average duration of treatment being three and one-half months. It is highly important that local treatment should be directed to the urethra, since the folds of its lining membrane afford lodgment for the specific virus after the vulvo-vaginal mucosa is apparently healthy.

In concluding the writer states his belief that in all cases of vulvo-vaginitis in children in which the urethra is affected and Neisser's coccus is found in the discharge there has been specific infection even when the inflammation develops in the course of one of the acute exanthemata.—*American Jour. Med. Science.*

TAMPONNING FOR POST-PARTUM HEMORRHAGE.

There has been considerable discussion of late in Germany in regard to the value of a method of treating *post-partum* hemorrhage which was warmly recommended by Dührssen in the *Centralblatt für Gynakologie*, No. 35, 1888. This method consists in tamponning the uterus with a long strip of iodoform-gauze, so as to promote contraction of the uterus and to stop the bleeding, partly in a mechanical way, and all with a material which might safely be allowed to remain in the cavity of the womb.

Notwithstanding the successful employment of the method by Dührssen it has been opposed as dangerous as well as unnecessary, if other well-known methods were used. On the other hand Dr. Becker of Hamburg, in the *Berliner Klinischi Wochenschrift*, Feb. 18, 1889, comes to the support of Dührssen, and by argument and by citing his own experience maintains that the method of the latter is a very valuable procedure, and that it may be relied upon in cases which seem to baffle every other resource of the obstetrician.

In this we believe that Becker is right, and that tamponning the uterus with iodoform-gauze for post-partum hemorrhage is a safe and excellent method. It has never

yet, so far as we know, given rise to iodoform poisoning, and it has certainly checked hemorrhages which had resisted other measures faithfully tried before it was employed. There is much in its favor theoretically, and practically it has accomplished about as much as could be asked of any claimant for professional approval.

Of course it will be understood that no such heroic method as this should be employed where a simpler one will do. There are few cases where intrauterine injections of hot water, and especially hot water with a little vinegar added, will not control post-partum hemorrhage; and, as a clean and convenient method, which leaves no foreign body in the uterus, it is preferable to any other. But if simple measures fail one must have more powerful ones, and a careful packing of the uterus with antiseptic gauze might prove of the greatest utility.—*Can. Med. Rec.*

HYGIENE AND DERMATOLOGY.

PREVENTION OF CONSUMPTION—ACTION OF THE HEALTH DEPARTMENT OF THE CITY OF NEW YORK.

Drs. Hermann H. Biggs, J. M. Prudden and Henry P. Loomis, Pathologists of the Board of Health of New York, who were requested to formulate a brief and comprehensive statement regarding the nature and prevention of tuberculosis, have made their report as follows:

The disease known as tuberculosis, and, when affecting the lungs, as pulmonary tuberculosis (consumption) is very common in the human being and in certain of the domestic animals, especially cattle. About one-quarter of all the deaths occuring in the human being during adult life is caused by it, and nearly one-half of the entire population at some time in life acquires it. The disease is the same in nature, in animals and in man, and has the same cause.

It has been proven beyond a doubt that a living germ called the "tubercle bacillus" is the cause, and the only cause, of tuberculosis. Tuberculosis may affect any organ of the body, but most frequently first involves the lungs. When the living germs find their way into the body they multiply there, if favorable conditions for their growth exist, and produce small new growths or nodules (tubercles), which tend to soften. The discharges from the softened

tuberculosis, containing the living germs, are thrown off from the body. In pulmonary tubercles the discharges constitute, in part, the expectoration. The germs thus thrown off do not grow, outside the living human or animal body, except under artificial conditions, although they may retain their vitality and virulence for long periods of time, even when thoroughly dried. As tuberculosis can only result from the action of these germs it follows, from what has just been said, that when the disease is acquired it must result from receiving into the body the living germs that have come from some other human being or animal affected with the disease. It has been abundantly established that the disease may be transmitted by meat or milk from the tubercular animal. The milk glands in the milk cows often become affected with the disease when their lungs are involved, and the milk from such animals may contain the living germs, and is capable of producing the disease. Among stall-fed dairy cows 20 or 30 per cent. are sometimes found to be affected with the disease. Tubercular animals are also frequently killed for food. Their flesh sometimes contains the germs, and if not thoroughly cooked is capable of transmitting the disease. Boiling the milk and thoroughly cooking the meat destroys the germs. Although the meat and milk from tubercular animals constitute actual and important sources of danger, the disease is acquired, as a rule, through the communication from man to man.

Tuberculosis is commonly produced in the lungs (which are the organs most frequently affected) by breathing air in which the living germs are suspended as dust. The material which is coughed up, sometimes in large quantities, by persons suffering from consumption, contains these germs, often in enormous numbers. This material, when expectorated, frequently lodges in places where it afterward dries, as on the streets, floors, carpets, clothing, handkerchiefs, etc. After drying, in one way or another, it is very apt to become pulverized and float in the air as dust.

It has been shown experimentally that dust collected from the most varied points, in hospital wards, asylums, prisons, private houses, etc., where consumptive patients are present, is capable of producing tuberculosis in animals when used for their inoculation. Such dust may retain for weeks its power of producing the disease. On the other

hand, dust collected from rooms in institutions or houses that have not been occupied by tubercular patients, does not produce the disease when used for the inoculation of animals.

These observations show that where there are cases of pulmonary tuberculosis under ordinary conditions, the dust surrounding them often contains the "tubercle bacilli," and persons inhaling the air in which this dust is suspended may be taking in the living germs. It should, however, be distinctly understood that the moist sputum received in proper cups are not elements of danger, but only the dried and pulverized sputum. The breath and moist sputum are free from danger, because the germs are not dislodged from moist surfaces by currents of air. If all discharges were destroyed at the time of exit from the body, the greatest danger of communication from man to man would be removed.

It then follows that tuberculosis is a distinctly preventable disease. It is a well-known fact that some persons, and especially the members of certain families, are particularly liable to tuberculosis, and this liability can be transmitted from parents to children. So marked and so frequent is this liability, and so frequent is the development of the disease in particular families, that the affection has long been considered hereditary. We now know that tuberculosis can only be caused by the entrance of the germ into the body, and that this transmitted liability simply renders the individual a more easy prey to the living germs when once they have gained entrance.

The frequent occurrence of several cases of pulmonary tuberculosis in a family is then to be explained, not on the supposition that the disease itself has been inherited, but that it has been produced after birth by transmission directly from some affected individual. When the parents are affected with tuberculosis the children, from the earliest moments of life, are exposed to the disease under the most favorable conditions for its transmission, for not only is the dust of the house likely to contain the bacilli, but the relationship also between parents and children, especially between mother and child, are of that close and intimate nature especially favorable for the transmission by direct contact.

If, then, tuberculosis is not inherited the question of prevention resolves itself principally into the avoidance of

tubercular meat and milk and the destruction of the discharges, especially the sputum of tubercular individuals. As to the first means of communication those measures of prevention alone answer the requirements which embrace the governmental inspection of dairy cows and of animals slaughtered for food, and the rigid exclusion and destruction of all those found to be tubercular.

For the removal of the second means of communication, *i. e.*, the sputum of tubercular individuals, the problem is simple when the patients are confined to their rooms or houses; then wooden or pasteboard cups with covers should always be on hand for the reception of the sputum. These cups are supported in simple racks, and at least once daily, or more frequently if necessary, should be removed from the racks and thrown with their contents into the fire. (A cheap and efficient cup answering this purpose is now on the market, and is supplied by the druggists.

The disposition of the expectoration of persons who are not confined to their rooms or houses is a far more difficult problem.

The expectoration certainly should not be discharged on the street, and the only practical means for its collection seems to be in the handkerchiefs, which, when soiled, should at the earliest possible moment be soaked in a solution of 5 per cent. carbolic acid and then boiled or washed. Handkerchiefs thus soiled are exceedingly dangerous factors in distributing tubercle bacilli, for when the sputum becomes dry it is easily separated in flakes from the cloth, and then soon becomes pulverized and suspended as dust.

It becomes evident from what has been said that the means which will most certainly prevent the spread of this disease from one individual to another are those of scrupulous cleanliness regarding the sputum. These means lie largely within the power of the affected individual. It is furthermore to be remembered that consumption is not always, as was formerly supposed, a fatal disease, but it is in very many cases a distinctly curable affection. An individual who is well on the road to recovery may, if he does not with the greatest care destroy his sputum, diminish greatly his chances of recovery by self-inoculation.

While the greatest danger of the spread of this disease from the sick to the well is in private houses and in hospitals, yet, if this danger is thoroughly appreciated, it is for

the most part quite under control, through the immediate destruction of the sputum and the enforcement of habits of cleanliness. But in places of public assembly, such as churches and theatres, particularly the latter, conditions are different, and the safety would seem to depend largely upon a dilution and partial removal of the floating and possibly dangerous dust by means of adequate ventilation.

Rooms in private houses and hospital wards that are occupied by phthisical patients should from time to time be thoroughly cleaned and disinfected, and this should always be done after they are vacated, before they are again occupied by other individuals. Steamship companies should be obliged to furnish separate apartments for consumptive persons, so that no person in the exigencies of travel need be forced to share his room with one who might be a source of active danger to him.

We desire to especially emphasize the following facts:

1. That tuberculosis is a distinctly preventable disease.
2. That it is not directly inherited; and
3. That it is acquired by the direct transmission of the tubercle bacillus from the sick to the healthy, usually by means of the dried and pulverized sputum floating as dust in the air.

The measures, then, which are suggested for the prevention of the spread of tuberculosis are:

1. The security of the public against tubercular meat and milk, attained by a system of rigid official inspection of cattle.
2. The dissemination among the people of the knowledge that every tubercular person may be a source of actual danger to his associates, if the discharges from his lungs are not immediately destroyed or rendered harmless; and
3. The careful disinfection of rooms and hospital walls that are occupied or have been by phthisical patients.—*Sanitarium.*

Electrical experts are still uncertain as to the actual effects of strong currents on human beings, and meanwhile the New York criminal condemned to die by electricity is living in a state of uncertainty. A man living in St. Paul, Minn., accidently received a severe shock of electricity which knocked him senseless for 48 hours. He has recovered, and says that the sensation on receiving the current was not painful.—*Maryland Medical Journal.*

Book Notices.

Diabetes: Its Cause and Permanent Cure, from the Standpoint of Experience and Scientific Investigation. By Dr. Emile Schnee, M. D. Translated from the German by R. L. Tafel, A. M., Ph. D. English edition, revised and enlarged by the author. Philadelphia: P. Blakiston, Son & Co. 1889. New Orleans: Armand Hawkins, 194 Canal st. Pp. 215. Price, $2.

It is a common saying that the less we know about a disease and its cures the greater the literature on the subject. Diabetes is a striking proof of the truth of this old saw. The great masters of pathology and therapeutics were far from solving the deep riddles involved in the cause and treatment of this dread disease. The practitioner, knowing how mysterious and hopeless the disease is, is at once struck by the title of Dr. Schnee's monograph. In a few brief words the author promises to unveil the cause of the affection, and to show how it may be radically cured. A list of the writings on diabetes covers seventeen pages of Dr. Schnee's work. No physician could hope to wade through such a colossal mass of medical learning, wherein much exists of mere repetition of the theories and errors of others; and when a writer holds out a hope of cure, nay, states positively that *he has effected radical cures*, then all vain theories must be put aside for the once, and a respectful audience given to the new speaker.

A perusal of Dr. Schnee's work from cover to cover inspires us with a feeling of confidence in the sincerity of the author. A practice of more than twenty years in Carlsbad and other sanitariums has given Dr. Schnee an unusually good opportunity to study this formidable disease. From 1861 to 1881 he treated diabetes as others had done before, and, of course, all of those that had *true* diabetes ran the usual course of the victims of this malady. Mark well the distinction (an essential one) which Schnee makes between *true diabetes* and a mere *glycosuria*. He does not glory in the cure of simple glycosuria, for that will get well in spite of treatment, but he does crow loudly (and, we think, with justice) over the *permanent cure of true diabetes mellitus*. In 1881 he claims to have discovered the

real cause of true diabetes—namely, *hereditary syphilis;* and it is only since that time that he has been able to record cases of *permanent cure;* and of these he has recorded a large number. A knowledge of the true pathology of disease is the key to its rational treatment. With this key Schnee unlocked the vault wherein lay hidden the secret of cure.

In the space brief allotted a review we cannot give, as we would like, an exhaustive summary of Schnee's views. We cannot commend his book strongly enough to the most careful consideration of the medical profession. It is not a large book, but its importance bears an inverse relation to its size. We confidently feel that Schnee's monograph marks a distinct era in the history of diabetes mellitus.

Before closing we would like to bring up a point which seems to have escaped the attention of our learned and diligent author. It is a conclusion which follows from two of his statements. He says, first, that the presence of true diabetes invariably indicates hereditary syphilis; second, that "the history proper of diabetes begins with Celsus, 1900 years ago." If both of his statements be unqualifiedly correct then he has proved that syphilis is a more venerable institution than the discovery of America.

A. McS.

Therapeutische Notizen der Deutschen Medizinal Zeitung. Herausgeber, Dr. Julius Grosser; Heft II. Free to subscribers of *D. M. Zeitung;* price to non-subscribers, one mark.

This is the second part of a work by Dr. Julius Grosser, which will prove of great interest to practitioners versed in the German tongue. It is a synopsis of articles on treatment, which have appeared in the *Deutsche Medizinal Zeitung*, one of the foremost medical journals of the world. The matter is arranged alphabetically, and figures of reference are given which enable the possessor of files of the journal to refer readily to the original articles.

Pin Worms.—The oxyuris vermicularis may be promptly destroyed by injections *per anum* of cod-liver oil, either pure or made into an emulsion with the white of egg.—*Coll. and Clin. Record.*

Publications Received.

Second Biennial Report of the North Carolina Board of Health, 1888.

Change in the Color of the Hair from the White Hair of Old Age to Black, Caused by Jaborandi. By D. W. Prentiss, A. M., M. D. Reprint.

Report on Five Hundred Cases of Labor in Private Practice. By D. W. Prentiss, A. M., M. D. Reprint.

Is More Conservatism Desirable in the Treatment of Joint Diseases of Children? By A. B. Judson, M. D. Reprint.

So-called Varicocele in the Female. By H. C. Coe, M. D., M. R. C. S. Reprint.

Medical News and Miscellany.

All prescriptions in Alsace-Lorraine must now be written in either German or Latin. The use of French for this purpose has been prohibited.

It is reported that a family in London has been poisoned by the fumes from a number of green candles, which were found upon analysis to contain arsenic.

Never give mercury in syphilis before secondary symptoms occur; you only mask these symptoms and are unable to ascertain the severity of the case.—*Prof. Gross.*

All cardiac diseases are parasitic, says Prof. Germain Sée, except the chronic affections of the aortic orifice of old people, which coincide and result from the fatty, atheromatous and sclerous changes of the arteries.—*Denver Medical Times.*

Iodized Glycerin is a mixture of tincture of iodine and glycerin, which considered by Dr. G. Hammond to be more effectual than the tincture, is possibly because the evaporation of the iodine is prevented.—*Jour. Am. Med. Assoc.*

Dr. John Guiteras of the United States Marine Hospital Service is authority for the statement that the city of Havana has had an annual epidemic of yellow fever for over one hundred years. July, August and September are the fatal months.

Charcot claims that the suspension treatment (stretching the spinal cord by being hung up by the neck) will restore their virility to elderly men whether diseased or not. It this becomes generally known among physicians the profession is liable to be decimated by "accidental deaths by hanging."

Injection to Destroy Oxyuris Vermicularis.—The oxyuris vermicularis is said to promptly disappear with injections per rectum of cod-liver oil, pure or made into an emulsion with the yolk of an egg. It is non-irritating, and is said never to have failed to effect a cure.—*New York Medical Abstract.*

Doctor—"You see, wifey dear, I have pulled my patient through after all! A very critical case, I can tell you." "Yes, dear hubby; but then you are such an excellent physician! Ah! if I had only known you five years earlier I feel certain my first husband—my poor Thomas—would have been saved!"

Value of Cocaine in Vomiting of Pregnancy.—Dr. Mason in the *Medical World* says he has cured every case when other remedies, such as ingluvin, oxalate of cerium, bismuth, carbolic acid, arsenic, iodine, etc., had failed. He gives one-fourth of a grain every three hours during the day, keeping the patient in bed if possible.

Powder for Ozæna.—

℞	Salol	5.00 grammes.
	Boracic acid	2.00 "
	Salicylic acid	0.50 centigr.
	Thymol	0.20 "
	Powdered talc	10.00 grammes.
M.	Sig.: Snuff frequently.	

—*Journal de Médicine.*

Dr. Matthews Duncan says that fertility is surest in its occurrence and safest and most happy in its results when the woman is between 20 and 25 and the man five years older. During these ages the dangers to the mother are at a minimum, and the production of healthy, long-lived, vigorous offspring most certain.—*American Lancet.*

A PHYSICIAN who understands human nature, plays with the baby, makes friends with the children and listens to the woes of the good wife and mother, is the fellow to whom the master of the house most cheerfully pays the largest bills. It is the comfort, the consolation, that mark the broad line between an unsuccessful and a popular physician.—*Ex.*

MOST cases of *vaginismus*, if seen early, will readily yield to local applications of cocaine in solution to the external genital organs. This combined with dilatation by Sims' glass tubes and excision of the hymen or its remains, or any irritable tumor which may act as a cause, will in all cases, with proper care, effect a cure. Coition during treatment should not be attempted.—*Prof. Parvin.*

TO ABORT A FELON.—Dr. Gaucher in writing on the abortive treatment of felon states that to effect this object it is sufficient to moisten slightly the painful part with a little water and to pass over this surface a stick of nitrate of silver. In a few hours after the skin becomes black, all pain disappears and the inflammation is arrested. No dressing is required and the black color disappears in six days.

TREATMENT OF ERYSIPELAS.—Behrend states that he has found absolute alcohol to be an active poison to the micrococcus of erysipelas. He cites numerous cases where thorough washing of the affected parts, three or four times a day, with absolute alcohol, produced complete recovery in less than a week. The micrococci in every case disappeared almost immediately.—*Medical News*, May 25, 1889.

THE Illinois Legislature has failed to make the appropriation needful to sustain the State Board of Health. As a result its admirable work must be diminished if not altogether stopped. The reasons for this are doubtless various, but all of them may be referred to the fact that the board in some way pinched the perquisites of some members of the Legislature, or of their friends among the quacks.

CHLORAL IN NIGHT SWEATS.—Dr. Nicolai has used an embrocation of chloral hydrate, two drachms, dissolved in a tumblerful of brandy and water. At night about bed-

time the patient is rubbed all over with a sponge dipped in this solution. Sometimes three or four rubbings suffice to effect the complete disappearance of night sweats which have previously lasted for weeks.—*Boston Medical and Surgical Journal.*

In atonic dyspepsia, characterized by a deficiency of acid in the gastric juice, the following combination is prescribed, and usually with good effect:

℞.—Pepsini (crystal) ..... ℥i.
Acid hydrochloric dilut ..... ℥iv.
Glycerini ..... ℥i.
Aquæ menth. virid vel aquæ cinnamomi ..... ℥iss.
M. S. Teaspoonful in a wineglassful of water after each meal.

The homœpathic doctrine of increasing potency with increasing attenuation has been ingeniously applied by the professors of the mind-cure to their science, and one of them explains the working of their treatment as follows: "I have found, by actual experiment, that as the drug is attenuated its power is increased until, when the drug is all gone and there is only mind, its greatest efficacy is reached."—*Northwestern Lancet.*

Vinum Creosoti Compositum.—

℞ Creosoti ..... ℥ij.
Tr. gentianæ ..... ℥v.
Alcoholis ..... ℥iv.
Vini. xerici ..... ad.Oj. M.

Give two or three tablespoonfuls daily to a phthisical patient when the temperature does not exceed 100° F., and when the bacilli are not yet very numerous.—*L'Union Medicale.*

Brown-Séquard's Mixture for Epilepsy.—In response to many requests the original "Brown-Séquard formula" for the cure of epilepsy is here given:

℞ Ammonii bromidi ..... ℈viij.
Potassii iodidi, aa ..... ℥vj.
Potassii bromidi ..... ℥j.
Sodii bicarbonatis ..... ℥j.
Tinct. calumbæ ..... f℥ij.
Aquæ destillatæ ..... f℥vj.
Misce. Sig.: Take a dessertspoonful after each meal and a tablespoonful at bedtime.—*Kan. Med. Index.*

For Whooping Cough.—

℞ Ext. cannabis indicæ ..... gr. xv.
Ext. belladonnæ ..... gr. viss.
Alcoholis ..... absol.
Glycerini ..... aa.gr.lxxv. M.

Sig.: To a child of 8 months to 1 year give 4 to 5 drops;

1 to 2 years, 5 to 8 drops; 2 to 4 years, 8 to 10 drops; 4 to 8 years, 10 to 13 drops; 8 to 12 years, 12 to 15 drops; over 12 years and to adults, 15 to 20 drops. The mixture is to be given only at night, or night and morning.—*L'Union Medicale.*

Treatment of Headache.—E. Lloyd James has found that the sipping of cold water relieves headache in a short time, in a large number of cases (*Practitioner*). In acute cases of low-pressure headache—*e. g.*, the toxic headaches from alcohol and tobacco—exercise and food are potent remedies. Relief is obtained from cardiac stimulants, such as the following:

℞ Spiritus ammoniæ aromat..... ....℥ss.
Spiritus chloroformi..... .....Mx.
Aquæ, ad..... .....℥j.
M. Ft. Sol. Sig.: Take at a dose.

In more chronic cases prolonged treatment is necessary.

In an experimental observation of 38 boys of all classes of society and of average health, who had being using tobacco for periods ranging from two months to two years, 27 showed severe injury to the constitution and insufficient growth; 32 showed the existence of irregularities of the heart's action, disordered stomach, cough and a craving for alcohol; 13 had intermittency of the pulse, and one had consumption. After they had abandoned the use of tobacco, within six months' time one-half were free from all their former symptoms, and the remainder had recovered by the end of the year.—*Science.*

Hysteria in Children.—A recent French writer (Paul Pengniez) claims that hysteria is often produced in children under the age of 13 by abuse, falls, accidents, shocks and painful emotions. From an analysis of seventy-nine cases he reaches the conclusion that: 1. Hysteria is not rare among children. 2. The chief predisposing cause of infantile hysteria is heredity. 3. The disorders of the perceptive faculties are among the first symptoms of the disease. 4. The symptomatology of hysteria, in either sex, is almost exactly the same with the child as with the adult. 5. Treatment is more likely to succeed in the case of a child than in that of an adult. 6. The earlier the diagnosis is made and the treatment begun the better the prognosis. 7. The most efficient treatment is by isolation. 8. Infantile hysteria sometimes prevails as a kind of epidemic.—*Kan. Med. Index.*

MORTUARY REPORT OF NEW ORLEANS

FOR JUNE, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	3	4	3	4	5	2	7
" Congestive	2	1	2	1	2	1	3
" Continued,	.....	....	.....	.....	.....	.....	.....
" Intermittent	1	.....	1	.....	.....	1	1
" Remittent	.....	1	.....	1	1	.....	1
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	3	1	2	2	4	.....	4
" Puerperal	2	2	.....	4	4	.....	4
Typho-Malarial	4	.....	1	3	3	1	4
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	2	3	3	2	.....	5	5
Diphtheria	8	8	8	8	1	15	16
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	8	3	7	4	3	8	11
Pneumonia	7	5	6	6	9	3	12
Bronchitis	3	3	4	2	3	3	6
Consumption	32	26	32	26	54	4	58
Congestion of brain	6	1	5	2	4	3	7
Diarrhœa	11	7	12	6	7	11	18
Cholera infantum	32	17	30	19	.....	49	49
Dysentery	12	7	10	9	17	2	19
Debility, General	4	2	5	1	5	1	6
" Senile	11	9	2	18	20	.....	20
" Infantile	11	8	13	6	.....	19	19
All other causes	153	102	151	104	146	109	255
Total	315	210	297	228	288	237	525

Stillborn children—White, 29; colored, 17; total, 46.
Population of city—White, 184,500; colored, 69,500; total, 254,000.
Death rate per 1000 per annum for month—White, 20.49; colored, 36.26; total, 24.80.

DIPHTHERIA RECORD FOR JUNE, 1889.

Dist.	Cases.			Deaths.		
	White.	Colored.	Total.	White.	Colored.	Total.
1	.....	1	1	.....	1	1
2	5	5	10	3	3	6
3	.....	1	1	.....	.....	.....
4	5	.....	5	4	.....	4
5	.....	5	5	.....	4	4
6	1	.....	1	1	.....	1
7	.....	.....	.....	.....	.....	.....
	11	12	23	8	8	16

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JUNE.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	66.0	77.0	58.0	.....
2	72.0	84.0	63.0	.....
3	74.0	87.0	66.0	.....
4	76.0	89.0	70.0	T
5	78.0	89.0	70.0	.....
6	76.0	87.0	70.0	.....
7	74.0	89.0	68.0	.....
8	78.0	89.0	71.0	.....
9	75.0	88.0	70.0	T
10	76.0	89.0	72.0	T
11	76.0	87.0	72.0	.....
12	74.0	84.0	72.0	.38
13	76.0	85.0	73.0	.....
14	76.0	85.0	73.0	.46
15	78.0	87.0	72.0	.....
16	79.0	87.0	72.0	.....
17	80.0	92.0	73.0	.....
18	80.0	90.0	73.0	.01
19	76.0	86.0	72.0	.53
20	76.0	83.0	70.0	.10
21	76.0	85.0	73.0	.29
22	74.0	86.0	71.0	.18
23	78.0	87.0	70.0	.....
24	76.0	88.0	69.0	.....
25	78.0	86.0	72.0	.....
26	72.0	76.0	66.0	2.86
27	76.0	84.0	73.0	.....
28	76.0	83.0	72.0	T
29	76.0	86.0	73.0	.05
30	76.0	85.0	71.0	2.76
31	....	....	....	.....
Sums	. .	....	....	7.62
Means	78.2	86.	70.3	.....

SUMMARY.

Mean barometer, 29.973.
Highest barometer, 30.10, 15th
Lowest barometer, 29.77, 17th.
Mean temperature, 78.2.
Highest temperature, 92.0, 17th.
Greatest daily range of temp., 21.0, 2, 3, 7th.
Least daily range of temperature, 10.0, 26st.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..81.9	1876..80.4	1881..84.3	1886..78.7
1872..80.5	1877..81.1	1882..81.2	1887..78.3
1873..80.1	1878..82.2	1883..80.7	1888..77.3
1874..81.0	1879..81.0	1884..79.4	1889..78.2
1875..79.8	1880..80.0	1885..82.2	1890.. —

Total excess or deficiency in temperature during month—84.
Total excess or deficiency since Jan. 1—300.0.
Prevailing direction of wind, S.
Total movement of wind, 5000 miles.
Extreme velocity of wind, direction, and date, 30 miles, E., on 11, 12th.
Total precipitation, 7.62 inches.
Number of days on which .01 inch or more of precipitation fell, 10.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874..... 9.62	1879..... 2.96	1884..... 8.60
1875..... 4.92	1880..... 6.43	1885..... 3.30
1876..... 6.20	1881..... 2.84	1886..... 9.30
1877..... 2.75	1882..... 2.71	1887.....13.34
1878..... 7.35	1883..... 2.05	1888..... 9.09

Total excess or deficiency in precipitation for month—1.39.
Total excess or deficiency since Jan. 1—10.71.
No. of clear days, 8. No. of fair days, 9.
No. of cloudy days, 13.
Thunder storms on 9th, 19th, 22th and 30th.
Lunar halo, on 7th.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable.

R. E. KERKAM, *Signal Corps Director.*

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

SEPTEMBER, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should the so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompanies the paper.

The Diagnosis of Urethral Stricture of Large Calibre.*

R. W. STEWART, M. D., M. R. C. S., Physician to Mercy Hospital, Pittsburgh, Pa.

A prominent authority on genito-urinary diseases says: "The least contraction at any point in the urethral canal has been demonstrated as capable of causing the indefinite continuance of an urethral discharge and even of establishing it *de novo* without veneral contact." The same authority also says: "Chronic urethral discharge, commonly called gleet, is the signal which nature hangs out to notify the intelligent surgeon that an obstruction to the normal working of the muscular apparatus of the urethra has occurred, that plastic material laid down in the antecedent inflammatory condition has begun to contract the normal urethral calibre, whether it be 20 or 40 millimetres in circumference, and that nothing short of a complete restoration of the normal calibre of the canal will afford a permanent cure" (Otis, "Stricture of the male urethra," pages 20 and 75). Those who are accustomed to the treatment of urethral diseases are aware that the treatment of gleet constitutes perhaps the most important as well as the most troublesome part of urethral surgery, and if, as there are

*Read at Allegheny County Medical Society, June 18, 1889.

good reasons for believing, the successful treatment of gleet consists, in the majority of cases, of the removal from the urethra of some contraction in its calibre, which keeps the adjacent mucous membrane in a condition of chronic inflammation, it will be evident how important it is that some means should be placed at our disposal by which urethral stricture may be readily detected and accurately located.

For this purpose various instruments have been devised; those in general use are the blunt-pointed steel sound, the bulbous bougie and the urethrometer.

The blunt-pointed steel sound, as recommended by Sir Henry Thompson, is doubtless useful for the detection of stricture of small calibre through which only small instruments will pass. But these strictures are not those with which we have most to contend; it is the stricture of large calibre, through which a medium sized steel sound will pass without perhaps a noticeable obstruction. The blunt-pointed steel sound is certainly inadequate as a means of detecting strictures of large calibre, and in the presence of superior instruments should be relegated to obscurity.

The bulbous bougies are, in many respects, superior to the steel sound, but to their use may be urged several serious objections, which they have in common with the steel sounds. It is necessary to have a complete set of bougies, as each bougie only guages a particular size. Where there is more than one contraction of the urethra, should the posterior contraction be less than the anterior, the bulbous bougie will not indicate its presence until the anterior contraction is dilated sufficiently to pass an instrument the size of the posterior stricture, and a contraction of the meatus so commonly found, renders them useless until the meatus is cut. Another objection to these instruments is the necessity of trying bougie after bougie until the proper size is obtained.

To obviate these objections the urethrometer was devised. There are several varieties of this instrument, all

agreeing, however, in their general construction and method of using. This instrument has a bulbous extremety, which can be expanded to any desired extent by means of a screw at the handle. An index at the handle indicates in millimetres the size of the expanded bulb. The urethrometer is free from the objections of the previous instruments, in the fact that it can be adjusted so as to measure any stricture of large calibre, and that a contracted meatus or a narrow anterior stricture forms no obstacle to the detection of deeper strictures. It must be admitted that the urethrometer is an improvement on the sound and the bougie, but it is perhaps better in theory than in practice, for in practice it has serious objections. Following the instructions of Prof. Otis, we introduce the urethrometer down to the bulbo-membranous junction, and by means of the screw at the handle expand the bulbous extremity "up to a point which is recognized by the patient as filling it (the urethra) completely, and yet easily moving back and forth. The index at the handle then shows the normal circumference of the urethra under examination." This is all beautiful in theory, but very different in practice; if we rely on the patient's feeling his urethra filled by the bulb we rely on a very unstable guide, because one patient may consider his urethra filled as soon as it is touched by the expanding bulb, while another will not consider his urethra filled until the pain of distension forces an admission from him; and a patient may at different parts of his urethra, according to its tenderness, form different estimates as to when it is distended. The only reliable indication of the distension of the urethra is by moving the urethrometer along the urethra and feeling whether it is held or not, and this may necessitate considerable moving back and forth of the instrument, exposing the urethra to considerable irritation. A contraction is recognized by feeling an obstruction to the withdrawal of the urethrometer when the bulbous portion is reduced just far enough to slip through the contraction; at the

same time a note is taken of the size and depth of the stricture. Having passed through the stricture, the bulb is again enlarged until the urethra is filled, and so on.

All this requires considerable skill, and a delicacy of manipulation which is seldom attained by any but the expert, accustomed to the handling of urethral instruments. In the hands of the expert the urethrometer may give satisfaction, but in other hands it will perhaps be oftener a source of embarrassment than a source of information.

To my mind the requirements of an ideal instrument for the detection of large strictures would be an instrument, the use of which did not require special skill, and which would make an accurate record of the urethra at all parts. In considering how an instrument could be made to fulfill these requirements, it became evident that the tactus eruditus of the surgeon must be replaced by a mechanical contrivance, and that instead of an index on the instrument, a diagram representing the size of the urethra at all parts must be substituted. Acting on these principles, I have had an instrument constructed which I have called a urethragraph. It consists of a canula, terminating in two movable blades, which present a smooth convex surface to the urethra. This instrument is introduced with the blades closed as far as the bulbo-membranous junction; then with the left hand the carriage containing a strip of cardboard is introduced into the slot in the urethragraph. With the index finger of the right hand a movable pin is touched, which liberates a spring contained within the handle of the instrument. This spring, on being liberated, expands the movable blades until a certain adjustable pressure is exerted against the urethral walls. The carraige is now held stationary with the left hand, and with the right the instrument is withdrawn from the urethra. The spring within the handle is so adjusted that the movable blades press against the urethra with an equal pressure at all portions, whether it is strictured or not. As the movable blades move along the urethral wall,

they follow its contour, no matter how irregular its shape, and at the same time an arrangement underneath the handle draws a diagram on the cardboard corresponding exactly with the width of the urethra at all parts. This cardboard is spaced longitudinally into millimetres, and transversely into inches, so that at a glance the size and position of any portion of the urethra can be seen. The advantages claimed for this instrument are:

1. The rapidity with which an examination of the urethra can be made.

2. The simplicity of the examination, so that it offers no greater difficulties than the introduction of a sound.

3. The accuracy of the results.

4. A uniform pressure is exerted against the urethal wall at all parts, so that the patient does not suffer from the instrument being obstructed in passing through a stricture.

5. This pressure can be adjusted at the will of the operator.

6. A record is obtained so that at a glance the condition of the urethra at any part may be ascertained.

7. These records may be filed away and kept for future reference.

One Hundred Operations for Urinary Calculi.*

By EDMUND ANDREWS, M. D., L. L. D., Chicago; Senior Surgeon to the Mercy Hospital, Professor of Clinical Surgery in Chicago Medical College.

The object of this paper is to compare the safety of litholapaxy with that of lithotrity and of lithotomy so far as my own practice is concerned.

Surgeons at first stood aghast at Bigelow's proposition to crush and wash out stones at one single sitting. An hour and a half is sometimes consumed in the process, and it looks like savage treatment unsuited to an inflamed and ulcerated bladder, and one likely to cause fatal shock in

*Read at the thirty-ninth annual meeting of the Illinois State Medical Society, May 23, 1889.

some cases, and desperate inflammation in others. However, experience soon showed that a prolonged instrumentation in the bladder is far less dangerous than leaving a heap of sharp-angled fragments there for days as was usual in the old operation of lithotrity. The objection proved unfounded, and the new method spread so rapidly that it is now established in every civilized land with most gratifying results, both in diminution of deaths, and in the rapid recovery of the patients. I have now operated for stone over one hundred times, employing all the different methods in vogue.

The following is a summary of my results:

	Cases.	Deaths.	Per cent. of Mortality.
Litholopaxy (Bigelow's operation)	40	1	2½
Lithotrity (after Sir Henry Thompson's method)	6	1	17
Lithotomy (at all ages and by all methods)	55	7	13
Lithotomy (below age of puberty)	26	2	8
Lithotomy (above the age of puberty)	29	5	17

As all the litholopaxies were done upon adults the one single death in 40 cases contrasts strongly with the five deaths in 29 adult lithotomies.

In respect to the old form of lithotrity my experience of one death in six operations is substantially like that of other surgeons. The old method was safer than cutting when the stone was small, but more dangerous when large, so that on the average the mortality was about the same as that of lithotomy. It is true that Civiale of Paris reported immense numbers of cases of lithotrity and an astounding success, such as no man has been able to equal since his day, but there is something incredible in his figures, and he is openly charged in his own country with falsifying his results. Throwing Civiale's statistics out of the count as not verified, we must say that the old lithotrity which we practiced fifteen years ago is practically obselete and no longer a competitor for favor.

Litholopaxy can generally be performed only in adults. In comparing it with lithotomy, therefore, we should take only adult cases of the latter. Now, if we take the published statistics of adult lithotomy over the whole globe

amounting to some 4000 cases, the average mortality varies from 12 to 18 per cent., while lithopaxy in Chicago —at least in my own forty cases—had a death rate of only 2½ per cent. Even if we select the reports of those lithotomists, who appear to have had very remarkable results, they still fall very far below the success of litholopaxy. Thus Dr. Dudley of Kentucky reported many years ago over 200 lithotomies with a mortality of about 7 per cent. This does not equal litholopaxy, and besides there are doubts about the value of his statistics for reasons which do not impeach his truth nor honor. Prof. Paul F. Eve states that Dudley refused to operate on some eighteen of the more unpromising cases which applied to him. Now, any lithotomist who selects his cases and rejects 7 or 8 per cent. of the most unpromising ones can always show a remarkable success with the remainder, but this can give us no light on the general results of the operation as usually performed. The patient, however bad his prospects, has no possible chance of life except the operation, and the conscientious surgeon has no alternative but to give him that chance. It may injure our statistics and our fame, but the surgeon is bound to face that risk as a military officer faces the risk of battle. He who skulks is a coward. Dr. Dudley was not a coward, but he probably had a theory that the patient in bad cases was already hopeless, and therefore not a proper subject of operation.

The most remarkable successes claimed for lithotomy come from the warmer regions of Asia where calculi seem to be very abundant.

The following are gathered from authenic sources:

Operators (educated in American and English institutions).

	Cases.	Deaths.	Per Cent. of Mortality.
Baboo Ram Norain Das Bahadore, of India	248	17	7
Dr. Kerr, American Mission Hospital, China.	187	19	10
Dr. Nishan Altoungan, of Amasia, Asia Minor (educated at the American Mission).	265	5	2
Dr. Sewny (son-in-law of Dr. Altounyan, Sivas, Asia Minor)	40	1	2½
Total	740	42	6

These are most favorable figures for lithotrity ever published, and yet they show a far greater mortality than litholopaxy. It is to be noticed that the figures of Dr. Kerr, an American missionary at Canton, are not very different from those in this country, while the native surgeons, educated in American and English style, show a much higher success. As I am unable to test these figures by examination of original records, except in the case of Dr. Kerr, I am tempted to suspect that the learned Hindu and the two educated American gentlemen in Asia Minor either gave rein to the exuberant oriental imagination, or else were loose and inaccurate in their records. Still if we granted in full measure the success they claim, it would be decidedly below that obtained by litholopaxy.

One thing which I notice in litholopaxy is that the patients are remarkably rapid in recovery, and go home in about half the time required by those who are treated by lithotomy.

The recurrence of stone after operation is not infrequent, both after lithotomy and litholopaxy. It results from two causes: the continuance of the tendency to form new stones, and the leaving behind of overlooked fragments. The former cause acts equally in both operations. The latter is more frequent in litholopaxy, and is spoken of as a serious objection to the operation. The weight of this objection is greatly overestimated. In litholopaxy the temporary retention of a small piece is a trivial affair. The patient is always instructed to watch for any slight recurrence of his old symptoms, and if he discovers them, to present himself for examination. If a bit of stone is found it can be seized and crushed or withdrawn whole without any danger, and generally without an anæsthetic. It is a mere trifle, like passing a catheter, and not a formidable operation like lithotomy or litholopaxy.

Three of my cases of lithotomy were of special interest. In one I attempted litholopaxy, but found the stone, which was of calcium oxalate, so excessively hard that with my

utmost strength I could not break it. I then had an assistant grasp one handle of the lithotrite with both hands, while I did the same with the other handle. Applying our full strength we broke the lithotrite, and the calculus with a stony obstinacy defied our powers, so that I was obliged to finish by lithotomy.

In another case of lithotomy I found nine stones, six of which were large and lay fitted together by facets of opposition.

In a third case the stone was found to be over three inches in diameter, and the jaws of the lithotrite could not grasp it, as they slipped from its slopes in every position in which I could place them. I was obliged, therefore, to finish the case by supra-public lithotomy. All the three cases recovered without serious difficulty.

No. 6 Sixteenth Street, Chicago.

A Case of Galactocele Testis.

By HY. S. COCRAM, R. S., Clinic of DR. A. B. MILES, House Surgeon Charity Hospital.

On the morning of August 7, 1889, a man applied at the Hospital for treatment, apparently suffering from some severe nervous trouble. He was hypersensitive and displayed an unusual amount of excitement, losing almost entire control of speech when questioned, and replying in the most simple manner, showing a decided lack of concentration; the mind was almost wandering. During the conversation he stated that three months previous he noticed a slight swelling of the scrotum, and that it had continually enlarged from that date. Dr. Archinard and I made an examination and found a tense scrotal tumor containing at least a pint of fluid. Simply to confirm the diagnosis of hydrocele we punctured the tumor with a hypodermic needle, and much to our astonishment withdrew an opaque liquid of about the color and consistence of milk. Desiring to ascertain the cause of this discoloration and what the fluid contained, I took it to the pathological department for

a microscopical examination, where it was found to contain numerous fine granules in a state of active movement, as set forth in the following report of Dr. A. McShane, Assistant Pathologist:

"A drop of the milky fluid was examined under the microscope, and in it was found a great multitude of light, almost transparent granules, which were all in very active motion. The granules did not refract light very strongly. In this respect they differed from fat granules which, furthermore, do not wriggle about as these granules did. In a fatty emulsion, the fat globules have not the Brownian movement, but they stand perfectly still. The milky appearance of this fluid was not due therefore to emulsified fat.

"In order to ascertain if the actively moving granules were bacteria or other microörganisms, a drop of the fluid was allowed to dry on a cover-glass and then stained just as is done in staining for the bacillus tuberculosis. Three cover-glasses were smeard and stained; 1, with magenta (Ziel's solution); 2, Loefler's solution (methyl blue); 3, hæmatoxylon. If the granules had been bacteria, they would have become fixed and stained, and would have appeared under the microscope as distinct points; but, instead of distinct dots, nothing could be seen except large films of coagulated or hardened albuminous matter, resembling the ordinary mucus that shows up in streaks whenever we stain sputum.

"The hydrocele fluid was odorless. The granules could hardly have been bacteria, for, 1, there was no possible way of entering from without; 2, the processes of their nutrition would have resulted in the formation of fetid matter.

"I incline to the belief that the granules were particles of of albuminous matter (non-reproductive), having the Brownian movement."

I then reported the peculiarities of the case to Dr. Miles, showing him a specimen of the fluid. He accompanied me

to the ward to make another examination. As we entered the ward the patient, in a most excited manner, stated that the water had "evaporated." An examination showed that the tumor had decreased in five hours about two-thirds of its original size. Instead of being tense and presenting the appearance of a well-filled bag, it was loose and flabby, conveying to the touch a gelatinous sensation of redundant tissue. At this stage the tumor bore no resemblance whatever to a hernia, every symptom indicating the presence of some variety of liquid in the vaginal tunic. The tumor rapidly diminished in size until the following morning, when the scrotum was almost, if not entirely normal.

The patient was dismissed 24 hours after his admission, apparently perfectly cured with no other treatment save the puncture of the needle of a hypodermic syringe.

The patient reported for examination the day after his dismissal, and again, five days later. On each occasion the swelling in the vaginal tunic seemed smaller, it still had the same gelatinous feeling, though somewhat firmer. Evidently absorption of the watery portion of the accumulation was progressively going on, and the parts were rapidly returning to their normal condition. The advent of the tumor was that of a typical hydrocele. Throughout its entire course there was not the slightest constitutional disturbance. What this tumor was, having been there for three months, and why it should have disappeared immediately after the puncture is certainly as obscure as it seems irrational.

In Birch-Hirschfeld's *Pathologische Anatomie* we find some mention of galactocele. He says: "The cases of hydrocele observed in tropical regions, the contents of which have a milky appearance (galactocele of Vidal) and apparently arising spontaneously, are probably allied to the previously mentioned cases of chylous ascites, caused by parasites," (page 1192). The paragraph referred to reads as follows: "A new animal parasite of the peritoneum was discovered by Winckel in a woman who had lived a long

time in Surinam, and who suffered from ascites. Upon tapping the abdomen, a fluid resembling buttermilk was withdrawn. Under the microscope this fluid was seen to contain an enormous number of worm-like entozoa in active motion. Each parasite had a slender, rounded head upon which 4 or 5 ciliæ could be seen, and a sharp-pointed tail. These organisms were 0.2 mm. long (= $\frac{1}{125}$ inch), and 0.1 mm. broad (= $\frac{1}{250}$) inch. Winckel thinks that it is probable that this parasite is indentical with the one discovered by Lewis in India, the *Filaria sanguinis hominis*, which causes chyluria."

Another kind of liquid tumor of the testicle is described by Birch-Hirschfeld, namely, spermatocele. Of this he says: "The finding of spermatozoa in the fluid of hydrocele was explained by the early observers as due to the rupture of dialated seminal canals on the surface of the testicle, whereby the contents of the glandular tube became mixed with the hydrocele fluid. Careful anatomical examination, however, showed that the spermatocele did not lie in the cavity of the vaginal tunic, but in special cystic places. The sperm-cysts develope as a rule in the head of the epididymis, more rarely at its lower end, and most rarely in connection with the *Rete vasculosum testis*. The cysts may attain considerable size; in Steuder's case 350 grams (nearly 12 ounces) of fluid were withdrawn. The contents are sometimes normal semen containing rapidly moving spermatozoa, and sometimes the fluid is increased and the spermatozoa lose their tails; finally, simple serous cysts may probably arise from sperm-cysts."

Now, how shall we classify our case? It was not due to the *filaria sanguinis hominis*. It was not due to chylous ascites, for there was no communication between the vaginal tunic and the general peritoneal cavity. It was not a spermatocle containing tailless spermatozoa, for the liquid lay undoubtedly *within* the cavity of the vaginal tunic, and not in any superficial cyst springing from the body of the testicle, and lying *outside* the cavity of the

vaginal tunic; moreover, if the moving granules in the liquid had been tailless spermatozoa, they would have stained nicely with hæmatoxylon, etc., and would not have hidden their diminished heads.

Our case does not accord with any of the cases mentioned in Birch-Hirschfield's exhaustive work, and it seems to be unique.

Hospital Reports and Clinical Notes.

MYXŒDEMA—REPORT OF A CASE, WITH COMMENTS.

By JAS. F. HIBBERD, M. D., Richmond, Ind.

The following is the report of a case, in abstract, made at the meeting of the Indiana State Medical Society, May 1, 1889:

The patient, Mrs. B., a lady 50 years old, consulted the writer in regard to her general health, which had been failing for almost a year, without her being able to describe any definite disease as the source of her invalidism. Her only departure from typical good health for years previous had been a perpetual looseness of the bowels, often associated with free hemorrhage. This was probably due to rectal ulcer, but as she declined examination this was conjecture. At 42 years of age she had an attack of enteric fever, which suspended her catamenia, which have never returned. Dr. Hibberd remarks, parenthetically, that in his experience no woman who has had enteric fever after 40 years old has ever menstruated again, and asks if his experience is unique. At the time he began to treat Mrs. B. her weight was 143 pounds. For months previously she had suffered from a sense of general weariness, abatement of mobility, disinclination to active exercise, and lessened ability to concentrate her mind on any important affair. She had been troubled with a form of dyspepsia, her stomach seeming to swell and bloat after eating, a sense of fullness, heaviness and distress in her head,

rather than actual pain, and a gradually increasing swelling of the whole surface of the body and apparently of the mucous membranes. Her skin had become dry, pale and sallow. It was swollen and puffy, particularly about the feet and hands, but she complained especially of the thickness and weight of her eyelids and surrounding tissues. Her limbs had lost their normal suppleness and she walked with unsteady gait, her hands were swollen and stiff, their tactile function impaired, making it difficult to hold a pen or write a legible hand. Her nails had become friable and would crumble, instead of cutting smooth under the scissors. She was very sensitive to low atmospheric pressure and complained of general subjective cold, particularly cold extremities and nose. She realized a slothful vital activity at large and a notable hebetude of mental operations. Examination disclosed no special error in respiratory, circulatory, urinary, uterine or digestive apparatus, excepting the dyspeptic disorder before mentioned.

Treatment.—The patient was advised to suspend her literary engagements, as an evening of study would be followed by an uneasy, restless night, and morning would find her with her eyes swollen, almost shut, and her face distorted with an irregular tumefaction. Moderate outdoor exercise was recommended. Mild doses of quinia, strychnia and iron soon made a favorable impression on her condition. She has continued to improve slowly up to the present time, and is now attending to her household duties and does some literary work without injury, but still presents a remnant of her serious ailments of two years ago. Now what is the disease that afflicted this patient, and what is its essential pathological nature? It is a typical case of myxœdema of favorable progress and promising prognosis; a mild attack to be sure, but disclosing all the characteristic symptons of myxœdema.

The essential pathology of this disease is still *sub judice*, but the majority of investigators accept the doctrine that it is a trophic neurosis, and has for its chief etiological factor the

destruction or deterioration of the thyroid gland, and that mucin permeates the dermal and subdermal connective tissue, the mucous membranes, and, possibly, all the viscera of the body. This is the cause of the most notable symptom, viz.: the non-œdematous and non-inflammatory swelling of the integument and all viable tissues. The first description of the disease was by Gull in 1874, and in 1876 Ord gave a thorough exposition of its leading characteristics, and proposed the name because he declared mucin was found in all the tissues of its victims. Hammond gave a short description of the disease in 1881, and most of the treatises on general practice and nervous diseases written since 1884 have chapters on myxœdema.

In July and August of 1888 the *American Journal of the Medical Sciences* published two papers by Drs. Hun and Budden, giving thorough details of four cases under their care, and a careful review of the literature on the subject. Excluding the cases due to the surgical extirpation of the thyroid gland for disease, and those associated with idiocy and cretinism, there are 154 cases of idiopathic myxœdema more or less completely reported. These writers conclude that there are more than three times as many females affected as males. The average age for the beginning of the disease is 40 years; the chief etiological factors are excessive child-bearing, excessive hemorrhage, mental shock and worry, and injuries especially of the head. Myxœdema appears to manifest itself by very characteristic symptoms, which affect especially the cutaneous, nervous and vascular systems.

Cutaneous System.—The skin is swollen without pitting, dry, scaly and cold, the hair and teeth frequently fall out, the nails become brittle, perspiration is either greatly diminished or absent. The mucous membranes are also swollen, but their secretion is usually increased.

Nervous System.—There is mental sluggishness and impairment; insanity is frequent. In about half the cases sensibility is impaired; in all cases the muscles act feebly

and sluggishly, the reflex actions are frequently diminished, speech is slow and sometimes hoarse, and numbness and neuralgic pains are frequently present.

Muscular System.—In the majority of cases the pulse is slow and small and the heart presents some abnormality. The patient is often in an anæmic condition, and often there are severe hemorrhages. The surface temperature is subnormal, which may be considered in part a nervous symptom.

The lesions found in myxœdema are a nearly complete atrophy of the parenchyma of the thyroid gland, with a new formation of lymphatic tissue in the gland with left-sided cardiac hypertrophy, chronic diffuse nephritis, interstitial hepatitis, degeneration of the suprarenal capsules, atrophy of the fat and a general œdema or infiltration of the skin and mucous membranes. Drs. Hun and Budden describe the results of studies upon persons in whom the thyroid gland had been removed, congenitally absent or atrophied, and of animals whose glands have been extirpated in experimental inquiry; and in all instances there supervened a condition not distinguishable from myxœdema, although known as "cachexia strumipriva." It is ascertained from other sources, however, that myxœdema does not always follow the extirpation of the thyroid gland. Of Kocher's thirty cases, six escaped; of Reverdi's eleven cases, six did not thus suffer, and Billroth has never had a case in many instances of removal of the gland.

A clear, succinct, comprehensive statement of our present knowledge of this disease is found in the summary of Dr. Ord, presented to the London Clinical Society as the chairman of a committee of the society in May, 1888. This summary, in 18 numbered paragraphs, was published in the London *Lancet*, June 2, 1888, and copied in the *Medical News*, Philadelphia, June 23.

The author concludes this paper with the statements that he considers it a distinct disease with well-marked symptoms; that its diagnosis is easy and certain; that it is not

amenable to treatment, and that persons affected with it never regain a perfectly normal condition. It seems quite possible to him, however, to meet successfully associated disturbances which are harmful with medicine, and by appropriate regimen carry the victim along through years of comparative enjoyment and usefulness, though he at last succumbs to other causes of death.

THE DEADLY BANANA PEEL.

Last Christmas morning, an old lady (Italian), aged eighty years, slipped on a banana peel and fell violently on the banquette. She was rendered helpless by the fall, and was carried to her home on an improvised stretcher. In a short time, Drs. Hugh Kelly and M. Levy saw the patient, whom they examined under chloroform; they found an intracapsular fracture of the neck of the right femur. They applied the same evening a plaster-bandage, which retained the limb in good position. No untoward symptoms presented themselves on the part of the hip, but the patient, always feeble, obstinately refused to take any nourishment, and in eight days she died of sheer exhaustion. She had fully recovered from the shock of the accident; her temperature was slightly elevated for three or four days, but it remained normal afterwards. There was nothing in the nature of the accident to prevent recovery; her extraordinary obstinacy and advanced age brought about the fatal result.

CORRESPONDENCE.

VIENNA LETTER.

[Our Regular Correspondent.]

The Therapy of the Ruptures of the Uterus.—An interesting and instructive discussion on the therapy of the ruptures of the uterus has recently taken place before the Obstetric-Gynæcological Society of Vienna. Dr. Piska-

ceck, late assistant at Prof. Spaelti's and Prof. Breisky's clinic, induced the discussion by the demonstration of a case of healed perforating rupture of the uterus. He showed a woman who had been admitted into the clinic of the late Prof. Breisky, owing to difficult delivery, and on whom several attempts at turning the fœtus had been made outside the hospital. The woman in question had already been delivered for three times of living children (cranial positions). The condition of the patient at the time of her admission into the general hospital was the following: The woman was very anæmic and exhausted; no labors. Abdomen inflated owing to meteorism; and in the left hypochondriac region, directly behind the abdominal walls, the outlines of the head could be felt. The uterus was much dislocated towards the right side. Scanty discharge of blood out of the genitals; prolapse of the right arm. The border of the external orifice of the uterus could be reached only on the right side and upwards at the entrance of the pelvis. On the left side a rupture was felt through which the child had slipped (escaped) into the abdominal cavity; the child was dead.

With the left hand the turning (version) of the fœtus (by the leg) could be easily practiced, and the same was true of the extraction which was made immediately after version. The fœtus was immediately followed by the placenta and the omentum, of which a piece of the length of ten centimetres could be found before the entrance of the vagina.

In the internal examination which was next made, it could be stated that directly behind the entrance into the vagina there was a longitudinal fissure of the vaginal mucous membrane which penetrated into Douglas' pouch, then continued into the neck of the uterus of the same side, and reached as far as 3 centimetres into the uterine body. After cleaning the omentum and the vagina with a solution of thymol (1:2000) the omentum was reposed with the whole hand, and afterwards an "iodoform wick" ("iodoform

docht'': several threads impregnated with iodoform being arranged in the form of a wick), being composed of 50 threads, and of a length of 5 centimetres, was introduced into the vagina; loose iodoform gauze in the form of stripes was then also introduced into the vagina and placed before the wick, which latter covered the vaginal fissure. After the uterus had been brought into the normal position a firm dressing was applied. On the third day there was already flutulence.

On the fifth day, after irrigation of the intestines, the bowels acted well. With the beginning of the third day there were high morning and evening temperatures. On the fourteenth day pus escaped into the vagina from an abscess in the left parametrium. Decrease of temperature. On the seventeenth day new increase of temperature. In the left inguinal fossa fluctuation was detected. Incision and discharge of large quantities of pus; decrease of temperature. Now, suppuration out of a fistulous opening still persisted over the same place, but the patient had left her bed for already two weeks.

In the place of the former rupture a retraction of the form of a funnel was to be found at present. The uterus was drawn to the left side and fixed there.

Besides this case, Dr. Piskacek reported four other similar cases of his own observation, of which three cases were perforating ruptures of the uterus and one represented perforating ruptures of the vagina. In one case of perforating uterine rupture, the woman died; she had lost much blood during the delivery and succumbed, owing to marasmus. In the other three cases, the women were dismissed as cured. With the exception of the fatal case in which a gum-drainage tube was used only iodoform wicks were employed.

Dr. Piskacek summarizes our treatment of cases of uterine ruptures as follows: With the exception of those cases in which a rupture of the uterus was complicated with narrowness of the pelvis and in which we

had to proceed according to the usual principles, we had to find out whether the rupture was complete or incomplete.

When the rupture was incomplete and there was no hemorrhage, the mere cleaning of the wound and the application of a loose iodoform wick to it reaching as far as the peritoneum were quite sufficient. Those cases in which, after an incomplete rupture no primary infections occurred, but in which phlegmonous processes of the parametrium were observed at a later date, had to be explained by a defective evacuation of the secretions (imperfect drainage).

When in the case of an incomplete rupture there was hemorrhage, the wound had first to be duly filled with tampons, and the uterus had, at the same time, to be pressed against the vertebral column for a long interval of time. Such a manual compression, which was also permitted without control, was much better than a mere compressing dressing under which the conditions of the uterus could not be observed. Should the hemorrhage thus be stopped, a compressing dressing could be applied. Should the hemorrhage persevere, there was, notwithstanding, the possibility of stopping it by means of sutures through the vagina.

The matter is, however, quite different when we have to deal with complete ruptures. In such cases several conditions have to be taken into account.

First, we must try to find out if the fœtus be still in the uterus, or if it have in part or entirely escaped into the abdominal cavity; furthermore, if the cervical canal or the external orifice be in a condition as to permit a free escape of the fœtus.

When the fœtus is in the uterus and there is presentation of the head, forceps have to be applied in the case of living fœtus; in the case of a dead fœtus, perforation and extraction with the cranioclast ought to be resorted to.

If the fœtus have entered the abdominal cavity with

the trunk, and the head lay in the entrance of the pelvis: forceps or perforation. The latter has to be practiced when the pelvis is not spacious enough.

If the fœtus escape into the abdominal cavity only with the head, version by the foot and extraction by the legs present no difficulties, whereas the extraction by the legs, where the fœtus has entirely escaped into the abdominal cavity, is possible only when the feet could easily be reached through the rupture, and when the womb has such properties as make a further lesion during the extraction improbable. In most cases, however, of compelete escape of the fœtus into the abdominal cavity, only laparotomy with cleaning of the peritoneal cavity, and suture of the uterus are indicated, as even large ruptures considerably diminish when the uterus becomes void.

As to those cases in which the rupture of the uterus has occurred when the uterine neck is still normal or there is cicatricial agglutination of the cervical canal and the external orifice, laparotomy with suture of the uterus has to be practiced in the first case, and Porro's operation has to be performed in the second one. In the case of danger of internal hemorrhage, laparotomy with blood-stopping by sutures.

The question as to whether laparotomy or the corrosive method with the application of drainage was attended with the best results, had, in conformity with the statements of most the authors, to be answerd in favor of the last mentioned method.

The proposition that laparotomy had to be resorted to when the rupture was present in the anterior parts of the uterus, or when infection had already taken place, could not be consented to. There was indeed no doubt about the fact that the discharge of the secretions was much easier when the rupture was situated in the posterior parts, but drainage could be practiced also when the rupture was present in the anterior parts.

In the case of an infection of the peritoneal cavity, laparotomy would scarcely make the prognosis better.

Discussion on Dr. Piskacek's Lecture on the Therapy of the Ruptures of the Uterus.—Dr. Piskacek's interesting and instructive lecture gave the impulse towards a discussion on this important subject. Dr. Fleischmann remarked that in the treatment of the ruptures of the uterus great importance had to be attributed to the seat of the lesion. The ruptures which were situated in the posterior wall of the uterus were better adapted, as was shown by Kaltenbach at the Congress of Freiburg, to treatment by drainage than the lesions of the anterior uterine wall. Dr. Fleischmann had tried to prove the correctness of this fact in a little work on ruptures of the uterus. He had observed that eighteen ruptures with a seat in the anterior wall always ended fatally, whereas out of fourteen cases with a posterior seat only nine patients died. Among the first cases, five were treated by drainage; among the latter, five patients were treated in the same way, and all recovered.

Docens Dr. Felsenreich first discussed the method of drainage in ruptures of the uterus, and also said that the introduction of the iodoform gauze and the iodoform wick into obstetrical surgery had to be looked upon as a valuable improvement. The drainage by means of the above-mentioned matter was not, however, sufficient for this case, as the incomplete rupture represented an excavated wound already in the first stage of its development, and as the complete rupture only healed by sequestration, and both thus gave origin to the development of the so-called "dead places" ("todte Räume"), it was more than questionable whether the drainage with the iodoform wick was sufficient for these cases. The combination of the iodoform wick with a double-drainage tube, however, would better serve the purpose, as in such a case the sequestered cavity of the wound could be washed with antiseptic fluids on the fourth or the fifth day. Dr. Peters had tried such a combination with an excellent result. Dr. Piskacek would perhaps have avoided the suppuration in

the case he had shown to the society if he had been able to practice disinfecting washings when fever supervened in the first days after the beginning of the treatment.

Docens Dr. Breus quite agreed with the remarks of his predecessor, Dr. Felsenreich, and directed the attention of the audience to the fact that ruptures of the uterus frequently healed with the formation of cavities which persisted. In frequent cases the rupture did not even close, only its margins became cicatrized so that the loss of substance persisted as a cicatrical cleft which led into a cavity in the parametrium.

Taking into account the rarity of the observations of healed ruptures of the uterus, Dr. Breus quoted one such case which had been observed and described in 1883.

Dr. Peters was also of the opinion that in the case of penetrating rupture of the uterus laparotomy was indicated, but that it could certainly be avoided in the case of non-penetrating ones, and that washings, drainage or tamponade were usually quite sufficient in such cases.

Dr. v. Erlach, assistant to Prof. Charles Braun v. Fernwald, reported two cases of complete rupture of the uterus which had been successfully treated in the above-mentioned clinic.

The first case was as follows: In 1883, a woman 44 years old, who was pregnant for 18 times (inclusive of the last pregnancy), was admitted to the clinic of Prof. v. Braun owing to transverse position (transverse presentation); at half past 6 o'clock P. M. of the same day there occurred rupture of the bladder.

The examination showed that the left arm of the fœtus lay in the vagina, and the left shoulder in the entrance into the pelvis.

The whole right side of the uterus was torn off; the buttocks and both the feet had left the uterus; the uterus, on the left side, lay on the head of the fœtus. Version was practiced under anæsthesia, and the extraction of a dead fully developed child was made. The uterine rupture was

then drained by means of a double-drainage tube, and the uterus was fixed by means of a compressing dress.

Recovery occurred almost without fever, and the formation of a cervico-vesical fistula. This could be looked upon as a sufficient proof that the rupture went as far as the anterior wall of the uterus.

The second case was the following: In 1886, a woman 32 years old, quintipara, was admitted into the same clinic, having complete rupture of the uterus; the rupture extended along the right side of the uterus.

The whole intact "ovum" had escaped into the abdominal cavity; fœtus large, pelvis moderately narrowed.

The intact "ovum" (weight, 50.5 grammes) could be removed by laparotomy. The serous membrane along the uterus and the peritoneum over the psoas muscle were united by sutures: the subserous space was drained. There was formation of an exudation on the right side, which became rapidly absorbed; recovery took place in 26 days. Hence they had to deal with two cases of complete rupture of the uterus, one of which had been cured by simple drainage and the other by laparotomy.

Dr. v. Erlach in conclusion pleaded in favor of the performance of laparotomy in the case of complete ruptures of the uterus, and recommended the application of the iodoform wick only for incomplete uterine ruptures.

Prof. v. Bandl spoke to the same effect.

Vienna, Aug. 3, 1889.

THE MENSTRUAL FLOW.

I borrow the following interesting data from medical writers of recognized authority:

Twice have I known the menstrual flow to continue its regular appearance up to the sixty-first year in ladies of a remarkably strong constitution, which was the case of a lady who regularly menstruated up to the time of her death in her eighty-fourth year.

Dr. Meyer, of Berlin, in his remarkable paper,* mentions his having ascertained that out of six thousand women, menstruation was still progressing in twenty-eight at the age of fifty, in eighteen at fifty-one, in eighteen at fifty-two, in eleven at fifty-three, in thirteen at fifty-four, in five at fifty-five, in four at fifty-six, in three at fifty-seven, in three at fifty-eight, in one at fifty-nine, in four at sixty, in four at sixty-two, and in three at the age of sixty-four, the seven last cases occurring in the upper classes.

Lamotte relates that a woman had thirty-two children, and menstruated quite regularly up to her sixty-second year.

Auber attended two women, one at sixty-eight and the other at eighty, who for the last few years had menstruated. The flow came regularly, lasted three or four days, and during that time they were more nervous than usual.

Saxonia states that a nun, in whom the menstrual flow ceased at the usual time, experienced its return when her 100th year was attained, and it continued regular until her death three years after.

Rush mentions the case of a woman, who was confined for the last time in her sixtieth year, menstruated until her eightieth and died in her 100th year.

Haller records two cases in which women at sixty-three and seventy, respectively, bore children. Capuron cites the case of a lady, who after menstrual flow had been absent for several years, saw it return at sixty-five. Three months after she miscarried, the fœtus being well-formed.

Meissner states that a woman, who first menstruated at twenty, bore her first child at forty-seven, and the loss of seven other children at sixty. Menstruation ceased and reappeared at sixty-five, continuing until ninety-eight, then stopped for five years, again to return at the advanced age of 104. In 1812 she was still alive.

The number of such cases could be increased, which are not instances of irregular flooding, but of the menstrual

*Congrès Médical International de Paris.

flow, occurring regularly with its attendant symptoms, or followed by pregnancy. These facts contradict the opinion of those who assert that when menstrual flow has once fairly ceased between 40 and 50, any blood that may afterwards flow from the womb must depend upon some undetected ulceration, but no ulceration was found where examinations were made to settle the question. I will con clude this very brief, but well-authenticated review, of the female subject with the following quotation from a high authority: "With regard to the structural conditions, whereby in a certain number of women the menstrual flow and fecundity are protracted to such an advanced age, it is fair to suppose that they were anatomically constituted like a lady in whom menstruation only became regular at the last years of her life and who died at 72, and in whom Drs. Bowier and B. de Boismont found the ovaries and the whole of the generative system turgid, as in girls of 15 to 18 years of age, instead of being in their usual state of atrophy."

With reference to the male subjects I have gathered the following interesting date:

Undoubtedly instances of virility at the age of nearly 100 years are on record, but in those cases the general bodily vigor has been preserved in a remarkable degree. The ordinary rule seems to be, that sexual power is not retained by the male to any considerable extent after the age of 60 to 65.

The impunity with which some elderly men continue the practice of sexual intercourse is certainly surprising. Still abuse or excess, which ever we may term it, must sooner or later tell its tale. In some, its effects assume the form of hypochondriasis, followed by all the protean symptoms and miseries of indigestion, in others of fatuity. In the more advanced stages, paralysis or paraplegia comes on, accompanied by softening of the brain and its attendant consequences. What in early life was attended by temporary languor, is in age not unusually followed by the train

of symptoms alluded to above; and, when we are called in, it is too late to do aught but palliate them.

As Lord Erskine asserted in his speech on the Banbury peerage trial, "there is no statute of limitations on the powers and faculties of man," and he quoted the instance of Sir Stephen Fox, who married at 77, and was the father of four children by the day he was 81.

Many other analogous cases might be quoted, but the following are the only two sufficiently interesting to merit notice: (1) In the *Edinburgh Courant* for May 3, 1776, there is this paragraph: "Wednesday last, the lady of Sir William Nicholson of Glenberry, was safely delivered of a daughter. What is very singular, Sir William is at present 92 years of age, and has a daughter alive of his first marriage aged 66. He married his present lady when he was 82, by whom he has now had six children." (2) Old Thomas Parr is said to have died on the 14th of November, 1635, at the age of 152 years and 9 months. His body was examined two days subsequently by the illustrious Harvey, who reports that, "the organs of generation were healthy, the penis neither retracted nor extenuated, nor the scrotum filled with any serous infiltration, as happens so commonly among the decrepit. The testes, too, were sound and large, so that it seemed not improbable that the common report was true, viz.: That he did public penance under a conviction for incontinuence after he had passed his 100th year, and his wife whom he had married as a widow in his 125th year did not deny that he had intercourse with her after the manner of other husbands with their wives, nor until about 12 years back had he ceased to embrace her frequently." I believe I have here presented an array of important facts bearing a more than ordinary medical and legal interest.

The inquiry is sometimes made, "How many children can a woman bear?" Dr. Szukits, in replying to this question, says that he has himself observed two women, each of whom had borne 24 children. Osiander refers to

one woman who, during her married life, bore 44 children; and another who had 53. Burdach mentions that the wife of a countryman in the Moscow district had given birth to 69 children in 27 confinements, viz.: Four times, 4 at one birth; 7 times, 3, and 16 times, twins. In the Harleian MSS., Nos. 980–87, is the following extraordinary case, which is generally regarded as true:

"A weaver in Scotland had by one woman 62 children, all living till they wer baptized, of which ther wer but fower daughters only, who lived till they wer women, and 46 sonns, all attaining to man's estate. During the time of this fruitfulness in the woman, her husband, at her importunity, absented himself from her for the space of five years together, serving as a soldier under the command of Captain Selby, in the Low Countries. After his return home his wife was again delivered of 3 children at a birth, and so in her due time continued in such births, till through bearing she became impotent. The certainty of this relation I had from John Delavall, of Northumb, Esqr., who anno 1630, rid about 30 miles beyond Edinburrough to see this fruitful couple, who wer both then living. Her stature and features he described to me then more fully. Ther wwas not any of the children then abiding with ther parents, Sir John Bowes and three other men of qualitie having taken at several times ten of ther children apeece from them and brought them up. The rest were disposed of by other English and Scottish gent., amongst which three or four of them are now alive, and abiding at Newcastle, 1830."*

I will conclude this paper, which has been over-hastily written at the suggestion of a prominent professional friend of this city, by a quotation or two from a medical author who has given much thought to this important subject:

"I am every day becoming more convinced that many of the affections of the brain, under which elderly persons

*Quoted from the History and Antiquities of Newcastle-upon-Tyne. By John Brand M. A. Vol. II, p 454, 1789,

suffer and to which a certain proportion annually succumb, are caused by excesses committed when the enfeebled powers are unequal to supporting them, and I think it the duty of the medical profession to put such sufferers in possession of these facts. Kind advice and sympathy would thus, I am sure, save the valuable life of many a man who errs sexually from ignorance. * * * In the present state of society, with our manners, passions, miseries, *man does not always die—he sometimes destroys himself.* * * * I see no objection to an elderly man marrying a woman in a rank compatible with his own and whose age renders it probable that she will not have a large family. In these cases excesses are not likely to occur, and I feel convinced that an old bachelor by remaining an old roué may run greater risk than by marrying. In either case I should say avoid excess; but I no longer set my face against marrying late, only to the excesses to which it may lead. Not a few such marriages about which I have been consulted have turned out well and have led to much mutual domestic happiness."

I believe it is Lord Bacon who wrote: "Nuptial love maketh mankind, friendly love perfecteth it, but wanton love corrupteth and embaseth it."

C. H. Tebault, M. D.

Health Officer City of New Orleans 1866 and 1867; formerly Visiting Physician Charity Hospital; Professor Diseases of Children and Associate Chair of Obstetrics and Diseases of Women, late Charity Hospital Medical College.

RADICAL CURE OF FISTULA IN ANO AND HÆMORRHOIDS BY ELECTRICITY.

We print below a letter from Dr. Shotwell, of Grand Rapides, Mich., upon the treatment of fistula in ano by a new method:

Messrs. Editors—I would call the attention of the profession to more rapid methods of curing fistula in ano and

hæmorrhoids, coupled with safety and their radical extermination. Having devoted years to this branch of the healing art, many times with tedious and unsatisfactory results, employing the much-talked of Brinkerhoff and other methods, I now challenge the world to compare results with the methods I now use in the cure of fistula in ano, be there one or a dozen openings. I employ an electrolytic battery of about 12 ampere power, with sufficient of the battery element to subdue any hæmorrhage that may perchance occur. My portable battery that I take to the patient's house is about 6 by 10 inches long and 10 inches high, with 2 cells, and built chiefly for quantity, charging it with tri-oxide of chromium and sulphuric acid.

The method of procedure is this: The battery is first charged, and the patient's bowels thoroughly emptied by means of an astringent injection. I then place the patient on his side and with the Shotwell Rectoscope or other suitable speculum the inner opening is located, or, if it be an external, incomplete fistula, the side opening of the rectoscope is so turned that the possible opening is in view. The patient is of course under the influence of an anesthetic. I then straighten out the fistula tract, next nearest the anus, with a stiff, steel probe of sufficient length, having an eye near its introductory end, and, if the sinus does not quite open into the bowel, perforate the intervening tissue till the eye of the probe is distinctly seen in the rectoscope; and leaving it there I next introduce a lance-pointed probe having also an eye near its end, about three-eighths of an inch further from the anus into the solid structure and parallel with the fistulous track till its eye is also seen penetrating the bowel in the opening of the rectoscope. The eyes of both probes are then threaded with the opposite ends of a No. 24 platinum wire, about 10 inches in length, and both probes are then withdrawn, leaving the wire *in situ*, forming a loop. Both ends are now secured to an electrode, the electric current turned on and the loop drawn through the

partition, in its passage destroying the membrane which lines the fistulous track. No dressing is necessary, as it is well known that no wounds heal more kindly than those made by a battery. The bowels, however, must be kept locked up for at least a week (longer is better) when the patient gets up a well man, complete union taking place by first intention.

The above method I have employed in many instances with complete success. In hæmorrhoids and prolapsus ani I employ a similar treatment, no matter how large the protrusion or how long the patient has suffered; first bringing the growths all outside the anus, and in one treatment of a few moments the work is done and is always successful, followed by no hæmorrhage or unpleasant symptoms of pain. Should your many readers desire further information I shall be only too glad to give the same gratis to all who may apply, by addressing me at Grand Rapids, Mich.

Grand Rapids, Mich., July 15, 1889.

[There is one important point upon which Dr. Shotwell does not touch. Suppose a patient has two complete fistulæ, one on either side of the median line. Would he burn through both of them at one sitting? If so, would not the sphincter be cut bilaterally, and would it not be in Othello's fix, that is, with its occupation gone? This is a point which we would like Dr. S. to clear up.—Eds.]

J. F. Groenevelt, Assistant Surgeon, M. H. S., was relieved from duty at Gulf Quarantine Station, and ordered to Mobile, Ala., for temporary duty, Aug. 3, 1889.

Sulfonal has undergone the same experience as cocaine in regard to price. When the latter was first produced it cost a fabulous amount, now it is 2 cents a grain. Sulfonal was at first very expensive, but a great demand has resulted in the discovery of cheaper methods of production, and now this latest addition to our list of hypnotics is no longer an expensive luxury.

LEADING ARTICLES.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The next annual meeting of this association will be held in Evansville, Ind., Sept. 24, 25 and 26, 1889. The officers for this year are: President, Dr. Geo. J. Cook, Indianapolis, Ind.; Vice-Presidents, Dr. J. D. Griffiths, Kansas City, and Dr. J. A. Larrabee, Louisville; Secretary, Dr. R. L. Thomson, St. Louis; Treasurer, Dr. C. W. Chapman, Toledo, Ohio; Chairman Committee of Arrangements, Dr. A. M. Owen, Evansville.

The object of this association is thoroughly to organize the members of the regular profession of the entire Mississippi Valley. Our great river should bind the people of its valley in close friendship. In many ways, industrially, the Valley-people would be benefited by a better acquaintance with one another. The Father of Waters makes their interests common, and we hail with delight any movement which tends to the developement of that part of the Union which we believe is destined to be the future home of the truly American civilization.

Last year many members of the Gulf States were unable to attend the meeting in St. Louis on account of the quarantine throughout the South. We hope that this year nothing of this character will interfere, so that every State will be represented, as questions of importance to the entire profession of the South and West will be before the association for consideration.

The importance of an association to bring together the members of the profession within this territory must be apparent to every one, as there are many interests in common and individual welfare that can best be promoted by the advancement of the interests of all.

Every member of the regular profession in good standing can become a member of this association, and all are earnestly invited to attend this year.

Evansville was selected as the next point of meeting on account of its central location, being easily accessible from all points both by river and by rail.

The Committee of Arrangements are already at work preparing for a royal reception in September.

Many papers have been promised by prominent men. Others who wish to present papers should send titles to the Chairman of Committee of Arrangements, Dr. A. M. Owen, Evansville, or to the Secretary, Dr. R. L. Thomson, 3555 Olive street, St. Louis, Mo.

A JOURNALISTIC SQUABBLE.

There is a slight suspicion of strained relations between the *Druggists' Circular* and the *Times and Register*. The former charged the latter with having, in its editorial columns, given approval to the reprehensible practice of drug-substitution by druggists. The accused journal courteously says that every statement made in the matter by the *Circular* is "utterly and unqualifiedly untrue." (This last sentiment could have been more forcibly expressed in three or four Anglo-Saxon monosyllables.)

The belligerents have not contented themselves with hurling irresistible volleys of ink from the shelter of their impregnable editorial columns, but they have favored the other medical journals of the land with circulars setting forth their grievances or defence as the case may be. In this way they have called the attention of editors generally to the mortal sin of drug-substitution, and have incidentally succeeded in getting a large amount of free advertising.

The trouble began, so the *Times and Register* explains it, by one of those irregularities that will happen in the best families—and even in medical journals sometimes. An annotation slipped into one of the last issues (had the editor gone fishing?) which was worded in such a way as to give rise to misapprehension. The writer of that unfortunate annotation, it seems, thought he was a humorist;

but his humor turned out to be more dismal than even that of the *London Punch:* it required an enormous amount of commentary to explain it. He didn't know that it was loaded, and the lynx-eyed editorial staff could not discern anything in the shape of a boomerang in it. The joke (without its explanatory diagram and references) made it appear that the *Times and Register* had given its consent to the evil practice complained of. If a respectable medical journal can so far forget its duty to itself and the profession as openly to advocate dishonest practices, then no language can be strong enough to condemn it, and its day of usefulness as a trusted friend is over.

The editor of the *Times and Register* hastens to disclaim participation in any such dishonorable sentiments as charged. The *Druggists' Circular* sees in the slip of its contemporary a trace of a colossal movement on the part of wholesale pill-makers *et id omne genus* to form a trust for the purpose of buying up or controlling all of the influential medical journals of the country. Unless we are very much mistaken in our estimate of American physicians and American medical journalists, such a consummation is in the very, very distant future.

CHANGE IN THE MEDICAL FACULTY.

r. Ernest Laplace, of New Orleans, takes his departure for Philadelphia on the 2d instant. He has received the appointment of Professor of Bacteriolgy in the Medico-chirugical College in the latter city. He had been appointed Demonstrator of Microscopical Anatomy and Bacteriolgy in the Medical Department of the Tulane University of Louisiana; but the call to the city of Brotherly Love came before he had entered upon the active duties of his office here. The vacancy created by the resignation of Dr. Laplace has been filled by the appointment of Dr. P. E. Archinard.

Dr. Archinard, like Dr. Laplace, is a native of New Orleans. He but recently returned from Europe, whither

he had gone, in company with Dr. F. W. Parham, to study more especially diseases of the nervous system and bacteriology. The doctor brought back with him a complete outfit for a bacteriological laboratory.

Drs. Archinard and Laplace, as well as many others of the medical rising generation, first had as guide and teacher in histology and pathology the late and much esteemed Dr. H. D. Schmidt, who founded the Pathological Department of the Charity Hospital of New Orleans.

The appointment of these gentlemen to their respective positions is cause for just pride on the part of New Orleans. When a teacher is wanted for our home schools to teach the newest of all sciences, it is not necessary to seek the requisite talent abroad; and when a school far away requires a teacher in the same branch, a son of New Orleans is requested to fill the chair.

Dr. Laplace will reside permanently in Philadelphia. We wish him a *bon voyage*, and confidently anticipate the success for him which his industry and talent will surely bring him.

THE TENTH INTERNATIONAL MEDICAL CONGRESS.

We have received the following notice concerning the Tenth International Medical Congress, which will be held in Berlin. In publishing this notice to our readers we augur a creditable attendance of American physicians at the coming congress, which, we feel confident, will be marked by the thoroughness and excellence which always and everywhere characterize the endeavors of our Teutonic friends:

"We, the undersigned, do hereby give notice, that according to the resolution passed at the Washington meeting, Sept. 9, 1887, the Tenth International Medical Congress will be held in Berlin. The congress will be opened on the 4th and closed on the 9th day of August, 1890.

"Detailed information as to the order of proceedings

will be issued after the meeting of the delegates of the German medical faculties and medical societies at Heidelberg, on the 17th of Sept. in the current year.

"Meanwhile, we should feel sincerely obliged if you would kindly make this communication known among your medical circles and add at the same time our cordial invitation to the congress."

VON BERGMANN,
VIRCHOW,
WALDEYER.

TYPHOID FEVER AND CISTERN-WATER.

We are in receipt of a circular from the Kentucky State Board of Health, upon the prevention of typhoid fever. The attention of the people of Kentucky is called to the gradually increasing prevalence of typhoid fever, and the mortality from that cause. We will not touch upon the measures recommended for the prevention of the disease, which are such as any well-informed, and intelligent health bureau would issue; but there are two points in the circular which more particularly concern our people. First, after directing that drinking-water from suspected sources be boild previously to being used, it says that "in the absence of a pure and well-guarded public water supply, properly stored cistern-water is probably open to least objection." Second, the Board states that typhoid fever is "not only a disgrace to our civilization, but an annual scourge and tax upon the people of Kentucky, in comparison with which yellow fever and cholera sink into insignificance." We do not know if the board refers to losses inflicted by yellow fever in all parts of the country, or only in Kentucky, but even if the whole country were generously embraced in the statement, this last would not be far from the truth. In a recent number of the *Sanitary Inspector*, a writer brought forward some startling figures. In the city of Boston, in 1888, the deaths from one infectious disease (diphtheria) amounted to 470, constituting about one-third of the total number of cases. In the recent

epidemic of yellow fever in Florida there were about 4000 cases, and only 350 deaths. The writer of that article asks: "With diphtheria always with us, is it not about time to wake up to the appreciation of the fact that our northern scourge is worse than the southern one?"

It is time to realize that fact. The circular of the Kentucky Board of Health shows that that progressive State realizes that yellow fever is not the only epidemic monster which demands serious attention.

Typhoid fever is a very rare disease in New Orleans. The cause of this exemption lies in our peculiar method of storing drinking-water. The use of cisterns (above ground) is universal, and it is impossible for the water to become contaminated, unless some one were maliciously to throw dejections of a typhoid patient into the cistern. As typhoid fever is mainly disseminated by drinking-water, we can feel confident that this horrible disease will never become a fruitful cause of deaths here as long as we adhere to our good and much-abused method of storing drinking-water.

Although cistern-water is pure when it first comes from Nature's distillery, the clouds, still it contains some dust, carbon and organic matter after it has run off the roofs and into the cisterns. This organic matter, however, is not nasty enough, or in sufficient quantity to do any appreciable harm, for we have been using this kind of water ever since New Orleans was founded, and still we live. Upon looking through a glass of our clear cistern water, it is difficult to conceive how much dirt really is in it. At the residence of Dr. Wm. R. Mandeville, the writer was shown the effect of a Pasteur filter upon cistern-water. When the water (with a head of seven pounds) was allowed to filter through the porcelain-tubes over night, a thick slimy deposit was found upon the surface of the tubes in the morning. This deposit was found, under the microscope, to consist almost entirely of unicellular algæ; he rest was silica. It may not be pleasant to reflect we

are drinking a water that contains enough organic matter to sustain this vegetable growth, but it is not nearly so unpleasant as to think that the refreshing beverage may contain a lot of typhoid fever germs.

New Orleans has many unpleasant features. There are many evils here which visitors from other States and cities kindly throw up to us whenever they patriotically proclaim the virtues of their own localities; but it occasionally crops out that there is something wrong outside of New Orleans. With our present system of quarantine, we, in Louisiana, snap our fingers at yellow fever; and with our abominable method of storing drinking-water, we need not fear the disease that scourges Kentucky and other States. Our moisture-laden soil virtually prohibits us from having sewers; we have open drains. No house-pipes with defective valves lead from a filthy sewer to our bedrooms to poison the atmosphere we breathe. We have our own peculiar sorrows; we do not wish to borrow others from our neighbors. We mourn with them when they suffer; but we do hope that they will spend more of their time in improving their own localities, and less in lecturing New Orleanians upon the filthy condition of their streets, and similar trifles. For a long time our much-abused city was looked upon as fit only to die in; increasing knowledge, however, shows that this is as good a city (for a large city) to live in, as any in the Union, provided that the plainest laws of hygiene be obeyed.

A communication from Dr. Frank Trester Smith announces that "the members of the medical profession in Alabama, Georgia and Tennessee are requested to meet in Chattanooga on the third Tuesday in October, for the purpose of forming a Tri-State Medical Association. All will be admitted to the meeting of the association, but the membership will be restricted to graduates of regular medical colleges in good standing."

SELECTED ARTICLES.

CLINICAL AND EXPERIMENTAL RESEARCHES UPON THE PATHOGENY OF FEVER.

By DR. ROUSSY, Chief of Laboratory in the Paris Faculty of Medicine.
[Translated from the *Gazette Médicale de Liege* by DR. A. MCSHANE.]

I. CLINICAL AND EXPERIMENTAL RESEARCHES.

1. *Clinical Observations.*— (*a*) I have seen an intense fever arise in men and children, either after over-exertion or shortly after the ingestion of altered beer, tainted meat, stagnant water containing decomposing leaves, hay or hemp, etc. (*b*) The brusque appearance of this fever and its more or less rapid and unexpected disappearance have led me to believe that it was caused by the presence in the organism of soluble chemical substances rather than by microörganisms. (*c*) With a view to testing the truth of this hypothesis I have undertaken experimental researches upon rabbits and dogs, with materials more or less like those which appeared to me to have produced the fever which I had observed in the human subject. (*d*) These researches, pursued for three years and comprising more than 400 varied experiments, lead me to formulate the following conclusions, which are given with some reserve in certain cases.

2. *Injections of Putrid Matter.*—(*a*) Subcutaneous and intravenous injections of altered beer, tainted meat, etc., always gave rise to fever in the rabbit and the dog. (*b*) This fever appeared almost immediately after the injection, and the temperature very rapidly rose to 42 degrees Centigrade ($107\frac{3}{5}$ Fahrenheit). In these cases the injection produces an infectious disease, which generally ends in death. The rapidity and intensity which characterize this fever from the beginning lead me to think that it ought to be attributed to soluble chemical substances rather than to the mechanical action of the microörganisms in the injected liquid. (*c*) Intrastomachal injections determine but little

fever in the rabbit and none at all in the dog. From these facts it may be inferred that the soluble chemical substances are either modified or destroyed in the intestine or the organs which they must traverse in order to reach the general circulation. Perhaps they are not even absorbed in the dog. (*d*) The fever produced in rabbits, even in cases of intrastomachal injections, seem to confirm that it is due to the absorption of soluble chemical substances rather than to the introduction of microörganisms into the blood through the gastro-intestinal mucous membrane.

3. *Frigorigenous or Algogenous Substances of Microbic Origin.*—(*a*) These chemical substances may be found in animal matter destroyed by microbic fermentation. They may be extracted by ether, alcohol and chloroform. (*b*) The substance extracted by ether possesses the most energetic frigorigenous properties. It lowers the temperature 4 degrees C. ($7\frac{1}{5}$ degrees Fahrenheit). It seems to have a tendency to crystallize, and it acts like a base in the presence of the usual reagents of alkaloids. For these different reasons it appears to me just to distinguish it by the name of *frigenine* or *algogenine*. (*c*) The production of frigorigenous substances seemed to be subject to particular conditions of animal fermentation due to microbic action, because these substances are not found in all animal matter, undergoing fermentation, or at least not in all stages of this fermentation. (*d*) The existence of these substances being absolutely certain it now remains to look for them either in cultures of the cholera bacillus, or in the affections accompanied with hypothermy.

II. Pyretogenous Substances Elaborated by the Cells of Yeast.

In the course of my experiments with the putrid liquids mentioned above, I was on several occasions particularly struck with the pyretogenous power of altered beer. Upon examining more closely into the composition of this liquid

I discovered in it a very large number of yeast-cells. In using altered beer I had only used a maceration of yeast-cells, which were present in great numbers.

This was the starting point of all the experiments which I afterwards made with the soluble products of yeast—experiments which have been very satisfactory. I was still further led to make researches with the products elaborated by this microörganism, by the great analogies which its life-history has to that of the cells of our own organism. Like the latter it has the alimentary needs, and throws off the same nitrogenous dejections.

1. *Pyretogenous Properties of the Wash-water from Yeast-cells.*—(*a*) The water which has been used to wash living beer-yeast possesses energetic pyretogenous properties. (*b*) These pyretogenous properties should not be attributed to the mechanical action of the microörganisms, which are found in relatively small numbers in this wash-water. (*c*) Indeed, these microbes, separated by filtration from the wash-water, or rendered lifeless by heat, produce, when introduced into the circulation of a dog, but a slight change in the temperature. (*d*) The pyretogenous properties of the wash-water of yeast are due to the soluble chemical substances which it holds in solution. (*e*) These substances are almost entirely retained in the pores of the fine mineral filter. (*f*) Filtration through fine mineral is a very bad proceeding in the study of soluble chemical substances. (*g*) Perfectly titrated solutions of muriate of strychnia, very poisonous in determined doses, lose their toxic properties in the same doses in passing through a mineral filter.

Tests made with accurate scales show that sometimes 70 per cent. of the muriate of strychnia remains in the filter. Further, highly poisonous solutions have become perfectly harmless by filtration through fine mineral. These facts show in an emphatic manner that researches which have been made up to the present day upon the soluble matters contained in culture-broths that have been fil-

tered through fine mineral, are subject to great sources of error. (*h*) The best method of studying the chemical substances dissolved in culture-broths, etc., consists in extracting these different substances in a state of purity and experimenting with them separately. (*i*) The soluble chemical substances which impart pyretogenous properties to the washings of yeast proceed directly from the interior of the yeast-cells. They are products of either secretion or excretion. (*j*) These substances acquire much more energetic properties when the yeast-cells are reduced to autophagy, in an inert medium, such as distilled or sterilized water.

2. *Extraction of the Pyretogenous Substances Elaborated by the Yeast-cells.*—(*a*) These substances can be extracted in quantities sufficient to make a separate study by stronger alcohol, from a small quantity of sterilized distilled water, in which several kilograms of pure yeast have been reduced to a state of autophagy. (*b*) The different substances thus obtained can be separated, owing to their unequal solubility in water, pure alcohol or alcohol diluted to various degrees. (*c*) I have in this way succeeded in isolating four substances, three of which crystallized well, while the fourth consisted of homogeneous granules. (*d*) Two of the crystallizable substances have appeared to me to be, the first, succinic acid or acid phosphate of sodium; the second, tyrosine. The third crystallized in academical palms perfectly formed, which often unite to form veritable crowns.

3. *Differences in the Pyretogenous Properties of Substances Elaborated by Yeast-cells Reduced to a Condition of Autophagy.*—(*a*) The crystallizable bodies used separately give rise even in comparatively large doses to only a very slight elevation of temperature (about 1 degree C. in the dog) and of short duration, and this without giving rise to the other functional troubles of fever. (*b*) The property of raising the animal temperature without producing a true febrile picture appears to be possessed by quite a

large number of substances. It is at present convenient to class the substances under the names of "calorigenous or thermogenous substances." (*c*) The most active of the substances elaborated by yeast-cells, the one which most profoundly affects the processes of calorification, is represented by the substance composed of homogeneous granules mentioned above. Its pyretogenous energy is surprising. Several tenths of a milligram to each kilogram of the animal suffice rapidly to determine in the dog a very typical and very intense attack. This attack (access) completes its evolution in nine or ten hours, and presents three stages, in the course of which all the phenomena of a malarial paroxysm are seen. (*d*) On account of its physiological properties, so powerful and so well marked, and on account of its chemical properties mentioned below, I think that this substance is well designated by the name of *pyretogenin*.

The crystallographic analysis of these crystals has been made at my request by Mr. Jeannetaz, Professor of Mineralogy and Crystallography in the Faculty of Sciences of Paris. The crystals are doubly refractive and quickly depolarize light, and extinguish it parallel to their octahedral bases, which belong to the orthorhombic systems. Their smallness does not permit a more complete analysis.

Pyretogenin produces absolutely no reaction in the presence of ferrocyanide of potassium added to perchloride of iron, of double iodide of mercury and potassium, of iodine dissolved in iodide of cadmium and potassium, of double iodide of bismuth and potassium, of hydriodic acid, etc.

Pyretogenin then appears to be a special molecule; it behaves like a base, but not like a putrefactive base, nor an ordinary vegetable base. It possesses clearly defined and powerful basic properties, but these seem to be special. That is a very important point, and one to which I wish to direct attention.

4. *Physical Properties of Pyretogenin.*—Pyretogenin

is a white, granular, homogeneous body, slightly volatile and emitting the odor of yeast. When placed upon the tongue it at first imparts the sensation of a slightly gummy substance. Then a feeling of warmth is noticed and a dryness, which extends all over the mouth, and ends in a feeling of strangulation. This substance is very hygroscopic. It liquefies when exposed to the air, becomes syrupy and acquires a markedly brown color. It is difficult of preservation. It is very soluble in water, insoluble in alcohol, benzine, chloroform, etc.; ether seems to dissolve a small amount. Pyretogenin seems to lose some of its pyretogenous properties during the manipulations employed in extracting and purifying it. It seems to possess the greatest energy during the nascent state. When dried in a vacuum over sulphuric acid it is very white, its surface is shining, brilliant, sparkling.

5. *Chemical Properties of Pyretogenin.*—Pyretogenin is neutral to litmus paper, but in the presence of picric, phosphomolybdic, phosphotungstic, phosphoantimonic acid, etc., it behaves like a base. It is precipitated by chloride of gold and chloride of platinum. It reduces slightly ammonio-sulphate of copper. All the precipitates that pyretogenin forms with the above mentioned acids show in time a greater or less tendency to crystallize. Of these precipitates, the most abundant and most crystallizable is that formed by phosphomolybdic acid, which forms phosphomolybdate of pyretogenin. This salt is composed of microscopical crystals, perfectly formed and very numerous, which may very aptly be compared to letter envelopes bearing a quadrangular stamp on the back.

6. *Nature of Pyretogenin.*—Pyretogenin in a pure state is an entirely organic body. When burned on a platinum wire slowly and progressively, it emits successively the odors of yeast, burnt bread and parched coffee. It leaves absolutely no residue. When heated in the presence of lime it gives off ammonia. Pyretogenin therefore is a special nitrogenous base, purely organic.

Further, pyretogenin presents another very remarkable property—viz.: that of converting candy-sugar into glucose and levulose. A very small quantity suffices rapidly to transform a comparatively enormous quantity of sugar. It acts then precisely like a diastase.

III. GENERAL THEORY OF THE NATURE AND THE PHYSIOLOGICAL AND PATHOGENIC ROLES OF DIASTASES OR SOLUBLE FERMENTS.

1. Pyretogenin is, then, not only an exclusively organic, nitrogenous base, but it is also a *diastase*, and a diastase of great power; that is to say, one of those soluble ferments which are found always and everywhere where cells exist, which seem to convert organic molecules by their mere presence without being destroyed themselves.

2. The diastases seem to convert organic matter by chemical processes more or less similar to those which take place in the conversions produced in fats and albumen by the action of soda, potash or baryta. However, it is absolutely unknown by what mysterious chemical property these singular ferments act.

3. Now, in view of the clearly basic properties of pyretogenin may we not be permitted to think that the other diastases possess similar properties, and that they convert organic matter by virtue of their basicity? And who knows if the numerous basic substances which chemists extract from the vegetable organisms under the name of alkaloids, of which we know neither the origin nor function, are not merely so many diastases elaborated by the vegetable cells for the necessities of their nutrition? If it were so, the general chemical agent of organic conversion and of nutrition would then be a base. This question is worthy the serious attention of scientists.

4. Pyretogenin differs from *invertin*, which I have isolated and studied, both in physiological action and composition. Indeed, invertin is only slightly pyretogenous,

and besides it leaves a saline residue upon calcination, while pure pyretogenin leaves no trace.

5. Pyretogenin seems to owe its physiological properties to the simplicity of its molecule.

6. Invertin and pyretogenin are two different diastases, secreted by the same microörganism.

7. Pyretogenin is a diastase of great energy. When a fraction of a milligram is introduced into the system of a dog it makes the tissues of the animal undergo fermentation; that is, it produces fever.

8. This is a new and positive fact unknown to science until now, and apparently of great import for general pathology.

9. This fact seems to me susceptible of a great generalization. All cells, in fact all microörganisms, elaborate diastases or soluble ferments, which they use in attacking and transforming matter either outside of themselves or within their substance.

10. Whether for nutrition or reproduction, for attack or defence in the presence of a hostile parasite, or to destroy it as in phagocytosis, the cell employs diastase. Diastase, or I might better say the diastases, are evidently to the cell what the digestive juices, secreted by the alimentary tract and acting by their diastases, are to the organisms of the most complex animals.

11. The study of diastases or soluble ferments is of the greatest interest for medical science. Microbiologists have unfortunately studied only the pathogenic rôle played by the microörganisms. To-day it appears to me entirely insufficient to study in bulk the pathogenic or vaccinic action of the numerous soluble chemical substances which result from the life-acts of microbes or of cells generally. It is absolutely necessary to push the analysis much further, and to study one by one all the chemical products both soluble and insoluble. Of these substances the diastases, that is to say the soluble ferments, are the most important. It is chiefly to them I wish to call attention.

PRACTICAL POINTS CONCERNING GUAIACOL INJECTIONS.

By DR. ARNOLD SCHETELIG.
[Translated from the *Deutsche Medizinal Zeitung* by A. MCSHANE, M. D.]

A small work by me upon a new method of employing creosote and guaiacol (*Deutsche Medizinal Zeitung*, Feb. 20, 1889), has given rise to a number of inquiries from physicians as to the quantities and manner of using the drugs. Although I will not express an absolutely definite opinion as to the merits of this intensified creosote and guaiacol treatment, still I think it opportune to give some practical hints concerning the method I have employed in a series of cases.

I do not bring forward another "cure for consumption," of which we already have a surfeit, but I urgently recommend in selected cases an improved method of guaiacol treatment for the alleviation of suspicious conditions.

But what are these "selected cases?" A novice might begin with the worst, as I did myself. When the drug has a favorable effect it quickly corrects certain severe general symptoms, viz.: fever, nightsweats, loss of appetite, etc.; this it does in a few days and almost visibly.

At the present time it is not unreasonable to expect that we may be able to graduate our treatment according to the severity of the cases. I would allow the use of creosote and guaiacol in the form recommended in all markedly febrile consumptives when no contra indication exists upon technical grounds.

Its effects are most striking in all cases of acute exacerbation in chronic consumptives, in whom the aggravation is presumably not due to too rapid breaking down of tubercles, but rather to a lively development of bacilli. In two cases, an increase could be established before the intensive treatment and a decrease afterwards, together with an improvement in the general condition. The order of events seemed to be as follows: Immediate lowering of the temperature to the normal point for a longer or shorter time, with or without transpiration, but without symptoms of

collapse, improvement in sleep, reawakening of the appetite, change in the character of the sputum and diminution in quantity, slowing of pulse and increase in the strength of the pulse-beats.

Those especially adapted are elderly persons with loose skin, *e. g.*, women who have borne children, a few young persons, and least of all those persons in whom the skin can only with difficulty be folded in certain places. The rare cases presenting a well marked panniculus adiposus are very favorable for treatment by hypodermic injections.

Where should the injections be made? Never into the arm, but into the skin over the abdomen, or in the inguinal folds, or in the anterior part of the thigh. In a sanitarium for consumptives, situated outside of Germany, injections were made into the nates.

The Drug and Doses.—After an experience, lasting for months, with creosote in oil of sweet almonds (20 to 30 per cent., never less), I now employ exclusively the pure, unmixed guaiacol in a single daily dose of from seven to fifteen grains. Guaiacol is a colorless liquid, having a peculiar, weak, aromatic odor, with the specific gravity of 1117; it does not smell of creosote, although derived from it. We should use only the absolutely pure guaiacol, and should eschew the impure commercial product, which smells strongly of creosote. An ordinary hard rubber, Pravaz syringe, of a capacity of one gram will answer; the bearings should not be of metal; also, the wire for cleaning the canula should be silvered, and should not be of brass or iron. The canula should be of the smallest, and the syringe of the finest. The needle should be quickly inserted and pushed under the skin as far as possible; the liquid should be slowly injected, and, when the canula is withdrawn, the spot should be rubbed with a centripetal motion for about a minute. The patients may complain for a moment of a burning sensation under the skin. Abscesses do not arise; in only one case, owing to an impure preparation of the drug, a circumscribed gan-

grene of the skin took place. In a few cases, a slight induration persists for a few days. The syringe need not be cleaned; only the piston-head should occasionally be smeared with vaseline. After using the syringe, the canula should be cleaned by again squirting a few drops of the strongly antiseptic guaiacol through it, and then carefully dried with a soft cloth. Every patient should have his own syringe, or at least his own canula.

When we review all that has been written upon the intensive guaiacol treatment, it will appear that we may expect great things from it under certain circumstances. The literature upon guaiacol and creosote is already large, and, without going into it to an unnecessary extent, we will say that all authors unite in praising it. Throughout all the literature there is a confession of dissatisfaction with customary methods, and a corresponding search for a more energetic method. This is only possible by the method of subcutaneous guaiacol-injections at the times of greater dangers—no other deserves the name of intensive treatment, none other can secure the requisite sterilization of the blood, much less of the general liquids of the body, at least not in a short time. When the greater danger (exacerbation) of a rapid growth of bacilli is averted, and when the hectic symptoms become improved, and when the organism is saturated with guaiacol by an intensive treatment lasting for days and weeks, then it is advisable to change the mode of administration by giving the guaiacol (not creosote) by the mouth.

In this connection I will mention the cases treated simultaneously by a French physician, Dr. Gimbert, of Cannes, with creosote dissolved in oil of sweet almonds injected beneath the skin of consumptives. He devised a special instrument for the purpose. I have not seen anything on the subject in current literature, but a short time ago I saw in the Brompton Hospital for Consumptives both his apparatus and his fluid. The former was a kind of reversed Potain's apparatus, with a canula, the size and

thickness of which rendered repeated use improbable. The liquid was 7 per cent. strong. In order, therefore, to give one grain of creosote hyperdermically, 15 grains of the liquid had to be used, which would be rather bulky for repeated hyperdermic injections. The method did not make much headway, and I believe that the originator himself has abandoned it.

The magical effect of the guaiacol, in some cases, upon the general hectic symptoms (among others, a bad bed-sore over the sacrum was promptly cured) indicates that the guaiacol exerts a specific influence upon the phthisical processes in the human body. This action must be exerted upon the bacilli (as was demonstrated in two cases), and perhaps modifies those of their products which give rise to fever. It would follow from this that the improvement in appetite and digestion observed in nearly all cases treated with creosote internally is not due to the contact of the remedy with the mucous membrane of the stomach and intestines, but indirectly to the improvement made in the condition of the blood.

Abstracts, Extracts and Annotations.

MEDICINE.

THE EFFECTS PRODUCED ON MAN BY SUBCUTANEOUS INJECTIONS OF A LIQUID OBTAINED FROM THE TESTICLES OF ANIMALS.

[Brown-Sequard's Repokt.]

On the 1st of June last I made at the Société de Biologie of Paris a communication on the above subject, which was published in the Comptes Rendus of that society on June 21 (No. 24). I will give here a summary of the facts and views contained in that paper and in two subsequent ones, adding to them some new points.

There is no need of describing at length the great effects produced on the organization of man by castration, when it is made before the adult age. It is particularly well known that eunuchs are characterized by their general debility and their lack of intellectual and physical activity.

There is no medical man who does not know also how much the mind and body of men (especially before the spermatic glands have acquired their full power, or when that power is declining in consequence of advanced age) are affected by sexual abuse or by masturbation. Besides, it is well known that seminal losses, arising from any cause, produce a mental and physical debility which is in proportion to their frequency. These facts and many others have led to the generally admitted view that in the seminal fluid, as secreted by the testicles, a substance or several substances exist which, entering the blood by resorption, have a most essential use in giving strength to the nervous system and to other parts. But if what may be called spermatic anemia leads to that conclusion, the opposite state, which can be named spermatic plethora, gives as strong a testimony in favor of that conclusion. It is known that well organized men, especially from 20 to 35 years of age, who remain absolutely free from sexual intercourse or any other causes of expenditure of seminal fluid, are in a state of excitement, giving them a great, although abnormal, physical and mental activity. These two series of facts contribute to show what great dynamogenic power is possessed by some substance or substances which our blood owes to the testicles.

For a great many years I have believed that the weakness of old men depended on two causes—a natural series of organic changes and the gradually diminishing action of the spermatic glands. In 1869, in a course of lectures at the Paris Faculty of Medicine, discussing the influence possessed by several glands upon the nervous centres, I put forward the idea that if it were possible without danger to inject semen into the blood of old men, we should probably obtain manifestations of increased activity as regards the mental and the various physical powers. Led by this view I made various experiments on animals at Nahant, near Boston (United States), in 1875. In some of those experiments, made on a dozen male dogs, I tried vainly, except in one case, to engraft certain parts or the whole body of young guinea-pigs. The success obtained in the exceptional case served to give me great hopes that by a less difficult process I should some day reach my aim. This I have now done. At the end of last year I made on two old male rabbits experiments which were repeated since on several others, with results leaving no doubt as regards

both the innocuity* of the process used and the good effect produced in all those animals. This having been ascertained I resolved to make experiments on myself, which I thought would be far more decisive on man than on animals. The event has proved the correctness of that idea.

Leaving aside and for future researches the questions relating to the substance or substances which, being formed by the testicles, give power to the nervous centres and various other parts, I have made use, in subcutaneous injections, of a liquid containing a very small quantity of water mixed with the three following parts: First, blood of the testicular veins;† second, semen; and third, juice extracted from a testicle, crushed immediately after it has been taken from a dog or a guinea-pig. Wishing in all the injections made on myself to obtain the maximum of effects, I have employed as little water as I could. To the three kinds of substances I have just named I added distilled water in a quantity which never exceeded three or four times their volume. The crushing was always done after the addition of water. When filtered through a paper filter the liquid was of a reddish hue and rather opaque, while it was almost perfectly clear and transparent when Pasteur's filter was employed. For each injection I have used nearly one cubic centimeter of the filtered liquid. The animals employed were a strong, and, according to all appearances, perfectly healthy dog (from 2 to 3 years old), and a number of very young or adult guinea-pigs. The experiments so far do not allow of a positive conclusion as regards the relative power of the liquid obtained from a dog and that drawn from guinea-pigs. All I can assert is that the two kinds of animals have given a liquid endowed with very great power. I have hitherto made ten subcutaneous injections of such a liquid—two in my left arm, all the others in my lower limbs—from May 15 to June 4 last. The first five injections were made on three succeeding days with a liquid obtained from a dog. In all the subsequent injections, made on May 24, 29 and 30, and June 4,

* This innocuity was also proved on a very old dog by twenty subcutaneous injections of a fluid similar to that I intended to employ on myself. No apparent harm resulted from these trials, which were made by my assistant, Dr. D'Arsonval.

† For reasons which I have given in many lectures in 1869 and since, I consider the spermatic as also the principal glands (kidneys, liver, etc.) as endowed, besides their secretory power, with an influence over the composition of blood, such as is possessed by the spleen, the thyroid, etc. Led by that view I have already made some trials with the blood returning from the testicles. But what I have seen is not sufficiently decisive to be mentioned here.

the liquid used came from guinea-pigs. When I employed liquids having passed through Pasteur's filter the pains and other bad effects were somewhat less than when a paper filter was used.

Coming now to the favorable effects of these injections I beg to be excused for speaking so much as I shall do of my own person. I hope it will be easily understood that if my demonstration has any value—I will even say any significance—it is owing to the details concerning the state of my health, strength and habits previously to my experiments, and to the effects they have produced.

I am 72 years old. My general strength, which has been considerable, has notably and gradually diminished during the last 10 or 12 years. Before May 15 last I was so weak that I was always compelled to sit down after an hour's work in the laboratory. Even when I remained seated all the time, or almost all the time, in the laboratory I used to come out of it quite exhausted after three or four hours' experimental labor, and sometimes after only two hours. For many years, on returning home in a carriage by 6 o'clock, after several hours passed in the laboratory, I was so extremely tired that I invariably had to go to bed after having hastily taken a very small amount of food. Very frequently the exhaustion was so great that although extremely sleepy I could not for hours go to sleep, and I only slept very little, waking up exceedingly tired.*

The day after the first subcutaneous injection and still more after the two succeeding ones a radical change took place in me, and I had ample reason to say and to write that I had regained at least all the strength I possessed a good many years ago. Considerable laboratory work hardly tired me. To the great astonishment of my two principal assistants, Drs. D'Arsonval and Hénocque, and other persons, I was able to make experiments for several hours while standing up, feeling no need whatever to sit down. Still more: one day (the 23d of May), after three hours and a quarter of hard experimental labor in the standing attitude, I went home so little tired that after dinner I was able to go to work and to write for an hour and a half part of a paper on a difficult subject. For more

* I ought to say that notwithstanbing that dark picture my general health is and has been almost always good, and that I had very little to complain of, excepting merycism and muscular rheumatism.

than 20 years I had never been able to do as much.* From a natural impetuosity, and also to avoid losing time, I had, till I was 60 years old, the habit of ascending and descending stairs so rapidly that my movements were rather those of running than of walking. This had gradually changed, and I had come to move slowly up and down stairs, having to hold the banister in difficult staircases. After the second injection I found that I had fully regained my old powers, and returned to my previous habits in that respect.

My limbs, tested with a dynamometer, for a week before my trial and during the month following the first injection, showed a decided gain of strength. The average number of kilograms moved by the flexors of the right forearm, before the first injection, was about 34½ (from 32 to 37), and after that injection 41 (from 39 to 44), the gain being from 6 to 7 kilograms. In that respect the forearm-flexors reacquired, in a great measure, the strength they had when I was living in London (more than 26 years ago). The average number of kilograms moved by those muscles in London in 1863 † was 43 (40 to 46 kilograms).

I have measured comparatively, before and after the first injection, the jet of urine in similar circumstances—that is, after a meal in which I had taken food and drink of the same kind in similar quantity. The average length of the jet during the ten days that preceded the first injection was inferior by at least one-quarter of what it came to be during the twenty following days. It is therefore quite evident that the power of the spinal cord over the bladder was considerably increased.

One of the most troublesome miseries of advanced life consists in the diminution of the power of defecation. To avoid repeating the details I have elsewhere given in that respect I will simply say that after the first days of my experiments I have had a greater improvement with regard to the expulsion of fecal matters than in any other function. In fact a radical change took place, and even on days of

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* My friends know that owing to certain circumstances and certain habits I have for 30 or 40 years gone to bed very early and done my writing work in the morning, beginning it generally between 3 and 4 o'clock. For a great many years I had lost all power of doing any serious mental work after dinner. Since my first subcutaneous injections I have very frequently been able to do such work for 2, 3, and one evening for nearly 4 hours.

† I have a record of the strength of my forearm, begun in March, 1860, when I first established myself in London. From that time until 1862 I occasionally moved as much as 50 kilograms. During the last three years the maximum moved was 38 kilograms. This year, previously to the first injection, the maximum was 37 kilograms. Since the injection it has been 44.

great constipation the power I long ago possessed had returned.

With regard to the facility of intellectual labor, which had diminished within the last few years, a return to my previous ordinary condition became quite manifest during and after the first two or three days of my experiment.

It is evident from these facts and from some others that all the functions depending on the power of action of the nervous centres, and especially of the spinal cord, were notably and rapidly improved by the injections I have used. The last of these injections was made on June 4, about five weeks and a half ago. I ceased making use of them for the purpose of ascertaining how long their good effects would last. For four weeks no marked change occurred, but gradually, although rapidly, from the 3d of this month (July) I have witnessed almost a complete return of the state of weakness which existed before the first injection. This loss of strength is an excellent counterproof as regards the demonstration of the influence exerted on me by the subcutaneous injections of a spermatic fluid.

My first communication to the Paris Biological Society was made with the wish that other medical men advanced in life would make on themselves experiments similar to mine, so as to ascertain, as I then stated, if the effects I had observed depended or not on any special idiosyncrasy or on a kind of auto-suggestion without hypnotization, due to the conviction which I had before experimenting that I should surely obtain a great part at least of these effects. This last supposition found some ground in many of the facts contained in the valuable and learned work of Dr. Hack Tuke on the "Influence of the Mind over the Body." Ready as I was to make on my own person experiments which, if they were not dangerous, were at least exceedingly painful, I refused absolutely to yield to the wishes of many people anxious to obtain the effects I had observed on myself. Bnt, without asking my advice, Dr. Variot, a physician who believed that the subcutaneous injections of considerably diluted spermatic fluid * could do no harm, has made a trial of that method on three old men—one 54, another 56 and the third 68 years old.† On each of them

* In my third communication to the Biological Society I said that both the intense pain each injection has caused me and the inflammation it has produced would be notably diminished if the liquid employed were more diluted. The three cases of Dr. Variot have proved the exactitude of my statement. He made use of a much larger amount of water, and his patients had to suffer no very great pain and no inflammation.

† The paper of Dr. Variot and my remarks upon it have appeared in the "Comptes Rendus de la Société de Biologie," No. 26, 5 Juillet, 1889, pp. 451 and 454.

the effects have been found to be very nearly the same as those I have obtained on myself. Dr. Variot made use of the testicles of rabbits and guinea-pigs.

These facts clearly show that it was not to a peculiar idiosyncrasy of mine that the effects I have pointed out were due. As regards the explanation of those effects by an auto-suggestion it is hardly possible to accept it in the case of the patients treated by Dr. Variot. They had no idea of what was being done; they knew nothing of my experiments, and were only told that they were receiving *fortifying* injections. To find out if this qualification had anything to do with the effects produced Dr. Variot, since the publication of his paper, has employed similar words of encouragement, while making subcutaneous injections of pure water on two other patients, who obtained thereby no strengthening effect whatever.*

I believe that, after the results of Dr. Variot's trials, it is hardly possible to explain the effects I have observed on myself otherwise than by admitting that the liquid injected possesses the power of increasing the strength of many parts of the human organism. I need hardly say that those effects cannot have been due to structural changes, and that they resulted only from nutritive modifications, perhaps in a very great measure from purely dynamical influences exerted by some of the principles contained in the injected fluid.

I have at present no fact to mention which might serve to solve the question whether it would be possible or not to change structurally muscles, nerves and the nervous centres by making during a good many months frequent injections of the fluid I have used. As I stated at the Paris Biological Society I have always feared, and I still fear, that the special nutritive actions which bring on certain changes in man and animals, from the primitive embryonal state till death by old age, are absolutely fatal and irreversible. But in the same way that we see muscles which have from disease undergone considerable structural alterations regain sometimes their normal organization, we may, I believe, see also some structural changes not essentially allied with old age, although accompanying it, disappear to such a degree as to allow tissues to recover the power they possessed at a much less advanced age.

* Since writing the above I have received a letter from Dr. Variot announcing that, after injecting the liquid drawn from the testicles into these two individuals he has obtained the same strengthening effects I have myself experienced.

Whatever may be thought of these speculations the results I have obtained by experiments on myself and those which have been observed by Dr. Variot on three old men show that this important subject should be further investigated experimentally.*—*Dr. Brown-Sequard, London Lancet.—American Practitioner and News.*

NEW STUDIES IN DIPHTHERIA.

In a recent contribution published in the *Annales de l'Institut Pasteur*, Drs. Roux and Yersin call attention to some of the properties of the diphtheritic poison.

They have established the fact that cultures of the bacillus of diphtheria in slightly alkaline veal-broth becomes acid for the first few days and regain an alkaline reaction after a longer period. As long as the culture is acid its toxic power is not great; but later, when the culture is alkaline its toxicity is much increased. Late experiments show that this liquid after being filtered through porcelain, that is to say, not containing any microbes, gives rise in the dog to paralyses having a striking resemblance to those seen in man; it is the same with sheep. These new examples of the energetic action of the diphtheritic poison upon the dog and the sheep make even more surprising the resistance of rats and mice, which easily stand doses which would kill a dog of medium size.

Drs. Roux and Yersin had already in their first memoir advanced the view that the poison of diphtheria should be classed among the diastases on account of some of its properties.

It is modified by heat, the change being proportioned to the elevation and duration of the temperature. The culture liquid filtered and warmed under certain conditions no longer produces death rapidly; it may even at first appear harmless. It is important, however, to note that the animals that receive a rather large amount finally succumb at the end of a longer or shorter time. They slowly become emaciated, although they eat as usual and show symptoms of paralysis several days before death. Now, the disease which carries off these animals, recalls that which attacks guineapigs and rabbits into which has been

* It may be well to add that there are good reasons to think that subcutaneous injections of a fluid obtained by crushing ovaries just extracted from young or adult animals, and mixed with a certain amount of water, would act on old women in a manner analogous to that of the solution extracted from the testicles injected into old men.

injected filtered diphtheritic urine or a maceration of organs of persons who have died of diphtheria. Experiment shows, indeed, that this same poison also exists in the bodies of persons dead of this disease. We may conclude that heating destroys a large part of the poison or else modifies it as it is modified in the system.

Another resemblance that it bears to diastases lies in the fact that this liquid is rapidly changed by sunlight upon contact with the air.

Among the diastases some act best in an alkaline medium, and others in an acid medium. Experiments on this point with the diphtheritic liquid have shown that the addition of an acid diminishes its activity. Thus the addition to the toxic liquid of tartaric acid, lactic acid, carbolic acid, boracic acid or borax, retards its effect upon animals without, however, preventing their death. It is not necessary to add much of the acid to lessen the energy of the diphtheritic poison; even very small amounts have a marked influence.

It is remarkable that the diphtheritic poison, which is so active when introduced under the skin, can be ingested in large qnantities by guinea-pigs and pigeons without causing any apparent damage to these animals. Ten cubic centimetres of the filtered liquid were swallowed by a pigeon, and on the following days he did not seem to be ill; on the other hand two-fifths of a cubic centimetre of the same liquid injected beneath the skin of another pigeon caused death in 60 hours.

After having established by other experiments the analogies which exist between the diphtheritic poison and the diastases or even with the venoms, Drs. Roux and Yersin remark that the great activity of the diphtheritic poison might lead one to regard as very virulent cultures of diphtheria which are not so. If, for example, we inject beneath the skin of a guinea-pig a very small amount (one-eighth of a cubic centimetre—about two minims) of an old culture, the animal will succumb, and his death might be attributed to the virulence of the injected bacilli, whereas in reality they are not capable of pullulating beneath the skin of the animal. The action of the cultures must not be confounded with their virulence. Virulence is the aptitude of a microbe to develop in the body of a living animal; this aptitude is generally increased by its passage through a series of animals. The property of elaborating poisons in

the cultures may belong to inoffensive microbes, entirely free from virulence.

It is difficult to accustom animals to the diphtheritic poison, simply on account of its great activity. Even in very weak doses it often produces effects at distant dates. On account of this great toxic power it is necessary to interfere from the very beginning of the formation of false membrane in diphtheritic patients. If we give the bacillus the time to produce a sufficient amount of poison, it will be useless to make the false membranes disappear and destroy the bacillus, for death from poisoning will supervene; because in diphtheria, contrary to what happens in many other infectious diseases, the infection is not produced by a microbe that invades the tissues, but by the diffusion through the organism of a toxic substance elaborated upon the surface of a mucous membrane, or, so to speak, outside the body. —*Journal de Médecine et Chirurgie Pratiques.*

GUAIACOL IN TUBERCULOSIS.

Dr. A. Nobili writes, in the *Gazzetta degli Ospitali*, a very encouraging article on the efficacy of guaiacol in tuberculosis. He says that its physiological properties are two-fold: 1, it strengthens the organism; 2, it destroys the bacillus tuberculosis. He looks upon guaiacol as the sovereignest remedy in this dread disease, and prefers it to creosote. He has up to the present treated more than twenty cases with good effect; twelve of these were in the initial stage; the others were more or less advanced.

In general Nobili began with doses of 1 to 3 grains daily after meals. It was given in wine, broth or sweetened water. He employed the following formula:

Guaiacol.....1 gram (15 grains).
Alcohol.....200 grams (℥vi and ℥v).
Tr. of gentian.....25 grams (℥$\frac{5}{6}$). M.

The dose is gradually increased, so that in time the patients take from 18 to 45 grains daily.

Nobili's experience has shown that guaiacol is easy to take, is without unpleasant effects, such as heartburn, vomiting, diarrhœa, increase of cough, irritation in the throat, etc. Patients who cannot take creosote on account of the vertigo, headache, nausea, vomiting and diarrhœa that it causes, can bear guaiacol very well. The great tolerance of the latter as compared with creosote may be referred

to two causes: 1. Because guaiacol is a chemically pure agent. 2. Because creosote, besides other substances (carbolic acid), very often contains an emetic substance.

In almost all the patients the guaiacol improved the appetite, and sometimes to a remarkable degree; in many the eructations and meteorism diminished, and in certain cases, in which there was intestinal as well as pulmonary tuberculosis, the guaiacol was well borne. According to Nobili, these phenomena may essentially rest upon the anti-putrefactive and anti-fermentative property of guaiacol, by the latter of which the abnormal decompositions are prevented in the intestinal tract, which so often take place in phthisical patients.

In many cases the cough markedly diminished, especially at night, and in nearly all cases the expectoration became less; in many, the former purulent sputum changed to muco-purulent or mucous, and at times it had a faint aromatic odor, like that of guaiacol, especially after large doses. Microscopical examinations of the sputum were frequently made during the course of the treatment, and the bacilli and microscopical elements grew beautifully less; in every case, which Nobili regarded as comparatively cured, the bacilli disappeared completely. Careful chemical examination failed to reveal the presence of guaiacol in the sputum.

Further, an aromatic odor was observed in the expired breath of patients. This odor persisted even after the mouth had been rinsed out with a deodorizing liquid. It follows from this that the guaiacol is partially eliminated through the lungs, and that it acts directly upon the bronchial mucous membrane and the pulmonary cavities, whereby the development of the secretions is in a measure prevented and their character altered. The influence of guaiacol upon the processes of putrefaction and decomposition, which take place in cavities, also explains its action upon the colonies of microörganisms, which contribute very much to the maintenance of the hectic fever.

The fever is not directly influenced by guaiacol, but it very often sinks, and in many cases it ceases.

The nightsweats decrease remarkably in some cases, and Nobili has never observed profuse prespiration in patients treated with guaiacol. In general, there was notable improvement in the pulmonary phenomena, espec-

ially a diminuition in the moist râles, and the subjective condition of the patients was also visibly improved. In many cases the bodily weight increased, in others it remained stationary, and in a few it decreased, especially in very advanced cases with high fever.

The urine increased in one or two cases, probably in consequence of the improvement in digestion, through which a greater amount of food and drink is taken. After the use of 40 or 50 centigrams of guaiacol, the urine acquired an aromatic odor peculiar to that of the drug; its reaction was always acid, and never containd sugar or albumen, except in extreme marasmus.

On the strength of his observations, Nobili declares that guaiacol is one of the most effective remedies in tuberculosis; that it gives the patient actual improvement, especially in the first stage.—*Deutsche Medizinal Zeitung.*

POISONING BY IRISH POTATOES.

Dr. Cortial gives in the *Archives de Médicine Militaire* the history of a series of cases which should prove of interest, because they are apt to be very frequent. In the space of two days 101 men of a battalion of infantry were attacked with symptoms of poisoning more or less severe. These symptons were principally an intense headache, dilatation of the pupils, colic, diarrhœa, thirst, fever, pain in the epigastrium, vertigo, nausea, sweats, troubles of vision, cramps, etc. The intoxication was evidently due to the food, and after successively putting aside various articles it was suspected that the potatoes were at the bottom of the trouble and they were interdicted at the end of 48 hours. From this moment there were no more new cases. The following explanation of the attack was given. The purveyor, who had been instructed to furnish new potatoes, had substituted very small ones forming simply the buds which spring from old potatoes. Now, it is known that these buds, like seed potatoes and green potatoes, contain solanine, which gives rise to symptoms similar to those mentioned above. Such buds should, therefore, be proscribed as articles of food.

In these patients the average duration of the indisposition was from four to five days. In one-fourth of the men attacked convalescence lasted from six to eight days and the diarrhœa persisted. In regard to treatment, no purga-

tive could be given in time, for the patients did not complain until eight or ten hours after the suspected meal. Antispasmodics were given (ether and laudanumn), and the patients were placed on an exclusive milk diet.—*Journal de Médecine et Chirurgie Practiques.*

NEW METHOD OF TREATING YELLOW FEVER.

Dr. George Sternberg has, upon theoretical grounds, proposed a new treatment for yellow fever. Sternberg states that the vomit, the intestinal contents and the urine have a very acid reaction. He could find no microörganisms in the blood or tissues, and he believes that the specific microörganism, which he thinks must exist, lies in the intestinal tract. The most important feature of Sternberg's treatment is the employment of large doses of an alkaline mixture containing corrosive sublimate to produce an antiseptic effect in the stomach. His formula is as follows:

℞ Sodæ Bicarbonatis ..... ℥iiss.
Hydrarg. Bichlor. ..... gr. ⅓
Aquæ ..... ℥xx.
Sig.—℥j every hour, ice cold.

Dr. Raphael Weiss, of Havana, has tried this on thirteen patients, all of whom recovered, while of eight others, treated in the usual way, five died. In some cases, the dose of the bichloride was doubled.—*Therapeutic Gazette.*

A NEW AND RAPID METHOD OF STAINING THE CAPSULE OF FRANKEL'S PNEUMOCOCCUS.

Dr. Umberto Gabbi (*La Riforma Medica*) employs the following method of staining the capsule of the pneumococcus: The pneumonic sputum or exudate is spread upon a cover-glass and quickly dried over a flame. Then 2 or 3 drops of the following solution are placed upon the preparation: Carbolic acid, 2 to 5 grams; fuchsin, 1 gram; alcohol, 15 grams; water, 100 grams. The staining solution is allowed to remain in contact with the preparation for a minute and then it is quickly washed off with water. In preparations thus treated the pneumonia bacilli are dark red, the capsule more or less light red. The coloring of the capsule disappears when the preparation is allowed to remain too long in the water.—*Centralblatt für Bakteriologie und Parasitenkunde.*

THE BACTERIA IN THE DUODENUM OF MAN.

C. Gessner has investigated in the Hygiene Institute of Munich the bacteria found in the human duodenum.

Eighteen subjects were examined, in all of which the autopsy was performed a short time after death. Five of the cases died from sudden violence, and in perfect health; subjects showing signs of gastric disease were rejected. He found constantly, or at least in several cases, very abundantly the following seven kinds of bacteria.

1. Bacterium tholœideum, forms points on gelatine, grows in the shape of a nail in gelatine; colonies have a slimy consistence, microscopically short rods and oval forms; coagulates sterilized milk with formation of an acid, in mice, hyperdermic injections in large quantities are pathogenic; increases in the blood and then shows the formation of a clear halo around the individual rods. The pathogenity forms a point of distinction between it and the otherwise similar *Bacterium lactis aërogenes.*

2. Streptococcus pyogenes duodenalis, very similar to the common streptococcus pyogenes, and in Gessner's opinion identical with it; pathogenic to mice, but with variable activity, giving rise sometimes to erysipelatous processes, sometimes suppuration.

3. Bacterium coli commune, rare in duodenum compared to the large intestine.

4. A bacillus corresponding to the one cultivated by von Utpadel from between decks (*Zwischendecken;* bilge-water?).

5. A yellow liquefying staphylococcus.

6. An orange-yellow liquefying staphylococcus.

7. A white liquefying bacillus.—*Archiv. für Hygiene. Centralblatt für Bakteriologie Parasitenkunde.*

IODOFORM IN INTESTINAL HÆMORRHAGE.

H. Huchard (*Bull. gen. de Ther.*) has used, with good results, iodoform in intestinal hæmorrhage in a tuberculous subject, which for six weeks had obstinately resisted all other remedies, such as perchloride of iron, ergotin, quinine, bismuth, opium, etc. He gave daily five doses of iodoform, of one grain each, and in six days the trouble ceased completely.

Likewise, internal administration of from 2½ to 3⅓ grains of iodoform with 1 grain of opium, three times a day, has given excellent results in ulcer of the stomach.—*Deutsche Medizinal Zeitung.*

THE GENIUS EPIDEMICUS.

During the celebration of the sixtieth anniverary of the founding of the Medical Society of Leipsic, Dr. O. Heubner spoke of the way in which we should at present interpret the expression, *genius epidemicus*, first used by Sydenham two hunded years ago. In view of our present knowledge of bacteriolgy, we must certainly define it differently from Sydenham. The latter had already established the fact that disease, in a succession of years show a certain change, which appeared to him as though governed by some law. He ascribed to each year, or other period of time, its special constitution, or *genius epidemicus;* and in this term he included even the ætiogical factor by which diseases are produced, and this in turn to give way to others when a new *genius* had developed. He showed that a given disease presented a different character in different years, and would be accompanied by variable phenomena and dangers. Heubner cited in detail only the relations of diphtheria, influenza, dysentery, typhus, cholera, scarlatina, measles, etc.

The knowledge of human parasites extant before the present time was not sufficient to explain these phenomena. Heubner does not think the assumption of a changing propriety of the poison of the disease, is not justifiable, so long as it is conceded that the latter is a low form of living things. He concludes that that which induces the change in the appearances of epidemics, and which is called the *genius epidemicus*, is the human body itself, which according to the hygienic conditions in which a man finds himself shows greater or less power of resistance to epidemic diseases.

In conclusion, Heubner shows that in Leipzig the deaths from tuberculosis are becoming fewer from year to year, corresponding to the increasing improvements in the sanitary surroundings.—*Schmidt's Jahrbücher. Centralblatt für Bakteriologie und Parasitenkunde.*

TREATMENT OF ACUTE GONORRHŒA.

Dr. Friedheim of Leipsic reports upon numerous comparative experiments which have been made in the Breslau Clinic with the most varied anti-bacterial and astringent remedies in the different degrees of concentration. He concludes that of all agents nitrate of silver, on account of its many ways of acting, is to be regarded as the most efficacious.—*Deutsche Medizinal Zeitung.*

SURGERY.

ON THE TREATMENT OF CARBUNCLES.

Dr. E. P Hurd, in the *Medical Age*, has this to say on the treatment of carbuncles:

"A carbuncle may be defined as a large boil, or an aggregation of boils. One characteristic is tumefaction; there is a hard, painful swelling of variable size; it is not unusual to see a carbuncle as large as a pint bowl. These swellings may appear on any part of the body; on the face, temples, hairy scalp, breast; but the favorite site is the back of the neck and the buttocks.

Another characteristic is suppuration. This pus production is the effect of certain microbes which commit their ravages in the derm and in the subcutaneous cellular tissue. Prominent among these microörganisms, which cause pus formation, is the *staphylococcus pyogenes aureus*. This micrococcus being invariably associated with common carbuncle is regarded by most modern authorities as the pathogenic agent. But this same microbe, along with the *staphylococcus pyogenes albus* is also believed to be the cause of ordinary abscesses. If it be the infectious agent of boils, and carbuncles as well, we have not as yet any sufficient explanations of the greater virulence and malignancy manifested by the microbe in the carbuncular affections. Certain it is that in the carbuncle we have not merely suppuration—we have extensive necrosis also. There are shreds of dead cellular tissue spreading in various directions, and a central solid core ready to slough, or in the process of sloughing. The necrosis is generally limited to the skin, and subcutaneous cellular tissue; it is rare that the muscles and fascia are involved.

We do not yet know how this microbe causes the death of the skin and cellular membrane. It seems to enter by the hairs or perspiratory pores and breed first in the sweat glands or hair follicles, thence it diffuses itself through the derm and cellular tissue, setting up a destructive inflammation.

Billroth supposes that this gangrene of the skin is induced by an early, perhaps primary, occlusion of small arteries, possibly of the vascular network around the sebaceous glands, but I do not know that there have been any observations to prove that such occlusion actually takes place.

That the *staphylococcus pyogenes aurens* is able of itself under certain conditions to procure furuncular inflammation is proved by an experiment of Carre upon himself. "He rubbed into the perfect healthy skin of his arm several *staphylococcus* colonies taken from osteo-myelitic pus, and these, penetrating the excretory ducts of the cutaneous glands, produced furuncles in large number."

All physicians who have had any experience with furuncular or carbuncular diseases recognize a certain predisposition as an essential factor of the pathology. The victim of carbuncles has been debilitated by some cause; the vital resistance of the derm has been lowered and the infectious microörganism finds in the cuticular tissues a good culture field. Here is the whole story. The debilitating influence may have been fatigue, worry, a cold, vicious indulgence, excess of any kind; it is needless to say that this predisposition may also be caused by chronic disease, especially diabetes and tuberculosis.

Passing on to the subjects of treatment, the author says:

"The method of crucial incisions has long been a favorite method of treating curbuncles, and certainly when thoroughly done, greatly abbreviates the duration of the malady. Sometime ago I remember to have read in some medical journal a recommendation not to poultice a carbuncle when opened, but to apply a large sponge wet in some disinfectant solution, carbolic acid or corrosive sublimate.

"This is a very sensible procedure, as I can testify from experience. The sponge should be large enough completely to cover the carbuncle, and may be cut into shape so as to fit over it like a cap. Before being applied it is dipped into a sublimate solution, one part to 2000, or a two-per cent. carbolic solution; a little iodoform may then be dusted into the cavity of the carbuncle, down to the bottom of the incision, and the sponge is then adjusted and confined by a few turns of a rubber bandage.

"There is no need of poulticing, for pain and tension are removed by the incisions, the microbes are more effectually stopped in their destructive depredations by the antiseptic liquid, which is thus enabled to penetrate every part than they can be by any other method; the dead shreds of tissue will rapidly separate under the disinfectant dressing and all the discharges will soak into the sponge

and be kept from putrefaction. Night and morning the dressings are renewed; the sponge, full of purulent matter and debris, is thrown into a bucket of boiling water, and afterwards cleansed, and again soaked in the sublimate solution for fresh application. Simultaneously with the separation of the sloughs, granulations make their appearance and *restitutio ad integrum* rapidly takes place."

The author then proceeds to relate the case of a gentleman 55 years old, who had a large carbuncle on the back of his neck. A crucial incision was made under anæsthesia and the shreds of gangrenous tissue cut and curetted away, the wound being dressed afterwards as stated above, the dressing being applied twice a day. The patient was so far cured at the end of two weeks of this treatment as to be able to go to work.

FOREIGN BODY IN THE LARYNX.

Dr. Leyden reports a case of foreign body in the larynx. The body was a stone that had been swallowed by a child; it remained in the air-passage for fifteen months without giving rise to unpleasant symptoms. While in apparent good health, the child fell down and suddenly choked. At the autopsy, a stone was found lying in the trachea just above the bifurcation. Above the right vocal cord there was a non-perforated canal, in which the stone had obviously been embedded. When the child was jarred, the stone fell into the trachea and caused suffocation.—*Deutsche Medizinal Zeitung*.

PATHOLOGY AND CURE FOR SNAKEBITE.

Dr. Muller has used hyperdermic injections of strychnine in the treatment of snakebite. We formerly expressed our concurrence in the opinion of Sir Joseph Fayrer, who said: "I do not say that a physiological antidote is impossible. All I say is that it has not yet been found." Now we are indeed pleased to say that we believe such an antidote is now found and that Dr. Muller is the happy discoverer. We are of opinion that his theory as to the pathological changes set up in the human system is a sound one, and that the treatment he has suggested and used is correct and proper and the one most likely to avert death in cases of snakebite, which would otherwise in all probability prove fatal. We therefore press the use of hyperder-

mic injections of strychnia upon practitioners who may have to treat cases in which the symptoms present are the result of snake or dangerous insect poison, and think that should the patients die without it having been used all will not have been done to save life that might have been. —*Australasian Medical Gazette.*

ENTEROTOMY AND GASTROTOMY FOR THE EXTRACTION OF FOREIGN BODIES.

The *Archives de Médecine* publishes, from a German journal, a curious observation relative to a double operation performed by Dr. Radestock: A young prisoner, aged 22, desiring to commit suicide, swallowed, according to his own statement, a rubber cuff, five pieces of glass, each as broad as a finger, and finally ten pieces of wood, each as long as a finger and as thick as a thumb. In order the better to swallow these objects, he pushed them far behind the base of the tongue, and then took a swallow of water. The operation was performed on the twenty-third day after the suicidal attempt. The intestine was opened and a large part of the foreign bodies removed; but it was necessary to make a new incision in the abdominal wall in order to extract those that were felt in the stomach. The operation succeeded so well that the patient could get up on the twenty-eighth day, and a few days later he returned to his prison. There he attempted to reopen the wound made during the operation, and again swallowed some pieces of wood. A new enterotomy was then made and three of these pieces were extracted, each four inches long and as thick as a finger. The cure this time was complete in ten days.—*Journal de Médecine et Chirurgie Pratiques.*

GYNÆCOLOGY AND OBSTETRICS.

PUERPERAL INFECTION FROM THE MIDWIFE.

Dr. M. Loeb of Frankfort-on-the-Main reports a singular case of infection of puerperal woman. A midwife confined twelve women in a certain time, and no matter how easy the labor was or how much she disinfected her hands, her patients inevitably had puerperal fever. Dr. Loeb was called in to treat several of her victims, and he diligently sought for the source of the infection. It could

not have been from her hands that the infection comes, for she carefully disinfected them. Dr. Loeb noticed on her left upper eyelid the cicatrix of a cured lupus. He at once thought: Could not a lachrymal blennorrhœa be present? With some trouble he got the midwife to consent to have her eyes examined by an oculist. Dr. Rosenmeyer made the examination, and reported as follows: "Examination revealed a lachrymal blennorrhœa, due to stenosis of the lachrymal duct. * * * It is not possible to say whether the stenosis is due to an old lupus, or to a former operation for nasal polypus. It has been shown, however, that in nearly ninety per cent of the cases, lachrymal pus contains staphylococci besides numerous other pyogenic microörganisms. In spite, therefore, of the frequent disinfection of the hands, it is probable that an infection of the fingers with pyogenic microbes took place from frequent contact with the eyes to wipe away the tears."

When the midwife was made aware of the dangerous nature of her eye affection, she underwent proper treatment. Since her cure (last now over a year), she has not had a single case of puerperal fever. *Deutsche Medizinal Zeitung.*

A PECULIAR CASE.

This short case may be of interest to the medical profession so far as it is rare and unique, and shows us how a woman may use herself, or let others use her, in order to avoid bearing children.

One evening, in my consulting room, a young married woman presented herself with the following story: "She was six weeks pregnant, and, as she did not wish to have any more children, some female friend told her how to get rid of it—namely, by passing a hairpin into the womb. Taking this woman's advice she tried it, and did it so well that she could not get the hairpin out. She now came to me to have it removed."

On examination with my fingers I could feel nothing peculiar about the vagina or cervix uteri. On introducing a Ferguson's speculum I found the cervix inflamed and pus issuing from the os. With a Simpson's sound I carefully explored the inside of the cervix for about half an inch, but apparently it was as it should be. I then asked her if she was sure the hairpin had not fallen out amongst her clothes, but she was certain it was in the womb, and I told her to come back in the morning, which she did.

Once more I introduced the speculum, and found the pus still issuing from the os uteri, and, using the sound as a probe, after about half an hour's trouble I succeeded in withdrawing an ordinary black hairpin, two inches long. She had introduced it with the round end upwards. The points must have been at least one inch and a half from the os externum. These had been pressed together when passing it, and this explains how I came to remove it, for the knob on the end of the uterine sound caught between the bars of the pin, and on withdrawing the sound the pin came with it.—*Dr. Andrew W. Nash, in the Australasian Medical Gazette.*

DERMATOLOGY AND HYGIENE.

TREATMENT OF THE ACUTE STAGE OF ECZEMA.

Dr. Mackintosh in the *Practitioner* for July, publishes a few practical points on the treatment of acute eczema.

He says: "Two essentials must be reckoned before we proceed to tackle the disease itself. The first of these is, that the patient must be instructed not to wash the eczematous parts, and this advice he must religiously observe. He will probably reply, 'but I must wash sometimes.' 'Wash not at all,' is the first commandment in eczema. He must neither wash with nor yet without soap, nor with the usual adjuncts of bran steeped in hot water, oatmeal, milk and water, buttermilk, whey, sour milk or rain water, or any other of the usual washes; all of these are mistakes that seriously hamper and delay curative treatment. That persistent washing predisposes to eczema by drying the skin and depriving it of the unctuous secretions which impart to it suppleness and softness, qualities on which the natural beauty of the complexion so largely depends, there cannot be a doubt. For the same reason and in the same manner, although it is not generally known, frequent washing with soap and water is disastrous to the growth of hair, it changes its natural color to a lighter hue, the natural gloss is lost, the hair becomes dry, prematurely grey and early baldness is favored.

This process of destruction is materially hastened by washing the head with warm or hot water and soap during cold weather. The head and beard should be dressed and kept clean by combing and brushing, a process all-sufficient for purposes of cleanliness, and the rational method for preserving a fine head of hair.

Coffee, strong tea and alcoholic drinks should be forbidden.

The second essential is that the bowels be kept well open. In the case of children, grey powder, rhubarb and bicarbonate of sodium, a grain of each, taken as required every second or third night, will answer every purpose; or grey powder and magnesia will do equally well. In adults saline medicines hold the first rank.

The following is a useful combination:

℞ Magnesiæ Sulphatis.....ʒ vj.
Sodiæ Bicarbonatis.....ʒ i.
Infusum Gentianæ Co. ad.....ʒ vj.
Sig.—Take a sixth part three times a day before meals.

I do not hesitate to say that the sulphate of magnesium is far and away the best of all purgative medicines in most other diseases as well as in eczema—the best because the mildest, the least irritating, one of the least injurious, and certainly one of the most effectual; but it must be taken at the proper time and in the proper quantity. The proper time is an hour before meals—preferably in the morning before breakfast, although it may be taken before any other meal with nearly equal benefit. The proper quantity is three drachms dissolved in three parts of a tumblerful of cold water or soda water. Hot water does not materially help its action, and it makes the drug more nauseous.

Three drachms of sulphate of magnesium dissolved in an ounce of chloroform water, followed by a cup of tea or beef-tea, can be swallowed almost without taste or inconvenience. A four or five-grain blue pill taken at night, and the same draught next morning has its advantages; or, what is perhaps better still, where free purgation is desired the following pill at bedtime and the draught in the morning:

℞ Extracti Colocynthidis Co.....gr. iij.
Pilalæ Hyhrargyri.....gr. j.
Extracti Hyosciami.....gr. j.
Ft. pil.

Where there is torpidity of the liver, a combination of cascara with nux vomica is equal, if not superior, to any other:

℞ Extracti Cascaræ Sagradæ Liquidi.....ʒ iijss.
Tincturæ Nucis Vomicæ.....ʒ j.
Glycerini.....ʒ iij.
Infusum Gentianæ Co. ad.....ʒ viij.
Sig.—Take one ounce every evening directly before dinner, or mornin and evening if required.

Medicines such as arsenic and iodide of potassium given internally I have found disappointing, and of very little use. Of course gouty eczema must be suitably treated.

The great desideratum is the appropriate external treatment. I have been in the habit of prescribing an ointment which in most cases pretty nearly approaches the character of a specific:

℞ Bismuthi Subnitratis ..... ℥iv
Zinci Oxidi ..... ℥i
Acidi Carbolici Liquidi ..... ℥ss
Vaselini Albi ..... ℥ii
Ft. ung.

When constant tingling and irritation disturb the patient's rest at night I have found this lotion invaluable:

℞ Bismuthi Subnitratis ..... ℥i
Glycerini (Price's) ..... ℥iv
Acidi Carbolici Liquidi ..... ♏xij
Aquam Rosæ ad. ..... ℥i
Sig. Shake up and apply with a camel's-hair pencil.

During the day, when business has to be attended to and the ointment cannot be applied, a powder will be found useful.

℞ Cimolite, bismuthi subnitratis, zinci oxidi, aa. partes æquales; fiat pulvis.

In more chronic cases the famous *unguentum metallorum* still holds its own. It consists of unguenti zinci, unguenti plumbi acetatis, unguenti hydrargyri nitratis, aa. partes æquales; misce.

This ointment I occasionally vary by substituting white precipitate for the nitrate of mercury.

Publications Received.

Dyspepsia. By Frank Woodbury, M. D. Detroit: George S. Davis.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Wittnaus, A. M., M. D. Second edition. New York: Wm. Wood & Co.

Cerebral Localization in its Practical Relations. By Charles K. Mills, M. D.

Death From Electrical Currents. By Charles F. Heinricks. From *N. Y. Star.*

Electrical Distribution of Heat, Light and Power. By Harold P. Brown. New York: J. W. Pratt & Son.

Diphtheria, its Nature and Treatment. By C. E. Billington, M. D., and Intubation in Croup. By Joseph O'Dwyer, M. D. New York: Wm. Wood & Co.

Munich a Healthy Town. Two Reports. By Prof. Von Pettenkofer and Prof. Von Ziemssen.

Transactions of the American Surgical Association, vol. vii. Philadelphia: P. Blakiston & Co.

Book Notices.

Suggestive Therapeutics. A Treatise on the Nature and Uses of Hypnotism. By H. Bernheim, M. D., Professor in the Faculty of Medicine at Nancy. Translated from the second and revised French edition by Christian A. Herter, M. D., of New York. New York: G. P. Putnam's Sons, 1889. New Orleans: Armand Hawkins, 194 Canal street. Price, $4 25.

This work of Bernheim's may be described as the Arabian Nights of medical literature, not that it is a tissue of fantastic imaginings, but a sober record of marvellous facts. "The singular facility," as Bernheim says, "with which the immense majority of subjects of every age, of both sexes and all temperaments may be hypnotized always astonishes the gentlemen who honor us by coming to our clinic to verify the statements contained in this book. They imagine the hypnotic state to be the exclusive lot of rare neuropathic cases, and they now see all or nearly all the patients in a ward fall under the dominion of suggestion. 'How have we been able to let a truth so easy of demonstration pass by us for centuries?' they ask, 'without discovering it?' "

Hypnotism has never died out; or, rather, it has always existed, though under different names and in different shapes. But its very mysteriousness has caused it to be tabooed by all except a few of the superstitious and ignorant. At one time the Church discouraged researches into hypnotism by burning at the stake those who practiced it; it was witchcraft. Later, when that method of disposing of those who had dealings with the evil one went out of fashion, *reputable* medical men frowned upon the practice and regarded with a pitying contempt all who were so grossly superstitious as to believe in anything that could not be measured in pounds and ounces. The hypnotizers, mesmerizers, etc., did not explain the effects produced by any *rational* method, but they referred all the results to the agency of spirits, and thereby damned hypnotism in the eyes of medical men, who are generally unbelievers. In the early part of this century the French Academy appointed a committee of eminent men to investigate certain

remarkable cases (which we now call cases of hypnotism, etc.). The committee's labors extended over a period of six years, and although a report was presented containing some strange statements, still the medical world at large could not be moved to accept the new force, which had undoubtedly been shown to be capable of producing wonderful results.

A few years ago there was a revival of interest in this subject. Hypnotism was subjected to the same rigid investigation that all medical novelties receive nowadays, and the harvest of discoveries has been very great. France was the field in which most of the labors were done. The French literature on the subject is very great, but most of it is scattered through dozens of journals. Bernheim has had vast experience with hypnotism. His work has been done systematically. He did not take up material at random, but classified and studied it with a view to establishing certain laws or facts. He opens his book with a description of the manner of hypnotizing. The various stages or degrees are described and the varieties of suggestion considered. The mental phenomena observed in hypnotic sleep are reviewed, and then the effects upon the functions of organic life.

The historical sketch in chapter VII is very interesting. It serves to show that even the most violent opposition cannot extinguish the light of truth, though it may obscure it. The author's own opinions of the manifestations of hypnotism fill chapter VIII. The great point upon which he differs from Charcot is that he does not regard hypnotism as a pathological state, but as a condition into which almost every person may be placed. Charcot looks upon hypnotism as a neurosis, most forciby manifested in hysterical subjects. Bernheim lays much stress upon this difference, for upon it will depend the conduct of the practitioners in applying hypnotism to the treatment of disease.

Chapter IX touches upon one of the most important phases of the question—namely, criminal suggestions. The unpleasant possibilities of hynotism in this respect are such as to demand the serious attention of lawmakers. The Tisza-Eslar affair, which caused such a commotion, in Hungary a few years ago, is considered from a suggestive standpoint.

Part II is devoted to the application of suggestion of

therapeutics. It has been used with benefit in the following states: Organic affections of the nervous system, hysteria, paresis, paralysis, chronic alcoholism, gastritis, insomnia, neuralgia, rheumatism and menstrual troubles.

We cannot describe the results obtained in the various affections. Bernheim's work presents medical men a well-digested statement of the present condition of hypnotism and suggestive therapeutics. English-reading members of the fraternity are under obligations to Dr. Christian A. Herter for a careful translation of a valuable work.

A. McS.

Massotherapeutics or Massage as a Mode of Treatment. By Wm. Murrell, M. D., F. R. C. P. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1889. Pages 236. New Orleans: Armand Hawkins. Price, $1.50.

This is a clear and succinct statement of our actual knowledge on the subject of massage. In this the fourth edition the author has employed the title of "Massotherapeutics," by which he means the scientific aspect of the subject, and not massage regarded merely as a means of earning a livelihood. Although the new name does not add to our stock of knowledge of the subject, still it serves to express the importance of massage as an auxiliary in treatment.

Dr. Murrell does not attempt to dive very deeply into the physiological action of massage, for it must be confessed we do not possess a superabundance of information on that phase of the subject. Murrell's work is entirely practical. He very clearly describes the different methods of employing massage, each manipulation being well illustrated, which we consider an important point. In his chapters on the application of massage to the treatment of disease the practical physician will find just the information he desires to guide him in applying massage to his own patients.

A. McS.

A Laboratory Guide in Urinanalysis and Toxicology. By R. A. Witthaus, A. M. M. D. Second edition. New York: Wm. Wood & Co., 1889.

This handy laboratory companion is arranged in a very convenient manner; it opens lengthways, and the leaves are printed on one side only, leaving a blank page for

notes. This *Guide* considers qualitative and quantitive analyses of urine, urinary deposits, analysis of calculi and detection of poisons, organic and inorganic. As it should be in such a guide, the text is brief but to the point; and it is arranged in the way shown by experience to be the best. We would recommend this *Guide* to all who desire to work profitably and systematically in the laboratory. A. McS.

The Pathology, Clinical, and Diagnosis of the Affections of the Mediastinum Other than those of the Heart and Aorta; with tables giving the clinical history of 520 cases; being an essay to which was awarded the Fothergillian medal of the Medical Society of London, March, 1888. By Hobart Amory Hare, B. Sc., M. D. Philadelphia: P. Blakiston, Son & Co., 1889. New Orleans: Armand Hawkins, 134 Canal street. Pp. 150. Price, $2.

The existence of this able work is accounted for in the author's opening lines. He says: "Notwithstanding the constant appearance of works purporting to give us a thorough insight into the diseases of the human chest, it is a fact worthy of remark that but few of them make more than a passing mention of those affections with which this essay deals. Why the medical profession has passed by this most important area in our bodies is beyond the writer's understanding, unless it be that among all the fatal ills that flesh is heir to diseases affecting this space are fortunately of comparatively rare occurrence."

We fancy that very few physicians are so fortunate as not to be worried by some perplexing case of thoracic disease, the like of which is not described in his familiar text-books on practice. Dr. Hare's essay deals precisely with those cases which receive scant attention, or none at all, from our standard authors. In its scope are considered carcinoma, sarcoma, suppurative and non-suppurrative inflamation, lymphoma, fibroma, hæmatoma, wounds, dermoid cysts, hydatid cysts, and many miscellaneous cases, including syphilis, injuries, etc.

This essay is virtually a supplement to existing treatises on thoracic diseases, and is well worthy of careful study on the part of those who desire to complete their knowledge of intrathoracic affections. A. McS.

Death.

Dr. Alexander Brown Mott, one of the most noted of American surgeons, and a son of a famous surgeon, Valentine Mott, died at his country seat near Yonkers, on Monday, Aug. 12, 1889, of pneumonia, after an illness of two days. Dr. Mott was born in New York on March 31, 1828. When ten years of age he was taken to Europe, and there received a careful classical education. He was appointed visiting surgeon to St. Vincent's Hospital in 1853. From 1855 to 1863 he filled a similar position in the Jewish hospital, and for fourteen years was head surgeon in the Charity Hospital. In each of these institutions his work was of the highest order, and although comparatively a young man he became known as one of the most expert of surgeons. In 1859 he was appointed attending surgeon at Bellevue Hospital, and subsequently consulting surgeon to the Bureau of Medicine and Surgical Relief to the outdoor poor of New York.

In 1861 Dr. Mott undertook the organization of the medical corps of the regiments that were sent to the seat of war, and afterward, with the assistance of many of New York's patriotic leaders, he founded the United States Army General Hospital, of which he was the medical director. In 1862 he received the commission of surgeon of the United States Volunteers, with the rank of major. Towards the close of the war Dr. Mott acted as medical inspector of the Department of Virginia, and was attached to the staff of Gen. Ord. He was present at the conference between Gen. Grant and Gen. Lee when they arranged the terms of surrender of the Confederate forces. He was mustered out of service July 18, 1865, with the brevet rank of colonel.

As one of the founders of Bellevue Hospital, Dr. Mott took a warm interest in the welfare of the institution, and to his untiring efforts much of the success of the hospital may be ascribed. In 1872 he retired from the chair of surgical anatomy and became professor of clinical and operative surgery, and filled the chair with credit to himself and honor to his college up to the time of his death.

Medical News and Miscellany.

Summer Diarrhœa.—Carharrer recommends the stoppage of milk as a diet, and substitution of liquid peptonoids with cocoa, pure brandy, and beef tea or broths. Water must be allowed freely, given in small quantities, and often. In bad cases he gives:

℞ Acidi salicylic	gr. xxx
Cretæ precip	gr. x
Glycerin	ʒ ij
Aquæ rosæ	ʒ xiv

M. Sig. Fluid ounce every hour for a child one year old.

The following mixtures will prove of benefit in treatment of intractable cases:

LOOMIS' DIARRHŒA MIXTURE.

Take of tincture of opium	½ fl. oz
Tincture of rhubarb	½ fl. oz
Compound tincture of catechu (U. S. P.)	1 fl. oz
Oil of sassafras	20 mins
Compound tincture of lavender, enough to make	4 fl. oz

SQUIBB'S DIARRHŒA MIXTURE.

Take tincture of opium	1 fl. oz
Tincture of capsicum	1 fl. oz
Spirit of camphor	1 fl. oz
Purified chloroform	180 mins
Alcohol, enough to make	5 fl. ozs

THIELMANN'S DIARRHŒA MIXTURE.

Take of wine of opium	1 fl. oz
Tincture of valerian	1½ fl. oz
Ether	½ fl. oz
Oil of peppermint	60 mins
Fluid extract of ipecac	15 mins
Alcohol, enough to make	4 fl. ozs

VELPEAU'S DIARRHŒA MIXTURE.

Take of tincture of opium, compound tincture of catechu (U. S. P.) spirit of camphor, each equal volumes. M.—*Medical Standard.*

According to Dr. Cornet tuberculosis is nine times more frequent among nurses than any other class of persons.

Dr. Edson sums up the etiology of typhoid fever in the following words: First, typhoid fever never infects the atmosphere; second, that it never arises *de novo;* and, third, that the causes of the disease, in order of their frequency, are as follows: First, infected water; second, infected milk; third, infected ice; fourth, digital infections; fifth, infected meat.—*Pharmaceutical Era.*

MORTUARY REPORT OF NEW ORLEANS

For July, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	5	7	4	8	8	4	12
" Congestive	9	1	2	8	7	3	10
" Continued,	.....	...	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....
" Remittent	3	4	6	1	3	4	7
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	1	.....	.....	1	1	.....	1
" Puerperal	1	.....	.....	1	1	.....	1
Typho-Malarial	4	2	4	2	4	2	6
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	4	2	4	2	.....	6	6
Diphtheria	5	4	5	4	1	8	9
Whooping-cough	2	.....	1	1	.....	2	2
Meningitis	8	6	8	6	8	6	14
Pneumonia	5	5	8	2	6	4	10
Bronchitis	3	2	1	4	.....	5	5
Consumption	26	35	30	31	57	4	61
Congestion of brain	12	3	8	7	4	11	15
Diarrhœa	10	2	6	6	7	5	12
Cholera infantum	20	3	14	9	.....	23	23
Dysentery	10	3	6	7	11	2	13
Debility, General	4	2	2	4	6	.....	6
" Senile	10	12	7	15	22	.....	22
" Infantile	7	4	4	7	.....	11	11
All other causes	237	111	195	153	209	139	348
Total	386	208	315	279	355	239	594

Stillborn children—White, 23; colored, 17; total, 40.
Population of city—White, 184,500; colored, 69,500; total, 254,000.
Death rate per 1000 per annum for month—White, 25.10; colored, 35.91; total, 28.06.

DIPHTHERIA RECORD FOR JULY, 1889.

Dist.	Cases. White.	Cases. Colored.	Cases. Total.	Deaths. White.	Deaths. Colored.	Deaths. Total.
1	5	2	7	4	1	5
2	3	2	5	1	2	3
3	.....	.....	.....	.....	.....	.....
4	.....	1	1	.....	1	1
5	1	.....	1	.....	.....	.....
6	.....	.....	.....	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	9	5	14	5	4	9

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—JULY.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	80.0	87.0	73.0	.09
2	82.0	88.0	76.0	.04
3	84.0	93.0	75.0	.....
4	84.0	91.0	76.0	.12
5	82.0	90.0	75.0	.....
6	80.0	89.0	71.0	2.04
7	80.0	85.0	75.0	T
8	78.0	82.0	74.0	.19
9	80.0	85.0	74.0	1.14
10	79.0	86.0	72.0	.64
11	80.0	85.0	75.0	T
12	81.0	89.0	73.0	1.70
13	80.0	88.0	71.0	1.18
14	84.0	92.0	76.0	.....
15	85.0	93.0	77.0	.....
16	85.0	92.0	78.0	.....
17	86.0	93.0	78.0	.....
18	86.0	95.0	78.0	.....
19	86.0	94.0	78.0	.....
20	86.0	94.0	78.0	.....
21	83.0	95.0	71.0	.36
22	84.0	90.0	79.0	.02
23	84.0	91.0	76.0	.24
24	83.0	91.0	75.0	.38
25	85.0	92.0	78.0	.05
26	84.0	90.0	78.0	T
27	81.0	88.0	74.0	.42
28	82.0	93.0	71.0	.....
29	84.0	91.0	78.0	.22
30	83.0	92.0	74.0	.28
31	81.0	88.0	74.0	.02
Sums	. .	....	....	9.13
Means	82.6	90.1	75.2	.....

SUMMARY.

Mean barometer, 30.036.
Highest barometer, 30.157, 15th
Lowest barometer, 29.909 19th.
Mean temperature, 82.6.
Highest temperature, 95.0, 21st.
Greatest daily range of temp., 24.0, 21st.
Least daily range of temperature, 8.0, 8th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..83.5	1876..82.9	1881..84.3	1886..79.8
1872..82.0	1877..83.4	1882..80.5	1887..80.5
1873..81.9	1878..84.3	1883..83.5	1888..81.5
1874..81.2	1879..83.2	1884..85.4	1889..82.6
1875..81.9	1880..81.4	1885..82.9	1890.. —

Total excess or deficiency in temperature during month—7.
Total excess or deficiency since Jan. 1—311.0.
Prevailing direction of wind, S. W.
Total movement of wind, 4487 miles.
Extreme velocity of wind, direction, and date, 48 miles, S. W. on 27th.
Total precipitation, 9.13 inches.
Number of days on which .01 inch or more of precipitation fell, 17.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874.....12.93	1879..... 7.04	1884.... 4.12	
1875..... 6.57	1880.....11.22	1885.... 6.15	
1876..... 4.73	1881..... 6.97	1886.... 4.35	
1877..... 6.41	1882..... 6.84	1887.... 7.85	
1878..... 6.21	1883..... 3.33	1888.... 2.02	

Total excess or deficiency in precipitation for month—2.71.
Total excess or deficiency since Jan. 1—6.61.
No. of clear days, 5. No. of fair days, 20.
No. of cloudy days, 6.
Thunder storms on 2d, 4th, 6th, 12th and 13th.
Lunar halo, on

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable.

R. E. KERKAM, *Signal Corps Director.*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

OCTOBER, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should the so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompanies the paper.

Notes on the Causes and Management of Hernia in Infants and Young Children.*

By K. MILLER, A. M., M. D., Lincoln, Ill.

Having had occasion to treat a number of cases of hernia of the intestines in infants and young children, I have observed a lack of literature on the subject. Our standard works on surgery and diseases of children, alike, either entirely ignore the subject or pass it with a mere casual mention, as though it were an affair of comparatively little moment, or so rare as to deserve no mention in a general treatise. Systematic works on surgery, it is true, speak of congenital hernia, but they say nothing of its treatment during early life. Vogel, in his work on the Diseases of Children, mentions it only to advise that it be allowed to work its own cure, if it will. This is my excuse for bringing to your attention some facts which are probably not new to the practice of most physicians. In very young children we find principally two forms of abdominal hernia, the *umbilical* and the *inguinal*. The former is the one which probably is most feared by the mothers of infants, and the excessive care to prevent this form is, in my opinion,

*Read at the Thirty-Ninth Annual Meeting of the Illinois State Medical Society, May 22, 1889.

an occasional cause of *inguinal hernia*. In addition to the causes of umbilical hernia which are so commonly recognized as to render their mention unnecessary at this time, I would call your attention to the possibility of its causation in a method of treatment of the navel sometimes adopted by nurses, under the impression that they thereby strengthen the umbilicus. Some are in the habit of firmly rubbing the scar left by the newly fallen cord at every dressing of the navel for several days, causing much discomfort to the child, and, as it appears to me, certainly to the impairment of the contraction and closing of the umbilical orifice. This is a very effective means of keeping up the soreness in this region, even for several weeks, and also of causing violent crying on the part of the child, one of the usual and efficient causes of umbilical hernia.

In addition to these causes we of course have the straining from constipation, violent coughing (as sometimes occurs in cases of whooping cough), and other similar causes unnecessary to mention.

As to the causes of inguinal hernia, aside from those which act alike in causing both umbilical and inguinal hernia, one I have never seen mentioned in any work upon such subjects, but which I have seen illustrated in practice, is the wearing of a very tight abdominal bandage with a view to prevent umbilical hernia. Where the bandage is very tightly fastened it necessarily interferes with the respiratory movements of the abdomen, makes the child uncomfortable, compresses the bowels and thereby interferes with their normal action, probably leading to various disturbances of the peristalsis, causing sometimes constipation and again irritative diarrhœa. This element in the causation of inguinal hernia was especially well marked in a case in my own practice. A well-formed, healthy male infant showed at birth and for several weeks thereafter no signs of weakness of the inguinal rings. About a month after birth the mother noticed

an irregularity in the action of the bowels, and a swelling in the lower part of the bowels, as she expressed it. When the child was six weeks old I was asked to see it. She thought it was rupture. On examination it was found that her diagnosis was correct.

Fearing that there might be some weakness in the umbilical ring, and a possibility of rupture at this point, she had kept on the child from birth a thick muslin band, drawn as tightly as she could readily draw it. The child had naturally cried a great deal, and had been troubled with intestinal indigestion, and had strained a great deal in the movements of the bowels—in fact, had been generally uncomfortable and had acted accordingly. The abdominal walls above the crests of the ilia had been so continually compressed that there was absolutely no room in that portion of the cavity for the bowels, and they had escaped in the direction of the least resistance through the inguinal rings, forming double hernia, which had penetrated into the upper part of the scrotum on both sides. It is, perhaps, needless to say that the umbilicus was in a healthy condition. Above the tumor formed by this protrusion the lower edge of the muslin band drew tightly into the abdominal walls. On removing the band there was no difficulty in returning the prolapsed intestines into their proper places; but as the child cried, coughed, or was raised to an upright position, prolapse recurred through the widely dilated rings. The relation of cause and effect between the very tightly drawn abdominal band and the resulting hernia was never more clearly presented to me.

While I have not seen any case in which this could be distinctly traced as the cause of hernia, it has seemed to me probable that in children who have escaped hernia in infancy, while yet there exists an unusual weakness in the inguinal rings, rope-jumping and some of the more violent plays of childhood may act as the exciting cause of hernia occurring in children from four to ten or twelve years of age. In fact, I have known of cases where

no other cause could be discovered, although this could not be proven to be the cause.

In the treatment of these difficulties—as, indeed, in all the disorders of children—it has seemed to me that the simplest efficient means was certainly the best. In my management I have, sought, therefore to combine the greatest simplicity with efficiency. In the case of neither form of the disorder have I originated the treatment which I have adopted. The treatment of umbilical hernia which I have found most effective is a modification of the treatment by abdominal pad and bandage. The pad should be, I think, as firm as can be worn with comfort, sufficiently large to protect well the borders of the orifice, sufficiently convex toward the umbilicus to press the prolapsed bowel back from the orifice and at the same time not so much so as to penetrate within the rings and thereby prevent their closure. These elements of efficiency are, I find, best combined in the old fashioned button mold. This, covered with a sufficient thickness of muslin to prevent any abrasion of the skin, is sewed firmly to three strips of adhesive plaster, each six to eight inches in length and a half inch wide, so crossed over the button mold that their ends shall be as nearly as possible equidistant from one another. These then, being quickly heated, can be easily applied over the abdomen. If any of them should prove to be too long to be easily applied, it may of course be clipped to a suitable length. When this apparatus is applied the child should be held so that the abdomen protrudes somewhat, in order that the strips of plaster shall not bind down folds of the skin and thereby cause discomfort. This dressing can be allowed to remain for several days, or indeed until the strips begin to be loosened by the moisture of the skin or the movements of the child. They may then be removed gently, without causing any irritation of the skin and replaced by another dressing of the same kind, care being taken that the newly applied strips do not cover the same portions of

the abdomen as were covered by the first dressing. In this way the dressing may be worn as long as may be necessary, without risk of excessive irritation to any portion of the surface. The appliance has the merit of being very simple, easily prepared by any one under the direction of a physician, easily applied by the mother if it is inconvenient to consult a physician at the time it needs replacement. It is light and limits the movements of the child to so slight a degree as to cause the minimum of discomfort and restraint. Even in very fleshy children I have not known this dressing to cause any troublesome effects, although with them it may be necessary to change the strips of plaster, moving them to a new position oftener than is necessary with others, especially during hot weather.

This method of dressing for umbilical hernia I learned from my preceptor and fellow-member of the Society, Dr. L. L. Leeds, of Lincoln, and in his wide experience of many years and my more limited observation it has never failed to correct the difficulty.

The method of treatment for inguinal hernia which I have employed for the last two years was brought to my attention by an article from the pen of Walter Pye, F. R. S., copied in the *New York Medical Abstract*, during the spring of 1887, from the *British Medical Journal*. Mr. Pye gives the credit for the introduction of this method to William Coates, who published the account of it in 1884, having acquired his knowledge from one of the "old women" of his neighborhood. I can not perhaps better describe it than in the language of Mr. Pye himself, who says: "A skein of worsted was used, which, stretched out straight, should be twenty-two (22) inches long. The threads should be tied across at intervals of about two or three inches, to keep them together. One end of the skein was placed over the abdominal rings and the folded worsted is passed horizontally across the abdomen over the line of the crest of the pelvis to the opposite side, around the hips, behind

the pelvis and over the hip on the side of the hernia. The end is then passed through the loop of the skein and will here form a knot, the bulging portion of which must be carefully adjusted so as to lie against the hernial opening, and being carried down to the upper part of the thigh, it is then brought around the external side near to the great trochanter, and there tied or fastened with a safety pin." Mr. Pye recommends alloa yarn as being improved for this purpose by washing. In the case of very young infants lambs' wool will be sufficiently firm. I have found Saxony good for the trusses, taking from a quarter to half of an ordinary skein, according to the circumstances of the case, and applying it in the manner described. Several of the trusses should be kept on hand by the mother of the infant. They can be washed, and should of course be changed as often as is necessary for purposes of cleanliness. In the case of double inguinal hernia mentioned above, I used this dressing, applying it to each side. It was perfectly successful, and in spite of the fact that its use was necessary during warm weather on a child that was quite fleshy, no considerable difficulty was experienced in preventing chafing. The child wore the dressing pretty steadily for about four months, and after that for a few days at a time, when it had any cough or trouble which might cause a recurrence of the hernia. I have used it on several other infants with equally good results.

In the case of the little girls, sisters, aged seven and nine years, in both of whom inguinal hernia had developed, this method of treatment was used with perfect success so far as the retention of the hernia was concerned. I have not recently heard from these, so I can not say whether a cure has resulted.

As pertinent to the subject, though not, strictly speaking, a case coming under the title of these cases, I may be allowed to mention a case occurring in the practice of Dr. Leeds, of Lincoln. This was a case of *double inguinal hernia*, occurring in an aged man, of small stature and ex-

ceedingly spare in flesh. On one side the hernia was very troublesome, descending into the scrotum on assuming an upright position. He was unable to bear the pressure of the ordinary kinds of trusses. Dr. Leeds used a truss of yarn, fastening two skeins together in order to secure sufficient length with a pad of carded wool under the loop. The dressing proved equally efficient in this case and was only laid aside for a product of instrument-makers skill, because the old gentleman would not learn to adjust it himself. Whatever its value, however, in cases of hernia during the active periods of life, such has been my observation of its efficiency in the cases to which it is probably best adapted, those occurring during infancy and childhood, that I should scarcely hesitate to warrant a cure, provided that the original cause of the rupture could be removed, and the child's attendant was willing to use these measures carefully and persistently.

It is probable that some, possibly many, of you may have employed these measures in similar cases; if so, I should be glad to learn the result of your experiences; if not, I think a trial of them would convince you of their usefulness.

A Case of Enormous Fibro-Cystic Tumor of the Uterus—Laparotomy—Recovery.*

DR. X. O. WERDER, Pittsburgh.

June 14 last I was consulted by Miss W. C., aged 23, in regard to an abdominal tumor which had been growing for the last eight months. The abdomen was enlarged to the size of pregnancy at full term, and below the umbilicus were a number of striæ, such as you find at the end of gestation. The right side of the abdomen was more rounded than the left, the tumor apparently having developed from that side. Dullness extended from the pubes to the ensiform cartilage, and to both hypochondriac regions, leaving a tympanitic area in both flanks. The tu-

*Read before Allegheny County Medical Society.

mor was uniform, soft and elastic, and distinctly fluctuating. The largest circumference of the abdomen was between the umbilicus and pubis. Digital examination per vagina revealed a normal nulliparous cervix, high up in vagina; fundus uteri could not be felt; sound was not introduced. Vaginal examination very difficult and painful on account of a rather rigid hymen. Examination per rectum negative.

Miss C. first menstruated at 13 years, always regular and painless, lasting 5 days. Has been more profuse since appearance of tumor than before. Had typhoid fever five years ago, then dyspepsia for a time after, but not since. Was confined to bed with rheumatism eight weeks; otherwise in good health. No sign of tumor until eight months ago, and then it was only noticeable about two weeks before each menstruation, when she felt bloated; this feeling always disappeared before the next menstrual period. She was not conscious of the tumor, however, until two or three months before the operation. The tumor never gave her any trouble except about two weeks after each menstruation, when it always became distinctly larger, making her quite uncomfortable. From this history, and from the fact of the rapid growth of the tumor and its apparent development from the right side, I did not hesitate to pronounce it an ovarian cyst. Several physicians of ability, who had examined the case before I did, had already made the same diagnosis.

June 24 I opened her abdomen at Mercy Hospital. The tumor was covered by a fold of the peritoneum, traversed by a large number of blood vessels, some of them of enormous size, and studded with numerous small cysts. It was at first rather difficult to determine whether this was the omentum adherent to the tumor, or some other structure, but on pushing my hands down between the tumor and the abdominal walls, I could feel it spread out on each side of the tumor like two wings. There was, therefore, no doubt that it was the broad ligament which was en-

veloping the lower portion of the tumor. This fact, in addition to the tumor—which, though even now distinctly fluctuating, seemed to have a thickset muscular wall, a fold of which, picked up between the thumb and finger, felt like the walls of an enlarged pregnant uterus—made it evident that the growth was something else than an ovarian cyst: that it was either a pregnant uterus or a soft tumor growing from the uterus. A hypodermic needle was passed into the tumor, but nothing but a few drops of serous fluid was withdrawn. Pregnancy was excluded on account of her regular menstruation, rigid hymen and virginal condition of vagina and cervix, appearance of her breasts, absence of fœtal sounds and ballottement, etc. Concluding that we had to deal with a myoma, we proceeded to remove it. This, however, was a difficult task. The abdominal incision was enlarged above and below, some adhesions to bowels and abdominal parietes were tied off as they were encountered, but all attempts to deliver the tumor failed until the incision had been carried up to the ensiform cartilage. By all these manipulations a great deal of time had been consumed before the tumor had been rolled out of the abdominal cavity, and the hemorrhage was alarming because of the extremely vascular nature of the tumor. The patient had become very anæmic, and at times almost collapsed, requiring constant stimulation by hypodermic injections of whisky, of which she received from thirty to forty during the operation. The broad ligaments, the right of which reached higher on the tumor than the left, and folds of peritoneum connecting the bladder and the tumor were now separated from the tumor as far as necessary to form a pedicle, and were secured by small forceps and an elastic ligature passed tightly around the tumor, just above the attachment to the fundus uteri, and the myoma cut off above the ligature. After trimming the pedicle, which was about the size of two fists, it was brought into the lower angle of the abdominal wound, and the parietal

peritoneum stitched to it just below the elastic ligature, in order to shut it off from the peritoneal cavity. The broad ligaments and the peritoneal folds, secured by the artery clamps, were also brought out below the pedicle; the forceps, six in number, were not removed, but were wrapped in iodoform gauze. In the absence of proper instruments for extra-peritoneal treatment of the pedicle—I having been prepared for an ovariotomy only, and not for a myomectomy—I compressed the upper part of the pedicle by two large Spencer Wells forceps, one to each side, covering their handles with iodoform gauze. They were made to take the place of clamps ordinarily used in the treatment of the pedicle by the extra-peritoneal method. The abdominal wound was then closed up by silkworm-gut sutures, deep and superficial, a glass drainage tube was inserted immediately above the pedicle, the wound was covered with iodoform, and an antiseptic dressing was applied. The pedicle was seared with the actual cautery and covered with iodoform.

The patient rallied well from the shock of the operation. On the first evening temperature was 102 degrees, pulse 120; afterward the temperature never reached that point again, and became normal after the first week. The patient suffered very little pain, except from flatulency the first few days; the large Spencer Wells forceps attached to the pedicle gave her most of her trouble, as they prevented her from turning on either side, keeping her constantly in the dorsal position. The drainage tube was removed about 30 hours after the operation. The small artery forceps attached to broad ligaments and peritoneal folds were removed on the 7th day; large Spencer Wells forceps on the 11th day on one side and on the 13th day on the other; the elastic ligature came away with the pedicle on the 19th day, leaving a large funnel-shaped opening, covered with healthy granulations. There was never any suppuration from the pedicle, it becoming dry and mummified, but on the 12th day a small fecal fistula formed

on the side of the pedicle, discharging small quantities of fecal matter at first; which ceased, however, after about ten days, nothing but some flatus coming from it now occasionally. Abdominal incision was healed by first intention, when sutures were removed on 10th day.

There is now, eight weeks after the operation, only a small, granulating surface left at the seat of the pedicle, not larger than a five-cent piece, which is rapidly cicatrizing. The patient has gained flesh since the operation, and feels perfectly well, so that she will be able to leave for her home in Ohio in a few days.

The tumor weighed 26 pounds, not including the pieces cut away in trimming the pedicle; they, in connection with the blood lost during the operation, would have probably increased its weight to 40 pounds. The tumor was a fibro-cyst, but contained large cystic cavities; it presented rather an œdematous, spongy condition. Even when lying on the table distinct fluctuation could be obtained, and on its cut surface small drops of serous fluid were observed, like drops of sweat. No microscopical examination of the tumor was made; I had intended to harden it in alcohol and preserve it, but the weather was intensely hot, and it spoiled in a few days.

The interesting points of this case are: 1. The youth of the patient; tumors of this kind are rarely found at an earlier age than 35. 2. The rapidity of its growth; it attained this enormous size in eight months, without causing much local or constitutional disturbance. 3. Its distinct increase in size always two weeks after each menstruation; periodical enlargement of fibroid tumors is not uncommon, but this occurs generally during menstruation. The question naturally suggests itself, whether swelling of the growth in this case did not correspond to the time of ovulation.

That a diagnosis of ovarian cyst was made in this case is not surprising. The fact is that it is impossible to differentiate fibro-cystic tumors of the uterus, especially when of such large size as this, from ovarian tumors, as

all the physical signs are almost identical. Gusserow, in his book on fibroids of the uterus (Encycop. Obstetrics and Gynecology), says, "The diagnosis of these tumors has only been made in the most exceptional cases, and even then has been the result of accident rather than of correct appreciation of the symptoms. Fibro-cysts so closely resemble multilocular ovarian cysts, particularly in their location and in their fluctuation, that the frequency with which they have been mistaken for ovarian tumors is not astonishing."

AMERICAN PUBLIC HEALTH ASSOCIATION.

The seventeenth annual meeting of the American Public Health Association will be held in Brooklyn, Oct. 22, 23, 24 and 25, 1889.

The Association is composed of eight hundred members. The objects of the Association, as may be inferred from its title, are to advance sanitary science and to promote organizations and measures for the practical application of public hygiene. It has met annually for the last sixteen years in different cities in the United States and Canada; and each meeting has been followed by increased efforts to promote public health. A notable feature of the coming meeting will be an exhibition of all appliances available to the preservation of health. The exhibit will comprise matters relating to the following: 1st, the dwelling; 2d, schools and education; 3d, factories and workshops; 4th, clothing and dress; 5th, food; 6th, sanitary engineering; 7th, public health administration in towns and cities; 8th, the laboratory; 9th, Red Cross section.

Of the value of the exhibitions and expositions there can be no doubt. Commerce has always been benefited by the exhibition of wares. Health is the most precious thing a nation can possess, for without it nothing can thrive and progress is impossible. We are glad that an exhibition of sanitary goods will be made, for we can not doubt that much good will follow it. It is only to be regretted, however, that such an exhibition could not be made permanent, for sanitation is a subject upon which the people always need instruction; and the objective method of teaching by means of exhibition is the best.

A Portable Gynecological Table.

By L. H. LUCE, M. D., M. M. S. S., formerly Physician and Consulting Physician to St. Luke's Hospital.

The importance of a suitable table for gynecological examinations is universally recognized by the profession. Many admirable stationary tables have been in use for some time, such as the Wadsworth, Chadwick, Bennett and the University. These tables, however, are only available in the office of the physician, being too large, of course, for use at the bedside.

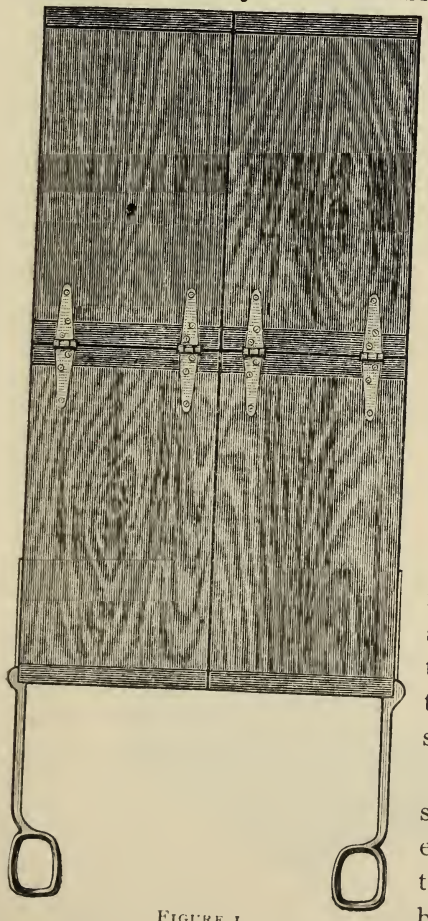

FIGURE I.

Having in twenty years' practice seen the necessity of a table that could be used equally well in the office or at the bedside, I have invented a *portable* table, which can be carried in the hand or buggy as easily as a satchel. From quite an extensive use now, it has proved so thoroughly useful, even beyond my most sanguine expectations, that I desire to bring it to the notice of my professional brethren.

It is composed of four sections, securely fastened with hinges, so as to allow of folding from before backward. The two upper sections are united by two hinges, so as to permit folding laterally. To the two lower sections are fastened the foot-rests or stumps, eighteen inches in

length, and provided with prop-joints to admit of adjustment at any angle, and also to fold back when not in use.

When open for use, the dimensions are the same as the stationary tables, being five feet, including foot-rests, and two feet wide. Fig. 1. gives a good illustration of it in this position.

When folded, it is twenty-two inches long, twelve inches wide, and about three inches thick. It is well shown in this position by Figure 2, while Figure 3 shows it at once with the back raised at an acute angle.

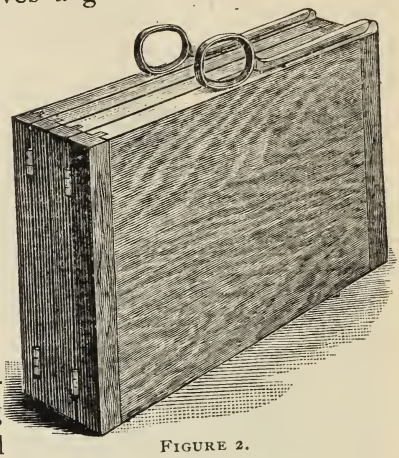

Figure 2.

It is strongly made, compact and handsome, being made of the best material and finely finished.

In placing pessaries, making applications to the cervix, in curetting the womb, or for purposes of diagnosis, especially when done at the home of the patient, it is

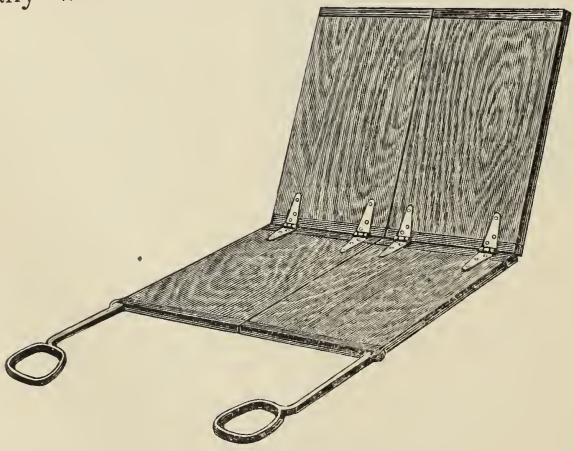

Figure 3.

simply invaluable, and not inferior to the high priced stationary tables.

When used at the office, it is unfolded and placed upon the office table, when it becomes, for all practical purposes, a stationary table. A foot stool or small box may be placed at the foot of the table to aid the patient in mounting, which is done in precisely the same manner as when a stationary table is used. When used at the home of the patient, as is so often necessary, especially in country practice, it may be placed across the bed, on the dining-room table or even on chairs. If used on the bed, it is best to place the table on a firm mattress stretched across the bed, and cover it with a blanket. This insures the necessary firmness and comfort.

In these days, when every practitioner has to be a gynecologist, such a table is as much a necessity for a thorough examination and treatment of the female pelvic organs as a stethoscope is in diseases of the chest. It is also equally useful in examinations and operations on the rectum and genito-urinary organs. It is *simple*, *efficient*, *portable*, and so cheap as to be within the reach of every one.

Hospital Reports and Clinical Notes.

A QUEER "WORM."

By A. McSHANE, M. D., Assistant Pathologist, Charity Hospital.

In the early part of August, 1889, a young white man (aged about 30), a dentist by occupation, brought to the Pathological Department a small bottle containing a whitish string which, he thought, was some kind of worm. When it was taken out of the bottle it was found to consist of two pieces, one six inches long, and the other about eighteen inches long. There was also a rounded piece, about twice as large as a pea, which looked like a head; it had evidently been attached to the rest at some time, for the roughened point of attachment could be easily seen. The "worm" was not of uniform thick-

ness throughout its length, but presented successive enlargements and constrictions, which latter were in some places as thin as ordinary cord. At its thickest part the "worm" was not quite as thick as a lead pencil.

The patient's history was as follows: He had been suffering from chronic cystitis for about four years. He had frequently injected astringent solutions into his bladder, and he was thoroughly acquainted with the anatomy of the bladder and the technique of bladder injections. Sometimes his cystitis would be almost cured, and then he would stop treating himslf; but lately his bladder has been troubling him, and he injected a solution of sulphate of zinc every night. One night he injected the solution as usual and allowed it to remain in the bladder for a while. He then discharged it into a basin, and put the latter into a sink, and went to bed. He had very little light in his room when he emptied his bladder, and could not notice anything unusual in the liquid. The next morning, however, he saw a long white thing lying in the basin. He became alarmed, and took the thing in a bottle to his physician, who told the patient to bring it to the hospital to be examined. I punctured the "skin" of the uncanny thing and squeezed a small drop of milky fluid. The interior seemed to be homogeneous. When the drop was mounted, it did not at first present any definite bodies, only a large amount of granular matter and some large masses resembling myeline could be seen. Not being satisfied with this examination, I mounted another drop, but stained with hœmatoxylon; and immediately many hundreds of spermatozoa could seen. The "worm," then, was nothing more than a stream of semen which had become coagulated by the astringent solution. I marveled at this singular thing; and, after thinking over the way in which the result could have been brought about, I concluded that the patient must have had an emission while he was expelling the astringent solution from his bladder, and that the

stream of semen, flowing along the urethra with the astringent, became fixed and hardened. The spasmodic expulsion of the semen will perhaps explain the succession of enlargements and constrictions observed in the "worm."

A REMARKABLE CASE OF AORTIC ANEURISM.

Reported by E. A. ROBIN, R. S. (Service of Dr. J. T. DEGRANGE).

W. B., a colored laborer, æt. 49, was admitted to ward 31, Charity Hospital, on July 30, 1889. Patient was of a short and stout build. Gave no hereditary history, and has led a regular life. Contracted syphilis ten years ago. He never, however, noticed very marked secondary symptoms beyond a slight eruption over the chest and back, the remains of which were noticed. Five months previous to his admission to hospital patient began to experience some trouble in breathing. Shortly afterward he noticed a slight swelling of his feet and legs. These symptoms gradually becoming more and more embarrassing, patient sought relief at our hands. A careful examination of his lungs and kidneys gave only negative results. The heart presented the following abnormalities: The area of cardiac dullness was considerably increased, the vertical line of dullness extending about an inch to the left of the left nipple. On auscultation a murmur was heard occurring with the first sound at the apex. At the base of the heart we detected a double or see-saw murmur very much diffused, and heard distinctly in both infra-clavicular regions. This sign was immediately suggestive of a thoracic aneurism. Closer examination failed to discover any further signs or symptoms which would justify a positive diagnosis of aneurism.

We accordingly made a diagnosis of mitral regurgitation and of aortic obstruction with a dilated condition of the vessels at the base of the heart, expecting the post mortem to clear whatever doubts we entertained concerning the accuracy of our diagnosis. Patient was first treated with cardiac and general tonics. At the expiration of two

weeks patient had made no progress. Upon the hypothesis that he was suffering from aneurism we treated him accordingly—putting him upon a restricted diet, rest in bed, and the internal use of iodide of potassum, etc. Three weeks elapsed with no improvement in the case, the patient being, on the contrary, much weaker. We abandoned that and adopted our first plan of treatment. Patient was now so exhausted that he was forced to remain in bed. Twelve hours before death his breathing became very much labored and noisy. Death took place on Sept. 5, 1889.

Post mortem revealed the following: The pericardium contained a considerable amount of serous fluid.

The heart, enlarged to about twice its normal size, exhibited a condition of hypertrophy and dilatation, with a fatty degeneration of its walls. The surface was studded with ecchymotic spots, giving evidence of a former congestion. The vessels at the base had undergone atheramatous degeneration. The aortic valves were thickened, but soft and otherwise normal. The mitral valve was thickened and insufficient.

At the root of the aorta we found a sacculated aneurism, about the size of an ordinary baseball, filled with a mass of hardened coagulated fibrin, and communicating with the interior of the vessel by a rounded orifice about an inch in diameter. This tumor pressed upon the primitive pulmonary artery in such manner as almost to occlude its lumen. A little above, still in the ascending portion of the arch, we noticed a fusiform dilatation extending into the transverse portion. Two other small aneurisms—one the size of an ordinary marble, the other scarcely larger than a pin's head —were found; the former on anterior surface of transverse portion, the latter about an inch above the orifice of the large aneurism. The inner wall of the arch was thick and rough everywhere.

This case is peculiar for the absence of the concomitant signs and symptoms of thoracic aneurism, and for the

singular mechanical obstruction caused by the pressure of tumor upon the pulmonary artery, thus depriving the lungs of their proper amount of blood, although its capacity to aerate it was perfectly normal.

RECOVERY AFTER DESTRUCTION OF LARYNX BY GUNSHOT WOUND.

Service of Dr. CHASSAIGNAC; reported by W. W. HARPER, R. S.

W. R., aged 23 years, is a well proportioned, robust negro. On the morning of July 21, while walking along the public road in St. James Parish, some 50 miles from New Orleans, he received on the left side of the neck and lower jaw a load of No. 3 shot, the distance being 8 or 10 yards. He at once took the train and, upon reaching New Orleans, was transferred to the Charity Hospital. Here he was examined by the house surgeon, Dr. Miles, and assistant house surgeon, Dr. Bloom, who, after removing an old towel, the only dressing which had been applied, found that the following structures had been shot away:

The lower half of the middle third of the lower jaw, the integument of the anterior part of the neck from the chin to within an inch of the sternum, the hyoid bone, a part of the muscles forming the floor of the mouth, the lower anterior part of the pharynx, and the entire larynx with the exception of its posterior attachments. In addition, the integument of the right side of the neck was badly lacerated, and there was a compound fracture of the inferior maxilla at its middle third (left side). The œsophagus was not wounded, nor were any important vessels or nerves of the neck. After checking the slight hemorrhage, and removing small pieces of lacerated cartilage and muscular tissue, the lacerated integument on the right side was sutured. The wound was now thoroughly irrigated with the acid sublimate solution 1 to 2,000, after which it was dusted freely with iodoform and dressed with bichloride gauze. To retain the dressing and to keep in apposition the broken fragments of the inferior maxilla, Barton's head

bandage was employed. In order to guard against occlusion of the trachea from pressure dependent upon the surrounding cellular inflammation, a tracheotomy-tube was inserted. He was then taken to the ward and placed in bed. For the first 3 or 4 days he was not allowed to swallow, but was fed entirely by enema, taking in this manner every two hours, day and night, four ounces of milk and two drachms of brandy. Instead of the milk and brandy, beef tea, without artificial digestion, was frequently given. Every three hours a teaspoonful of Haustus Cinchonidiæ, containing five grains of cinchonidia and seven minims of tincture of opium, was administered in his enema of nutriment. He was closely watched, and as often as the tracheotomy tube became filled with mucus, which was very tenacious, it was cleared by means of a feather. After a few days he was able to expel the tracheal secretion by forcibly blowing through the tube. Every day the wound was thoroughly irrigated with the acid sublimate solution, and, after being dusted with iodoform, was dressed with bichloride gauze. At each dressing the tube was removed, and, after being thoroughly cleansed, was again placed in situ. Three or four days after the injury he began attempting to swallow water, but more escaped through the wounded part of the pharynx than went down the œsophagus, so he was directed to lie upon his abdomen and to swallow while the chin was flexed upon the chest. In this way he managed to swallow better and began to drink milk, but his enemata of milk and brandy were kept up for a few days, after which rectal alimentation was discontinued.

By referring to the temperature chart, it will be seen that the temperature rose only once above 101° F. This was on the evening of July 23d, and he was given 5 grains of antifebrin, which were repeated in 2 hours. The next morning the temperature had fallen almost 2 degrees. There was very little inflammation or suppuration. The wound soon became a healthy granulating ulcer and rapidly healed.

July 30th. Haustus Cinchonidiæ now given only every 4 hours during the *day*. As he was beginning to look anæmic and emaciated, he was given the following 3 times a day: Ferri Pyrophosphat. 2½ grains, Tinct. Cincho. Co., Syr. Hypophos. Co. of each 2 drachms.

August 6th. He now swallows well without having to flex the chin upon the chest, has no fever, appetite is good, is increasing in weight, the wound is rapidly healing, and he is taking Haustus Cinchonidia only 3 times a day. He was allowed to get up this morning. By closing the tube, he can whisper faintly. There is some expoliation of the inferior maxilla, which was readily removed by making an incision through the gums.

August 30th. He is as stout as when admitted, the fracture of the inferior maxilla has united in good position, the wound has healed with the exception of an ulcer about the size of a dollar just over that part of the lower jaw which was shot off, there is no sign of injury to the neck except a little puckering about the opening of the trachea, and by placing his finger over the end of the tracheotomy tube he can be understood at a distance of 5 or 6 yards. He is now taking no medicine.

September 1st. Desiring to go home, he was allowed to leave the hospital this morning. Before he left, his ability to breathe without the tracheal tube was tested. He can breathe fairly well, even after closing the opening with his finger, but as he is fearful of an accidental closing and consequent suffocation, he was directed to retain the tube and to return after a week or two so that arrangement can be made for its permanent withdrawal.

Selected Articles.

DR. STERNBERG'S TREATMENT OF YELLOW FEVER.

By Dr. Emilio Martinez, translated from the *Revista de Ciencias Medicas*, of Havana, by Dr. A. McShane.

In company with Dr. Vicente de la Guardia, physician of the Mercedes Hospital, and authorized by the director of that institution, I resolved to subject to an extensive trial the treatment proposed by Dr. Geo. M. Sternberg in yellow fever, which gave such excellent results in recent epidemic of yellow fever in Decatur, Ala.

Sternberg's treatment consists in alkalinizing the digestive from the beginning of the attack. The intestinal localization of yellow fever is to-day an incontestable fact, and all treatment should be based upon it. There is a constant fact, which gave rise to the alkaline treatment, and that is the marked acid reaction of the vomit and the feces of yellow fever patients. Starting from this point, Dr. Sternberg proposed by means of his treatment to neutralize the intestinal acidity, and thus to form a medium unfavorable to the development of the germ of yellow fever, assuming that this germ thrives best in acid media.

Another indication fulfilled by the alkaline treatment is diuresis, as it is not only necessary to destroy the intestinal germs, but also to procure the elimination of the ptomaines absorbed from the very beginning of the invasion.

The plan followed is as follows: upon admission to the hospital the patient takes a purgative if he has not passed his third day, in which case a purgative enema is ordered. Shortly after the purgative the following is administered:

℞ Sodæ Bicarbonatis.....3ij
Hydrarg. Bichloride.....gr. 1/3
Aqua.....O. ij
M. Sig.—Three teaspoonfuls every hour, day and night, given very cold.

A very strict diet must be maintained for the first four or six days. When defervescence begins the above is put aside for a solution of bicarbonate of soda (4 to 1000) as

an ordinary drink. Nausea and vomiting are overcome with ice.

We present a series of observations which will enable us to form a just conception of the value of the treatment, it being remembered, however, the hospital statistics show an excessive mortality, which is due not only to the gravity of the cases which seek aid, but also to the advanced state of the disease when the patients enter the hospitals.

We arrange our cases in three groups: 1st, *light cases*, those which enter upon convalescence after the first stage; 2d, *common cases*, those which have passed into the second stage; and 3d, *severe cases*, those which present some grave symptom.

I. LIGHT CASES.

CASE 1.—M. R. S., native of Galicia, 26 years old. Took sick on August 18, with rachialgia and fever. Admitted to hospital on third day. Calomel and jalap, and Sternberg's potion (10 grams, 2 centigrams, 1 litre). Fourth day, albumen in urine. Improves on the following two days; convalescent on seventh day.

CASE 2.—M. V. G., 18 years old; five months in Cuba; first sickness. Fell sick on August 19, with vomiting, fever, etc. Admitted on second day. Purgative of calomel and jalap; Sternberg's potion. His urine contained a small amount of albumen; general condition satisfactory. Became convalescent on the seventh day.

CASE 3.—M. H., native of Canary Islands, 15 years old; sailor; first voyage, 20 days from port; fell sick on August 6, with headache, epigastralgia and general pains. Admitted on third day. Temperature, 38 degrees C. ($100\frac{2}{5}$ degrees Fahr.), light icteric tinge of conjunctivæ; pulse 58; traces of albumen. Purgative enema and Sternberg's potion. Became convalescent on the seventh day.

CASE 4.—M. V., native of Coruna, 32 years old; sailor; fell sick in the evening of July 6, with headache, fever, vomiting, etc. Admitted on second day. Calomel and jalap; Sternberg's potion. Third day, general malaise,

intense headache, insomnia. Fourth day, albumen in small amount, which persists up to the sixth day. Eighth, cured.

Case 5.—A. C. J., native of Asturia, aged 18; eight months in Cuba; first sickness. Fell sick on August 18, with general symptoms of fever. Admitted on fourth day; temperature, 38 degrees C., conjunctivæ and skin yellowish, scanty urine, small amount of albumen. Eighth day, convalescent.

Case 6.—M. D. L., native of Coruna, 15 years; two months in Cuba; first sickness. Admitted first day; gave an emetic (ipecacuanha); temperature=38.2 degrees C. (100.76 degrees Fahr.) Second day temperature=38.5 degrees C.; castor oil, bicarbonate solution (4 to 1000). Third day, temperature=38.8 degrees, Sternberg's potion. Fourth day, temperature=36.4 degrees, trace of albumen. Fifth day, temperature=37 degrees C., urine, 500 grams. Treatment suspended. Eighth day, cured; rises.

Case 7.—C. R., native of Galicia, 21 years old; four months in Cuba. Fell sick on July 6, A. M., with general pains, fever, headache, etc. Admitted the next day. Second day, 39 degrees C.; purgative of calomel and jalap; Sternberg's potion. Third day, albuminuria. Treatment was continued for several days; a subicteric tinge appeared. Eighth day, rises cured.

[There were four other cases falling in this category, all of which recovered.]

II. COMMON CASES.

Case 12.—M. G. B., native of Galicia, 16 years old, eight months in Cuba. Fell sick on July 9 with intense headache, fever, vomiting, etc. Admitted on the third day. Calomel and jalap; Sternberg's potion. Fourth day, albuminuria. Fifth and sixth days, notable adynamia, marked icterus, abundant urine. Eighth day, convalescent. Tenth day, left his bed cured.

Case 13.—O. L. O'K., native of United States, aged

22; seven days in Cuba. Fell sick on Aug. 21, P. M. Second day calomel and jalap; temperature = 40 degrees C. Third day, several passages; temperature = 39.8 degrees C.; Sternberg's potion. He had a chancre on his prepuce. Fourth day, urine = 900 grams; temperature = 38 degrees; nausea; hemorrhage from chancre. Temperature, P. M., = 38.4 degrees C. Fifth day, temperature = 38 degrees; nausea; urine, 1 litre; temperature in evening, 38.2 degrees. Sixth day, temperature = 37.6 degrees C.; urine abundant; yellowness of conjunctivæ; temperature, P. M., = 38.8 degrees. Seventh day, temperature 37.6 degrees C.; pulse, 68; potion suspended; bicarbonate solution (4 to 1,000) given; urine, 1,200 grams, containing much albumen and biliary coloring matter. Eighth day, icteric tinge becomes general. Tenth, convalescent; water and sherry wine.

[Eleven other cases of this group ran a similar course; all terminated happily: convalescence set in promptly.]

III. SEVERE CASES.

CASE 26.—B. M., native of Jerusalem, 30 years of age. Could get no history from him, as he could not speak any European language Admitted to hospital on perhaps the third day. Albuminuria; Sternberg's potion. Patient in a serious condition. Fifth day, temperature = 39 degrees. Sixth day, temperature = 38.8 degrees C.; vomiting; urine abundant. Evening, temperature = 38.5 degrees C. Seventh day, 38.4 degrees C. Eighth day, urine abundant. Ninth day, general jaundicé; great prostration; bicarbnoate solution. Tenth day, convalescent.

CASE 27.—V. O., native of Galicia, aged 26; three months in Cuba; first sickness. Fell sick on August 9, A. M., with vomiting. Admitted to hospital on second day. Calomel and jalap. Vomiting. Temperature, 40.4 deg. Sternberg's potion. Third day, temperature = 39.6 deg. Looseness of the bowels. Evening temperature, 39.6 deg. Fourth day, temperature = 38.6 deg. Urine, 850 grams.

Albuminuria; copious diarrhœa. Fifth day, no urine. Sixth day, temperature = 37.5 deg.; urine very scanty. Intense pigastralgia. Abundant black vomit. Bi-carbonate solution. Death at 11 A. M.

Case 28.—A. S., native of Canary Islands, aged 41 years; twenty days in Cuba. Fell sick on August 8, A. M. Fever, etc. Admitted on second day. Purgative; Sternberg's potion. Temperature, 39.4 deg. C. Third day, temperature = 38.6 deg. Urine, 800 grams; alkaline; contains albumen. Fourth day, 38.5 deg. Urine, 1000 grams; alkaline; albumen. Temperature P. M., 39.4 deg. C. Fourth day, temperature, 38.5 deg.; urine, 1000 grams, alkaline. Temperature P. M., 38.6 deg. Fifth day, temperature, 37.8 deg.; abundant diarrhœa; weakness. Urine, 700 grams. Temperature P. M., 37 deg. Potion suspended. Sixth day, temperature, 36.2 deg. Epigastralgia. Black vomit. Urine more than 300 grams. Temperature P. M., 37.4 deg. Seventh day, temperature, 36.2 deg. Adynæmia; stupor; black vomit; urine scanty. Death at 1:30 P. M.

Case 34.—R. G., native of Galicia, aged 17 years; seven months in Cuba. Fell sick on July 24, with fever and general pains. Admitted to hospital on the fourth day. Temperature, 39.8 deg. Purgative of citrate of magnesia. Black vomit after the purgative. Abundant melœna during the night. Fifth day, temperature, 38.4 deg. Albuminuria. Sternberg's potion. Sixth day, temperature, 38.8 deg. A. M.; 39.6 deg. P. M. Urine, 700 grams. Seventh day, temperature, 38 deg. Urine, 700 grams. Potion suspended and bi-carbonate solution (4 to 1000) given instead. Ninth day, urine, two litres; pulse, 64. Seventeenth day, cured.

[The third group embraces nineteen cases, of which seven terminated fatally. It is unnecessary to mention all the cases in detail; the above examples give a sufficiently good idea of the course of the disease under Sternberg's treatment.]

RECAPITULATION.

Cases treated, 44; discharged, 37; died, 7; mortality, 15 9-10 per cent.

The official statistics of yellow fever in the Mercedes Hospital for previous years are as follows:

Year.	Treated.	Cured.	Died	Mortality.
1882	187	124	63	33.6 per cent.
1883	178	103	75	42.1 "
1884	132	77	55	41.6 "
1885	40	16	24	60.0 "
1886	28	11	17	60.7 "
1887	75	33	42	56.0 "
1888	72	38	34	47.2 "
Total	712	402	310	43.5 per cent.

Thanks to the courtesy of our friends in the hospital, we were enabled to try the treatment on all the patients admitted to the hospital except two, one of which entered on the seventh day with suppression of urine and black vomit, and refused all treatment, even ice; the other entered six hours before death.

Upon comparing the results obtained with Sternberg's treatment with those formerly obtained, we see that it has lowered the hospital mortality more than one-half.

We have observed the following: the patients' stomachs tolerate the medication very well; when they are treated from the first day, vomiting occurs very rarely.

Diuresis is maintained always to a marked degree, even in the severest cases; "When they die, they do not die aneuric." (La Guardia.) Evident aneuria appeared only once.

After the eighth or tenth day, it is necessary to suspend the bicarbonate and to give stimulants and combat the hemorrhages, adynæmia, etc., with the customary remedies.

AFTER Oct. 1 Dr. I. Minis Hays will relinquish the editorship of the *Medical News*. Dr. Hobart A. Hare, one of the editors of the *University Medical Magazine*, will assume editorial charge.

Leading Articles.

A BAD MOVE.

We sometimes find news in old papers. An old copy of "The Doctor," March 1, 1888, contains a paragraph which, to those who have not suffered from the evil, looks innocent enough. The paragraph was extracted from the *New York Tribune;* but, as it will serve as an excellent text for a sermon, we reproduce it here: "Some time ago a number of Detroit physicians conceived the idea of adopting the contract system. That is, of contracting to look after the health of a certain number of families, charging each family $10 a year. The scheme appeared to work well, and the doctors thought they had discovered a bonanza, as they had taken care to contract only with healthy families. But they were accused of unprofessional conduct by some of their brethren, and one of them was tried. He was acquitted, however, and the contract system has apparently come to stay in Detroit. It is likely also to be tried in other cities."

If the physicians of Detroit would only turn their eyes upon New Orleans, they would quickly see that they have opened the door to a monster which will devour them. Contract practice has been in vogue here for many years, and here it can be studied in all its phases. An examination of some of the peculiar features of this evil would cause reasonable men to avoid it with horror. A physician who takes up this sort of practice, at first derives a slight pecuniary benefit; but this does not last long. He does more work than he is paid for, and thus deprives the profession as a whole of a part of its revenue. The first sin, therefore, is an act of injustice to his *confrères;* this begins to undermine the feeling of fellowship and common interest which should always exist in the ranks of the profession. The innovater and destroyer of harmony should be shunned by his medical brethren; and it is greatly to be regretted

that the profession in Detroit had as little backbone as that in New Orleans. If the accused brother had only been convicted, the evil would have been nipped in the bud; but now that an entering wedge has been inserted, it is hard to foresee how much breaking of professional harmony and prosperity will take place.

When the evil has spread to a certain extent, the physician who has been too proud to resort to the demoralizing practice, finds that many of his family-patients no longer send for him. He investigates, and finds that his patients have consulted economy, and allowed confidence and old associations to go to Jericho.

When one of these proud and so-called unprogressive men has a large family on his hands, and finds his practice (and, therefore, his income) growing beautifully less, what does he do? What can he, unaided, do? Of himself, he can do nothing except vainly and justly complain of the doings of the contract-practitioners, towards whom he begins to entertain a feeling akin to hatred. Why should he feel kindly towards those who are improperly taking away his means of support? His only appeal is to the profession at large, but he finds, only too late, that professional *esprit de corps* has become as a broken reed, for one of the earliest and saddest effects of the evil is a tendency to place physicians in an attitude of direct hostility to one another, thereby paving the way for demoralization and disorganization.

In New Orleans, not only is there a contract-practice for families, but people band themselves together in so-called benevolent societies, the main object of which is to get physicians to bid for the society, *i. e.*, to treat the members (and usually their families are included) for so much a year. The lowest bidder gets the plum. At the end of the year, when he compares work done with receipts, he finds that he has been makiug visits for about 30 cents each, and one physician stated that he averaged a fraction over 15 cents, barely enough to pay car fare.

Now, isn't that a pretty state of things? Add to this that the physician who happens to be the bond-slave of these societies must always keep on good terms with the members in order to insure re-election. The members know that, and this knowledge often leads them to offer insolence which should be resented with a kick.

Some years ago a tremendous effort was made by the profession to abolish the evil of contract-practice, or "society practice," as it is more commonly called here. All the physicians gave up their societies at once, and if it had not been for a sad defection in the ranks, contract-practice in New Orleans would be a thing of the past.

Not all physicians meet with unpleasant experiences in their contract-practice. Some societies can be tolerated, but the evil is still an evil. In rendering a general verdict upon contract–practice, we could well reverse the Irishman's opinion of whiskey: "None of it is bad," said he, "but some kinds are better than others." We say: "No contract-practice is good, only some kinds are worse than others."

We hope our brethren of Detroit will profit by the bitter experience of New Orleans. If they are blind enough to let the evil gain a foothold, then it will become impossible to eradicate it, for it begins its deadly work by destroying the only thing that could overcome it—namely, professional *esprit de corps*.

SOMETHING MORE ON HIGHER MEDICAL STANDARDS.

From time to time a great deal has been said in the pages of this journal on the subject of quackery in Louisiana, and the necessity for a more thorough preparatory education among good men who wish to take upon themselves the honors and responsibilities of the physician. While we have never exaggerated this matter, we have never presented it to our confrères in its most convincing

form—namely, by direct illustration; so we now take the liberty of "offering in evidence" two documents which, in literary excellence alone, will rank their compilers with such orthographic lights as "Josh Billings" and the author of "Freddy's Slate."

These documents were kindly lent to us by the officials of the Board of Health, and it is asserted that the archives of the said board contain many more of interest and merit almost equal to those here reproduced.

The first letter will speak for itself. The author, who acknowledges that he has never received any medical instruction from college or hospital, applies for a license to practice, and opens his request with the following Chesterfieldian paragraph:

"The Preementents of Medical Sciences fernish a seblim objeck on the gineral map of the human mind and could it Reach that lofty Preementents and proud Destinction of other Sciences called Perfect to cure our Deseases and heal our Pains with out fale how great would be the some of Human hapiness at this Nobel objeck it aims).(the mind led by the Deity and improved by the indications of his Power shall yet Retain that Perfection of knowledge that will Render life a gineral Blessing and Deth the Disolution of a Tabnickel worne out by time and exosted By sloe Decay.... (.) The Mind was made for victory and he that over comes shall ware the victory Crown ✳."

The applicant, whom we will call Dr. Van Smith, then proceeds to enumerate the number of persons in his family, and after rehearsing several of his physical ailments, continues:

"I only profesh the Theory and Practis of Medicin and I perses from a long study and from long experence under the Profeshen. I. have the Theory of the 2 schools. I. will give you sample Gentlemen in the human system are manifested three actions vital actional chemical action and electrical vital action is effect of that unknown agency by which life is sustained and from which Results mind, sen-

sation voluntary and involuntary Motion and Reproduction; this action is perfect only when the chemical and electrical actions of the system are also penfect Health consists of an equilibrium of them."

"Thesis on fever, homeopathicis to make use of those remedys which will arouse the various excretory organs to a state of action by vomiting, perging, sweating and thus cause the morbific agents to be eliminated from the system."

The improved spelling of the latter erudite dissertations on the schools of medicine is something to be remarked. It has a second-hand look about it, yet, if so, who could have been the original author?

Contrast it with the next sentence, which undoubtedly bears the stamp of the writer's strong individuality, "in explanation gentlemen, I was borned in the southern states. raised by my father eminetent physician of south, so far as my morril charracter I can give as good refference as eny man, so fair as charracter gineral. I come of as high tone family as eny man in southern states of Amarkey." The usual endorsements end the agony. Eight citizens declare that Dr. Van Smith is "a onest good citeson, and a good female doctor," as worthy of all the "oners and priviledgs of the profeshen as eny man."

The second letter which we wish to present comes from a gentleman who is licensed to kill or cure, under the five-years-in-practice law. Dr. De Jones is evidently careful with his cases and probably takes notes.

His letter was written some three years ago on a printed slip, forwarded by the Board of Health, asking if there was any leprosy in his parish.

He says, on the blank space left for remarks:—"Request to the on I bul board of louisiana we haf had what I call tiphoid flux which has seem to bafful the skil wher it has struck I will giv De tail of same it is in tent fevor with in famation of the intestines the fevor seems biddefiere to

skill especila wher it wold strike larg famlea as it has bin her in this parish for som time and has seem to bafful the skill of all hoo has metit I umble ask your counsul.

reSpec fulle youse,

H. De Jones M. D.

We submit these two communications as *samples*, not as exceptions, for there are other medical quacks within and without the law, who can do very little, if any, better in a literary effort—men who are "gulling" the public with their knavery or their ignorance, and who will continue to do so while the state laws and public opinion continue to license them to practice. The two cases cited seem to be of ignorance rather than knavery, and as Dr. Van Smith lives near the border line he may be practicing on the unsuspecting citizens of a sister state, after being refused a license by our own authorities; for his petition was rejected.

But Dr. De Jones (he calls himself M. D.) still continues his researches, and is at this moment, very probably, studying that "tiphoid flux which has seem to bafful the skill wher it has struck," and he may continue to "biddefiere" to all boards of health as long as the lax laws of Louisiana uphold his ignorance and demand no higher standards.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The next meeting of this association will be held in Nashville, Tenn., November 12, 13 and 14, 1889. We have received a preliminary programme of the session. The list of readers of papers comprises men of national reputation. Among them are two well-known men from Philadelphia and one from New York. Members of the profession are cordially invited to attend.

Proceedings of Societies.

MEETING OF ORLEANS PARISH MEDICAL SOCIETY.

August 26, 1889.

Dr. Beach read a paper entitled "Recollections and Reminiscences of Yellow Fever," in which the doctor related some of his experience and interesting events occurring during epidemics here, chiefly that of 1878. He adduced in his paper some arguments supporting his claim that yellow fever should be classed among exanthemata; he has frequently seen an eruption accompany the disease.

Dr. Ernest Laplace read from the *Medical Record* the conclusions of Brown-Sequard. He also gave an account of his own experiments. Up to date he has given about one hundred injections to twenty-six patients. The most striking case was that of a cripple idiot, at the Charity Hospital, who could neither walk nor rise from her seat; now she can both rise and walk. He thinks two effects can be expected from the injections; 1st, an immediate stimulating effect, which is only transitory; 2d, a more permanent stimulating effect, lasting about 24 hours.

Dr. Souchon asked about the length of time that the effect of the course of treatment lasted. Dr. Laplace said he had not been able to determine. Dr. Chassaignac stated that Brown-Sequard, after using the injections, ten in number, during three weeks stopped them, and found that about four weeks later he had dropped back to his original condition.

Dr. P. Michinard mentioned having experimented on three cases—an idiot, a young rheumatic and an old person with cardiac disease. He could not say that he had any result in any case. The young rheumatic claimed that he was eased of pain, but the doctor could see that he was growing weaker, notwithstanding.

Dr. Chassaignac stated that together with Dr. Archinard and Dr. Parham he had had several patients under observation, and that in only one case were there any beneficial results; this was in an intelligent old gentleman, 72 years of age, who claimed positively that he could stand more fatigue, and do better mental and physical work. The doctors, however, attributed the good results to the workings of the imagination, rather than to those of the "Elixir." They are continuing their experiments, using guineapigs.

CHAS. CHASSAIGNAC, M. D.,
Secretary.

ABSTRACTS, EXTRACTS AND ANNOTATIONS.

MEDICINE.

TREATMENT OF PULMONARY PHTHISIS.

At a meeting of the Allegheny County Medical Society held on Aug. 20, 1889, Dr. Lange reported a new method for the treatment of pulmonary phthisis. He said: The method consists in the inhalation of vaporized mercury and iodine. Of the results of this method I have nothing to say. I cannot forget that grass has not yet grown upon the grave of gaseous enemata, and I am aware that many men, many years and many cases are required to produce evidence of the usefulness of any remedy or method in the treatment of anything, even when the remedy or method possesses usefulness. I report this method because I desire co-workers.

It suggested itself to me that vaporized mercury, if brought into more or less direct contact with the bacillus of Koch, might destroy this, and that iodine, if applied directly to the ulcerating surfaces of lung tissue, might effect a more powerful beneficial action than that resulting from its ordinary method of administration. I have had, and still have, the valuable assistance of Dr. Tingley in the preparation of apparatus and in devising ways and means by which these vapors may be satisfactorily administered to patients. This has presented many difficulties. A principal one is, that I know of no manner, as yet, by which a definite, a known quantity can be given. The vaporized

mercury salts are resublimed and deposited upon the cooler parts of the apparatus. This is particularly true of the inhaling tube, which is always the coolest part of the apparatus. The consequence of this is that patients receive always an unmeasured, an accidental quantity of these salts or vapors, and not a quantity which is measured or known. To this fact are due two accidents, namely, that one very feeble patient was violently purged, and another was salivated. However, we hope to overcome this defect of apparatus and to be able soon to give patients exact quantities of these salts. The desideratum is an inhaling tube which will bear the temperature necessary to hold the mercury salts vaporized up to the lips of the patient, and which at the same time shall be flexible. Flexibility is almost a necessity; a feeble patient cannot breathe deeply and persistently from a stiff tube, a glass tube such as I now use.

I have found that the only salts of mercury available for this purpose are the red oxide and calomel. All others are reduced before being volatilized. I began with the iodide of mercury. This and all others when used result in the vapor of metallic mercury only. I have found no objection, however, to the use of metallic mercury, only it is to be noted that when other salts than calomel and the red oxide are used, the patient receives the vapor of metallic mercury.

Can the vapor of mercury, or can anything inhaled, reach the bacilli in a tuberculous lung? Those bacilli, which are in consolidations, provided such a consolidation is connected with a previous bronchial tube, those in lung cavities furnished in the same manner, those in the bronchial tubes, those in the aveoli, and those in the sputum may be reached by this vapor, or by anything which may be deeply and persistently inhaled. But these bacilli are comparatively inert: they are harmless; they have already accomplished their mission of destruction, and are being extruded from the body. Those whose destruction is very much more desirable, those which have not yet but certainly will produce consolidation and softening, *i. e.*, destruction of lung tissue, those in the pulmonary connective tissue, and the lymphatic sheaths of the blood vessels, can these be reached by anything that can be inhaled? Again, if we grant that in a certain patient every bacillus has been destroyed, this is by no means synonymous with his cure.

Evidences of this fact are presented daily; patients die of non-tubercular phthisis very readily; and the tuberculous patient, with every bacillus in his lungs destroyed, possesses still that fatal predisposition, and will be reinfected.

It is a question also whether mercurial vapor is a germicide. No one will deny this property to corrosive sublimate. But corrosive sublimate is not volatilizable, and volatized mercury, volatized calomel, and red oxide are very different substances indeed.

Despite these theoretical objections I am encouraged to proceed with this treatment of phthisis, and when I have perfected the apparatus, and have a series of cases certainly tubercular, as demonstrated by the discovery in the sputum of the bacilli, I shall report again to the society.

HOT AIR INHALATIONS IN PULMONARY TUBERCULOSIS.

Dr. E. L. Trudeau read a paper on the above subject at the meeting of the Association of American Physicians, September 20, 1889. The literature of the subject is as yet scanty. Dr. Louis Weigert claimed to have discovered that inhalations of hot air were specific in the treatment of tuberculosis, and that phthisis could be cured by the use of an apparatus devised by himself for the purpose.

Dr. Trudeau tried hot air inhalations in four cases. Three of them had been sick less than a year, and presented the rational and physical signs of moderately advanced pulmonary phthisis in its first stages; in one only was a small excavation present. The sputum, which contained bacilli in all the cases, was examined every month, and careful records of the vital signs were kept. These patients took the treatment continuously for periods of one month, six weeks, and a little over three months, respectively; the time of inhalation was rapidly run up to four hours daily, divided into two sittings, during which the temperature of the inhaled air (as measured by the thermometer on the mouthpiece), was maintained over 392 deg. Fahr. (200 deg. Cent.)

The results were as follows: In the first and second cases slight improvement in all the symptoms occurred at once, but the patients became discouraged and could not be persuaded to continue the inhalations. The third patient kept up the treatment most vigorously for over three months without the least noticeable effect.

The history of the fourth patient before and after treatment was as follows:

January 28, 1889. R., clerk, aged 23; no family history of phthisis. Taken ill July, 1888, with hæmoptysis; has all the rational signs of progressive pulmonary tuberculosis in its first stages; has lost ten pounds. Both lungs are involved. At right apex prolonged bronchial expiration, with fine and coarse râles both back and front, involving the upper lobe. At left apex breathing good, except under the claivcle, where some fine crackles and loss of breath-sounds prevail. Temperature every evening, 101½ deg. to 102 deg.; respiration, 24; pulse, 100 to 120. Expectoration moderate in quantity and purulent.

Began treatment February 18, 1889, and inhaled air at 392 deg. to 410 deg. Fahr. four hours daily, with but trifling intermissions, until June 20, 1889. A complete record of the vital signs was kept, and the sputum was examined every five weeks for bacilli. His condition at the end of treatment (a little over four months) was as follows; *Physical signs* show marked decrease in the amount of râles, which entirely disappeared over right scapular region. *Rational signs:* Weight has increased ten pounds; pulse shows an average decrease of eight beats; respiration has fallen from 24 to 19; temperature usually about 2 deg. Fahr. lower; sweats have disappeared; dyspnœa improved; no hæmoptysis; expectoration has diminished two-thirds in quantity, and is still mucopurulent in the morning. The improvement reached its height about three months after the inception of treatment; some of the ground gained was lost during the fourth month, though the inhalations were faithfully continued.

These brief clinical notes furnish no positive proof as to the therapeutic value of the method.

The bacteriological study was as follows: The sputum of all four cases was examined before treatment, and as soon as it was abandoned. *In every instance the bacilli were found.* No appreciable influence, therefore, was produced upon this most important element of the disease.

Inoculation experiments upon animals, made with the sputum taken from Case IV at the end of treatment, showed that this had not caused the death of the bacilli.

Dr. Trudeau's conclusions are as follows:

1st. The therapeutic value of hot air inhalations in phthisis is doubtful.

2d. The evidence obtained by the bacteriological study of the cases presented does not confirm the assumption that inhalations of heated air can either prevent the growth of the tubercle-bacillus in the lungs of living individuals, or diminish the virulenee of this microbe when it has gained access to them.—*Medical News.*

THE RELATIONS OF SCROFULA TO TUBERCULOSIS.

Dr. E. Madigliano, Anat.-Path. Institute of Pisa.

It was long ago shown by Koch that the tubercle-bacillus could be found in scrofulous formations, and it was assumed that there was no œtiological difference between the two conditions, as they were both due to the action of the same bacillus.

In studying the subject, Madigliano injected scrofulous lymphatic gland-tissue from three human subjects into the pleural and peritoneal cavities and under the skin of forty-five rabbits and guinea pigs. Those guinea pigs into which crushed gland tissue of the first two patients was injected, became all tuberculous, and Koch's bacillus was found in every case. The disease developed rather slowly, more so than when tuberculous matter is injected; a guinea pig, for instance, gave birth, four months after the injection, to healthy offsprings, and gave milk to her young ones. The mother lived four months longer, without showing any outward symptoms of disease. Three other guinea pigs, after eight months, did not show externally any symptoms. The injected rabbits all remained healthy. [This agrees with the results obtained by Arloing.] The gland-tissue of the third patient was injected into two guinea pigs; one died in four months and the other in six months of generalized tuberculosis. With the tubercular matter taken from these last two animals, Madigliano inoculated others. His conclusions are as follows:

1. The scrofulous virus is virtually an attenuated tubercular virus, which produces in guinea pigs a much milder form of the disease than the true tubercular virus. Rabbits are not affected by it.

2. The scrofulous virus, when it has passed through one generation of guinea pigs, regains the full tubercular virulence for these animals, and also becomes pathogenic for rabbits, whereas it was before absolutely harmless to these animals.—*Deutsche Medizinal Zeitung.*

ETIOLOGY OF YELLOW FEVER.

(Communication of Dr. Geo. M. Sternberg, U. S. A., to the Academy of Sciences of Havana, August 25, 1889.)

Mr. President and Gentlemen: I do not now intend to present to the academy a detailed statement of the bacteriological investigations which I have made in this city during the last six months; but with your permission I will make a brief communication in reference to one of the micro-organisms which I have found most constantly in the intestines of the victims of yellow fever. This micro-organism is designated in the list of those I have isolated and studied, with the letter N. It attracted my attention last year, but I did not obtain it in my cultures for the reason that it is strictly anærobic, and I did not make anærobic cultivations during my previous visit to this city. This year I again encountered it in my first case, and I succeeded in cultivating it in glycerinized agar, in an atmosphere of hydrogen. The microbe referred to is a large bacillus which resembles the bacillus anthracis, and that of malignant œdema; but it appears to me somewhat larger than either of these, although I have not had time to make exact measurements. It is unnecessary to say that it is not the bacillus of charbon, but as it possesses pathogenic properties similar to those of the bacillus of malignant œdema, it is necessary to differentiate it from this bacillus, which is also strictly anærobic. That they are not identical is shown by the fact that my bacillus N is not movable, as far as my observation extends, does not form spores, whereas the bacillus of malignant œdema is movable and forms endogenous spores.

In the intestines, yellow fever cadavers, we find a greater or less quantity of a viscid matter which contains a considerable number of bacilli of various kinds. This matter is generally black, from the presence of blood-pigment, and frequently has an acid re-action. Two or three drops, injected beneath the skin of a guinea pig, usually causes death in twenty-four hours. In the examination *post mortem*, we find a considerable collection of sero-sanguinolent fluid in the subcutaneous tissue, and generally there is an extensive separation of the skin, with softening of the subcutaneous connective tissue and superficial muscles of the whole abdomen.

The extent of the destruction of tissue in animals that die in eight, ten or twelve hours is truly surprising; a

large pouch forms at the most dependent part of the body, in which frequently there is a collection of five or ten cubic centimeters of bloody serum. This serum contains various bacilli, but the most prominent among them is my bacillus N, and I infer that it is the principal agent in the production of malignant œdema. Two or three drops of this bloody serum injected beneath the skin of another guinea pig produce death in the same manner.

This bacillus is so large and is so easily stained with the aniline colors that it would be easily demonstrated if it existed in the blood or tissues of yellow fever patients at the moment of death. In my autopsies, most of which were made six hours after death, it did not show itself in the stained preparations of the blood tissues or in the anærobic cultures made immediately from the liver, except in three cases. That the microbe exists in the liver and kidney in a relatively small number of cases can be shown by the methods of investigation.

In a certain number of cases last year, and in all my autopsies this year, I preserved a small fragment of the liver of the size of a man's fist in an antiseptic covering which secured the sterilization of the surface, for the purpose of ascertaining what microbes, if any, would develop in the interior of the mass. Evidently the micro-organisms which exist at the moment of death, although they might not be present in sufficient number to be revealed by the usual methods of culture, might multiply in the fragment of liver preserved in this manner, and after invading the whole mass be easy of demonstration. My technique consisted in submerging the piece of liver immediately after its removal from the body in a solution of bichloride of mercury (1 to 500). It is wrapped in several layers of china-paper and again dipped in the disinfecting solution. After this it is again wrapped in several layers of china-paper and placed in a sterilized jar. At the end of forty-eight hours I gently remove the covering, and generally find that the piece of liver, as far as the surface is concerned, is perfectly preserved. Upon cutting it the interior has a fresh aspect and is without putrefactive odor. The cut surface has a markedly acid reaction. Upon making a stained preparation of this surface I have usually found my bacillus N in large numbers; sometimes in a pure culture, but more frequently associated with one or more different and smaller bacilli.

The fresh tissue of the liver from a cadaver of yellow fever may be injected beneath the skin of a guinea pig in considerable amount without producing an appreciable result; but two or three drops from the substance of a fragment of liver which has been preserved in the laboratory in an antiseptic covering for 48 hours, and which contains the bacillus N, causes death in 12 or 20 hours with the same extensive malignant œdema produced by the injection of the matter from the intestine.

To-day, I present to you two preparations that show the morphology of this bacillus, obtained from the subcutaneous tissue of a guinea pig inoculated at midday, yesterday, with matter from a liver preserved in the manner indicated for 48 hours.

A preparation of this piece of liver mounted at the same time that the antiseptic covering was removed, reveals this same bacillus in considerable numbers.

I have observed that the matter from the intestine that has been preserved for two or three weeks, has a distinctly alkaline reaction, and no longer kills guinea pigs in the manner described.

Rabbits are much less susceptible to the pathogenic action of this bacillus. In several cases, the guinea pigs killed by subcutaneous injection of matter containing the bacillus N, have had an accumulation of bloody serum in the small intestine. In a case in which I injected some of this bloody serum from the intestine of a recently dead guinea pig beneath the skin of another guinea pig, death occurred in the same manner, and the bacillus N was found in the sero-sanguinolent fluid. The bacillus is never found in the blood or tissues of inoculated animals at the time of death. The liver is generally full of blood, and soft. There is no appreciable change in the other abdominal viscera.

I do not desire to discuss now the possible etiological importance of the facts here recorded, and, indeed, a deduction would as yet hardly be justified; before this matter can be definitely settled, a series of comparative investigations must be made by the same methods, and in a locality far from the endemic focus of the disease in question.—*Revista de Ciencias Medicas, of Havana.*

INTESTINAL ORIGIN OF CHLOROSIS.

Dr. Duclos (*Revue Gen. de Clin. et de Thér.*) says that chlorosis is an intoxication, an auto-infection, which has its starting point in the digestive tract. A large number of cases in which *true* chlorosis coincides with disordered intestinal functions prove this assertion.

Many years ago Boudet (*Annales de physiques et de chemie*, 1833) found in the excrements a substance which he called *seroline*, and later on Flint (in 1868) called it *stercorine*. Boudet spoke of the intoxication due to its retention, and attributed certain effects to stercoremia. Miquel, pursuing the path, cites several cases in which retention and putrid decomposition of fecal matter gave rise to symptoms of intoxication, and in many cases to the most characterized typhoid fever. Griesinger, in 1868, in his *Treatise on infectious diseases*, sets forth the opinion of Stich, who affirms that "the animal organism carries always within the intestines the very materials which may give rise to a putrid poisoning." Chalvet, in his memoir entitled, "Notes upon the alterations of the humors by the so-called extractive matters," speaks of morbid states depending upon incessant absorption of septic principles through the intestinal mucous membrane, and maintains that the symptoms can be explained by an intoxication.

Careful experiments have led Duclos to the same conclusion. In a rather large and varied practice he has observed many times that the retention of fecal matter and its putrid decomposition determine grave phenomena of intoxication, and that disinfectant and deobstruent medication produces happy results.

One fact arrests attention: truly chlorotic patients always suffer from constipation, so that the following may be set down; every chlorosis not accompanied with costiveness serves as a mask to some other disease. Duclos knows but few exceptions to this rule, and even these are cases of mixed chlorosis, that is, chlorosis complicated with some intercurrent or independent disease.

Chlorosis almost always develops in persons living on highly nitrogenized food, a diet which produces strongly ammoniacal digestions. It would be impossible to furnish conditious better adapted to a putrid decomposition in the intestine.

Another circumstance clearly shows the influence of the digestive tract in the production of chlorosis. In many

localities quacks subject chlorotic patients to an exclusively laxative medication, and in the absence of quacks the relatives do it. This empirical method has certainly given good results. It is sometimes difficult to regulate the bowels; but it can be accomplished by persisting in purgatives, and giving a mixed animal and vegetable diet.

In some chlorotic patients the constipation is not so pronounced, but the putrid decomposition is more active. In these cases bicarbonate of soda, powdered charocal, magnesia combined with a small quantity of prepared chalk, will give good results. Here also small doses of iron are of great utility, not because it is introduced directly into the blood, as the system does not permit that, but solely as a disinfectant to produce the sulphide of iron, which is rapidly expelled.

This way of looking at the pathogeny of chlorosis explains two facts which no theory has been able to explain satisfactorily: first, the rapidity of the invasion in certain cases of chlorosis; second, the frequency and facility with which relapse occurs.—*Gaceta Medica Catalana.*

A DANGEROUS MIXTURE.

The following prescription is dangerous:

℞ Chlorate of potash ..... 8 grams.
Rose honey ..... 30 "
Mix with the aid of heat to make a collutory.

This prescription was presented to pharmacist J. Obricht, in Algiers, and the assistant who put it up saw, to his great surprise, the mixture take fire in the capsule in which he was heating it. This accident would have happened with any saccharine vehicle, and is nothing extraordinary; but it is well to know it.—*Jour. Pharm. d'Alsace-Lorraine La Sperimentale.*

TO AVOID THE DANGERS OF CHLOROFORM-ANÆSTHESIA.

Dr. Dastre said that he had always avoided the dangers of chloroforming in dogs, by previously giving a hypodermic injection of atropia and morphia. Death from chloroform-anæsthesia is most frequently due to irritation of the pneumogastric nerves, which causes stoppage of the heart's action. The preliminary injection of atropia and morphia prevents this irritation.—*Semaine Medicale, Deutsche Medizinal Zeitung.*

THE EFFUSION OF CHYLE AND OF CHYLE-LIKE, MILKY, FATTY FLUIDS INTO SEROUS CAVITIES.

At the meeting of the Association of American Physicians, Washington, Sept. 18, 1889, Dr. Samuel C. Busey read a paper on the above subject.

The reported cases of effusion of chyle and milk-like fluids into the pleural and peritoneal cavities, including the doubtful cases, do not exceed 43, and these cases cover a period of 190 years. Nevertheless, 23 of the cases of effusion of chyle and chyle-like fluid into the abdominal cavity have been observed during the present century, 15 since 1850, and 13 during the last and present decades. The increasing frequency of the occurrence is thus clearly shown.

Effusion into the pleural cavities; chylothorax. Of this, including the doubtful cases, there have been 10 cases reported. In 5 of these the chyle poured directly from the thoracic duct. The diagnosis in these cases can only be made by evacuation and examination of the fluid. The prominent symptoms are dyspnœa and accumulation of fluid in one or both cavities. The prognosis is unfavorable and the treatment expectant.

Effusion into the tunica vaginalis testis. The case of galactocele reported by Vidal (de Cassis) seems to have been the first observation of this class of effusions. In two of the reported cases the patulous orifices of the vessels from which the lymph exuded were found. Since 1885 there have been reported in this country 13 cases in which filaria were found, and 2 of these were cases of lymphocele. It has not been shown, however, that filaria are present in every case of lymphocele. It is conceivable that adenitis, gonorrhœal lymphangitis, or other conditions which obliterate the permeability of neighboring and connecting glands, might cause stasis of lymph and dilatation and rupture of lymph capillaries and plexuses with which the serous membranes are so richly supplied. The opinion of those who have had the best opportunity to study the relation of filaria to disease in general seems to be that of Sir Joseph Fayrer, that it has been shown that disorders of the lymphatic system are most frequently associated with, if not caused by, the filaria. The recent invaded portions of the sub-tropical belt of this country by the filaria, and the reports of cases of diseases with which the parasite has been so uniformly associated, together

with the fact that the mosquito has been proven to be its intermediate host, present considerations of the highest importance to the profession and general public. Some of the cases have been cured by injection of iodine, others have been cured by dissecting back the vessels and tying the bundle *en masse* with a silk ligature.

Chylous and oily ascites. A tabulated statement, arranged chronologically, presenting a condensed summary of the reports of cases of chylous and oily ascites, was given. The number of cases reported was 33. Primary rupture occurred in but 5 cases. Chylous ascites may be the secondary result of a variety of morbid conditions, which directly or remotely obstruct the flow of the chyle through the lacteals, receptaculum, or thoracic duct, impede its exit into the left subclavian vein, or retard the current of blood in the left subclavian vein, right side of the heart, or lesser circulation. The relation of puerperal conditions to the effusion of chyle is not susceptible of explanation. In five cases the fluid found in the peritoneal cavity was associated with tuberculosis, and in four it is stated that the peritoneum was more or less studded with tubercle. No perforation or rupture of chyle-conveying vessels was found in any of these cases.

The symptomatology of effusion of chyle into the peritoneal cavity is not sufficiently distinctive to differentiate such cases from ordinary ascites, and a diagnosis is only possible after examination of the evacuated fluid. Of the 33 cases 19 died, 9 recovered, and in 5 the result is not stated Of the 22 cases of chylous ascites proper, 12 died, 5 recovered; and in 5 the result is not stated. Meagre and unsatisfactory as are the clinical details of these cases, they point to two conclusions: 1, that a free and unobstructed channel of communication between the venous system and the chyle-conveying vessels is essential to the proper nutrition of the body and preservation of life; 2, that death following partial or complete obliteration of this communication is the result of inanition.

In 17 of the 33 tabulated cases tapping was practiced, and in most of the cases repeated several times. Six of these recovered. In 2 laparotomy was resorted to, with recovery of both patients. One was a case of intact retention cyst, and the other was probably a ruptured cyst. As a medical resource, paracentesis is of questionable value. The treatment is mainly directed to the prolonga-

tion of life. The causative condition may in some cases be amenable to medical treatment, but in most cases some surgical procedure might offer a prospect of cure. In filarial cases, the treatment applicable to such would be admissible. Sonsina thinks that astringents, such as gallic acid and tincture of the chloride of iron, with rest, tonics and proper alimentation, are useful. Lancereaux thinks that the parasitic forms of lymphatic disease are curable. He has found mercurial inunction in the region of the affected gland in connection with hydropathy of service. He suggests the injection of a parasiticide into the affected glands for the purpose of destroying the female adult worm.

Dr. Osler said that in ordinary post mortem work it was not infrequent to meet with the varices of the chyle vessels of the mesentery covering the walls of the intestine. Sometimes there are extravasations which may form large chylous cysts.

With reference to chyluria, he was positive that there was a non-parasitic form. He had made thorough examinations in one such case and failed to find filaria. On post mortem examination nothing was discovered. Also in the case of lymph scrotum, he had examined the fluid and the blood and found no embryo. He laid a great deal of stress upon these cases, as it is generally stated that these conditions are always parasitic.

Dr. Welch exhibited a specimen of chyle removed from the abdominal cavity of a boy 12 years of age. He described the chemical and microscopical characters of the fluid, and dwelt upon the importance of distinguishing between chylous and fatty hydrops.

CREMATION IN DETROIT.

The Board of Health of Detroit, Michigan, announces 22 cremations in the city's crematorium between December 14, 1887, and July 31, 1889.

The board endorses the crematory from a sanitary point of view, but is somewhat chary about recommending the process for other cases than death from small-pox. A law exists there which declares that bodies of persons who have died from small-pox cannot be removed for re-burial unless they have been previously incinerated.

ACTION OF ANTIPYRINE IN GLYCOSURIA.

At a meeting of the Paris Academy of Medicine, April 9, 1889, Dr. Panas stated that he had employed antipyrine in cases of diabetes with cataract. From his observations he concludes: 1, that antipyrine has a prompt and marked anti-glycosuric action; 2, that it has given happy results in cases in which neither dieting nor the usual remedies could diminish the amount of sugar lost; 3, that in order to be efficacious it must be given, from the beginning, in doses of three grams daily; 4, that this action continues even when the patients are permitted to take a moderate amount of feculent substances.

Dr. G. Sée looks upon antipyrine as a drug that diminishes nutrition. As its good effect in diabetes is undoubted, he does not believe that this disease can be classed among diseases due to enfeebled nutrition. According to his view, the exaggeration in the quantity of glucose produced is due to an irritation of the nervous system, which ultimately extends to the vaso-motor nerves distributed to the liver. This pathogeny leads to two consequences: the use of nervous sedatives, and the necessity of suppressing one of the sources of the glycosuria by giving the smallest possible quantity of feculents.

Sée has treated eighteen cases of diabetes with antipyrine. When the quantity of sugar excreted does not exceed 80 or 100 grams to the litre, all the symptoms can usually be cured. The remedy gives no results in emaciated patients who excrete a very large amount of sugar (more than 150 grams per litre), and in phthisical patients.

Sée has never seen nephritis follow the administration. Sometimes albuminuria appears, but it passes away as soon as medication is suspended. Antipyrine is not a tonic, and it is the only nervous sedative that does not decompose the blood-corpuscles. The treatment does not expose the patient to coma.—*Revista de Ciencias Medicas, of Barcelona.*

USE OF TANNIN IN TUBERCULOSIS OF BONES AND ARTICULATIONS.

Prof. Andrea Saccharelli, of Parma, calls attention to the benefits derived from the use of tannin as a dressing in tubercular lesions. A first series of experiments upon animals has shown him the anti-tuberculous action of tannin in

inoculated animals. Clinical results have not been less favorable.

Tannin has been employed in various lesions, such as osteitis, white swellings, fistulæ, resection, etc. It was used in the form of a powder, or on a gauze saturated with an alcoholic solution of tannin. This substance, according to the professor, is an antiseptic that notably favors the union of wounds. It has powerful anti-tuberculous properties, because it prevents the development of tubercles and destroys the tubercular nodules already existing. It is, without doubt, better than iodoform, as it exerts its effect without danger to the organism. In many cases tannin was at the same time administered internally.

Drs. Raymond and Arthaud conclude that the action of tannin, when taken internally, resembles that of mercury in syphilis. In both cases, the therapeutic agent does not destroy the disease, but restrains it and gives the gumma and tubercle a chance to go on to cicratrization. We obtain a cure of the lesion, but that does not mean that we always obtain a cure of the disease.—*Journal de Méd. et Chirurgie Pratiques.*

CONTINENCE AND SYPHILIS.

The Lancet, commenting editorially upon our remarks regarding continence as a preventive of syphilis, adds: "Though Dr. Growers' testimony to the importance of chastity as a means of health is the last great note sounded to Englishmen, it does not stand alone in medical literature. There is another voice which may be recalled here which will sound for generations yet, as characteristic in its ethical strength as in its medical and scientific authority. Sir James Paget, in his clinical lectures, speaking of patients that expect us to prescribe fornication, says: 'I would just as soon prescribe theft or lying, or anything else that God has forbidden. If men will practice fornication or uncleanness, it must be of their own choice and on their own responsibility. * * * Chastity does no harm to mind or body; its discipline is excellent; marriage can be waited for; and among the many nervous and hypochondriacal patients who have talked to me about fornication, I have never heard one say he was better or happier after it; several have said they were worse, and many, having failed, have been made much worse.'"—*N. Y. Medical Record.*

A CASE OF ANTIPYRIN POISONING.

By William Perry Northrup, M. D., of New York.

The new drug, so efficient in relieving headaches, is, at present, so much used and so little suspected of danger, that it seems desirable to communicate a recent unpleasant experience. In speaking with different practitioners and neurologists, I learn that many times 45 grains of antipyrin are given at one dose to an adult, and 25 to a child above 5 years of age, and they all add, "No drug is more satisfactory in its results."

The patient was Mrs. L., aged 44 years, married, mother of three children. She had been subject to headaches (hemicrania) since childhood, but the attacks had been more severe and frequent since the birth of twins, after which she was sick in bed seven months, and, as she says, "her nerves were completely upset—and her whole system." During convalescence, the patient used her eyes excessively, reading, doing fancy work, etc.

Since the twin birth 4 years ago, she has been exceedingly nervous, and as she adds, "nervous by spells," and "extremely irritable," with occasional numbness of the extremities and "lump" in her throat. At two different times in her life she has passed over a year without an attack of headache. Immediately before the lapse of the second year she had suffered from rheumatism, and taken for its relief "salicylate." She believed the remedy had been the cure of the headaches, as well as her lameness. She has, however, since tried the remedy, and come to a contradictory conclusion.

With the two exceptions above referred to, she has usually had a headache every three or four weeks.

She has observed that over-fatigue and excitement are sure to be followed by her customary attack; also that overheating or chilling of the body provoked them, and that they came at longer intervals in summer than in cold weather. During the fall months of 1887, the intervals became shorter. Occasionally two attacks came within a period of ten days, and during the prostration of one of these quick recurring attacks I made my first observations on the case.

The patient, with the headache, lay with her eyes closed, raising her lids reluctantly and with effort when spoken to, answering questions in monosyllables, and as though irri-

tated at the disturbance. Her face at times pale, again moderately flushed on the cheeks and pale about the lips, wore an expression speaking for itself—"want to be left alone." Pulse was full, slow and regular. Pupils normal in size, equal, and reacting promptly.

The headache was limited to the left hemicranium.

No remedy was administered at this time, as the attack was already beginning to wear off.

During the succeeding interval of relief, while the patient was in her best possible condition of general health, she was put to bed and examined carefully—lungs, heart, liver, abdomen, uterus, and ovaries, condition of arteries, general circulation, accumulation of adipose, etc. Nothing was found abnormal. The patient was well nourished, free from disease, from malpositions, and from localized tenderness. She was large of frame, well proportioned, giving the impression of one with strong, enduring physique.

Examination of urine was negative—reaction, specific gravity, color, odor, and quantity; examinations for albumen and sugar bore testimony that the kidneys were doing their work perfectly. Ophthalmoscopic examination showed normal discs, vessels, and retinæ.

Was the headache, then, due to error of refraction? The eyes were examined under atropine, with test lenses, and the result was the patient was fitted with glasses for moderate hypermetropia (1.25 spherical) and instructed to wear them three weeks during waking hours. They made the vision clearer, and the head less confused while shopping and while upon the streets, but did not ward off the headaches. To remove the cause, then, seemed impossible.

There yet remained the new drug, the magic remedy, "the most satisfactory drug that I know of," says one; "that I prescribe with the utmost confidence," says another. "I do not hesitate to send it to a patient at a distance, whatever the cause of the headache."

Antipyrin in fifteen grain capsules was ordered and carefully written directions were left against the time of the next attack. The patient was instructed when she felt the headache coming to go to bed, take one capsule and with it a tablespoonful of whiskey with an equal volume of water.

It happened after the usual short interval that the patient awoke in the morning with a headache of the customary kind, and without rising from her bed called for a capsule.

The directions as to the whiskey were mistaken, and she took whiskey and water together to the amount of a tablespoonful. She took then fifteen grains of antipyrin with a half tablespoonful of whiskey upon an empty stomach. She felt no apprehension, no nervousness on taking the remedy; but took it rather with confidence that it would help her, if not wholly relieve her.

As soon as she had taken the dose she felt "queer," that "the medicine was going all through" her, was mounting to her head; she had sense of "smelling pepper," and she began to sneeze—sneezed fully a dozen times in rapid succession. This was followed by an urgent desire to defecate: she arose from her bed to get to the commode and fell heavily upon the floor, unconscious. The next remembrance was of a sharp pain from a hypodermatic injection of whiskey in her wrist and some one bending over her urging her to drink from a glass.

The patient lived but two blocks from my office, and I was not long in getting to her in answer to an urgent summons. I found her lying on the bed, her eyes closed, her countenance pale leaden, her "jaw dropped"—in a condition of extreme general relaxation. There was no pulse at the wrist, no sensitiveness of conjunctiva, and no amount of irritation aroused her. I immediately injected twenty minims of whiskey into the first available place, and shortly repeated it. The second injection caused her to move her hand to avoid the pain. In a few moments more she opened her eyes with a wild, staring look, and presently began to vomit frothy mucus. This "dry" retching continued more than an hour, at the end of which time the patient was nearly exhausted, though clear in her mind. Her headache was not relieved.

For a week she kept close to her room, feeling that for some reason the medicine had upset her digestion and that her headache, though but little prolonged, had been more than usually agonizing.

At the end of a month my patient was quite recovered from her treatment and was again suffering as usual from her periodic visitant. During this time she heard of numerous friends who had been relieved by the remedy—many ladies of her church who carried antipyrin in their purses, and during the long prayer, if headache threatened, slipped a capsule or powder or tablet into their mouths and the attacks did not come on. Even after her former ex-

perience, though I suspect she never fully realized how the antipyrin had affected her, she consented to try the remedy in one-third the previous dose. I took the precaution to get the medicine from a reliable down-town drug firm, and directed that the tablet of five grains of antipyrin be taken on a full stomach and *with* a tablespoonful of whiskey with water.

At the first symptoms of her next headache the patient took her capsule and whiskey as directed and only communicated the fact when she began again to "feel queer."

When the sister of the patient learned that the remedy had been taken she hastened for me, and I arrived at the side of the victim of headaches within a few moments.

She was lying on a sofa with her head raised, her face this time flushed deep crimson, her neck, wrists and hands covered with urticaria, tearing the clothing from her neck and chest, sighing and gasping for breath, with a worried and anxious countenance, comparable only to the severe dyspnœa of Bright's disease.

The pulse at the wrist was rhythmic, moderately full, but without good tension. The urticaria developed its characteristic wheals rapidly over all the limbs of the patient, the irritation tormenting her and adding to the already existing extreme restlessness. After an hour the severity of the symptoms began to subside.

She has since continued to have periodic headaches. Her general health is good and she wears constantly the glasses fitted during the course of treatment.

To test the quality of the antipyrin used in the first dose, I gave the remaining capsule of 15 grains to Dr. T. Halstead Myers, who tried it on an appropriate case in his dispensary practice. He reported its action as like that of good antipyrin. The second dose of five grains came from Frazier & Co., New York.

Briefly to recapitulate:

Fifteen grains of antipyrin caused in an hysterical woman: Sneezing, evacuation of the bowels, syncope (thirty minutes), vomiting, prostration. Five grains caused: Sneezing, urticaria and diffuse hyperæmia of skin, dyspnœa.

Mr. Theodore Weicker, formerly business manager of the well-known firm of Merck, has become a member of the firm.

At a meeting of the Clinical Society of London Mr. Mayo Robson showed a girl, aged 14, on whom he had successfully grafted two inches and a half of the posterior tibial nerve into a corresponding gap in the median nerve in the forearm. He also showed the tumor which had involved the median nerve and had necessitated its removal. The history of the case, briefly, was that the patient had noticed the tumor growing for six years, but that it had grown more rapidly during the past twelve months, during which time it had caused great inconvenience as well as deformity. The tumor, about the size of a hen's egg, extended from the angular ligament in front of the right wrist up the forearm for about three inches, reaching laterally from side to side, the skin being firmly stretched over but not adherent to the tumor, which appeared to be solid or semi-solid. On making an incision over the swelling the tumor bulged through the wound, and was easily separated from its cellular bed, leaving the mass attached above and below to a cord, which appeared to be inseparably blended with it. The attachments had therefore to be cut through. A microscopic examination showed that the cord was composed of nerve tissue, and on the patient recovering from the anæsthetic the parts in the hand supplied by the median nerve were found to be devoid of sensation. Arrangements were made by Mr. Robson to graft the sciatic nerve of a rabbit into the gap of the median nerve, but fortunately his colleague, Mr. Ward, kindly allowed him to arrange his operation at the same time he was amputating a thigh, and to utilize the posterior tibial nerve, which was taken straight from the amputated leg into the prepared forearm, the transfer from one theatre to the other being made in a warm carbolic solution. Two inches and a half of nerve were utilized, the ends being attached to the proximal and distal portions of the median with a fine catgut suture, without the slightest tension either on the stitches or the nerve; the wound was well washed out with perchloride of mercury lotion and carefully sutured. Healing occurred by first intention. The grafting was performed forty-eight hours after the tumor had been removed, and thirty-six hours after the nerve had been grafted sensation had so far returned in the parts supplied by the median that the touch of a pencil could be localized. Day by day sensation became more and more distinct, until, when shown to the members of the

Leeds and West Riding Medica-Chirurgical Society, five weeks after the operation, it was so perfect that the slightest touch could be localized, and although there was manifest diminution in volume of the abductor and flexor brevis pollicis, they were not completely paralysed. Mr. Mayo Robson, after relating experiments on animals, which went to prove that reunion and even regeneration of nerves might occur, remarked that in such cases, where there had been absolute loss of nerve, return of function did not occur. He thought the case he had related presented very important physiological and clinical features—physiological, in that the living nerve must have immediately united and taken on function, so that thirty-six hours afterwards the distal portions of the median were functionally active; clinical, in that, if nerve grafting to such an extent could be certainly relied on many hitherto hopeless cases may be cured—for instance, in injury of an extremity with destruction of one or more chief nerve trunks, in the case of a tumor involving nerves, in paralysis due to cicatrical destruction of nerve, and in many other cases. He ventured to hope that if, as in this case, two inches and a half of nerve would live, further experiments might show that greater lengths might survive; or, if such were found to be impossible, that the grafting might be done piece by piece, as in the case of bone grafting. The conditions which he advised to be observed in such operations were: first, entire absence of tension in the grafted nerve—e. g., two inches and a half being employed to fill an interval of two inches and a quarter; second, great care in dissecting out and handling the nerve; third, immediate transference of the living tissue into its new bed; fourth, the employment of only a single suture to fix the ends of the nerves; and, fifth, strict asepsis. He thought that this case, if he had correctly interpreted it, went to disprove the theory that a primary union of the divided ends of a nerve is only an appearance of union, and not a physiological one, and that the distal ends must pass through a process of degeneration. He remarked that the return of function in the motor portion of the nerve was more gradual than in the sensory, and made suggestions which he thought might explain the difference. Mr. Bryant asked whether the suture had included the whole thickness of the nerve. Mr. Bowlby observed that the case seemed likely to prove a successful one, but at present it was not entirely so. It

was the first recorded case of nerve grafting in this country, although a number of experiments and operations had been published on the continent. This was the first case of primary grafting of a nerve that was within forty-eight hours of the injury. He pointed out that in a certain number of instances there had been restoration without re-establishment of continuity of the nerve. He had quoted several instances of the kind in his lectures at the College of Surgeons.* Still on examining that particular patient, he found more sensation than he had ever seen before under similar circumstances. The condition of the muscles was not quite healthy, but still satisfactory. He mentioned as a curious fact that the power of voluntary motion often returned long before there was any reaction of electricity. He had remarked a bulla on the tip of the patient's index finger, which seemed to point to a trophic lesion. He questioned the accuracy of the view generally held, that after primary suture of the two ends of a divided nerve the lower end necessarily underwent degeneration. In a case in which he had brought the ends together, although fully an inch had been cut out, complete restoration of function ensued in a few days. In another case in which union by primary intention took place, although there was no paralysis, yet for a long time there was no reaction to electricity. He also pointed out that sensation was a very vague term, and might exist in very varying degrees. Mr. Robson's patient still experienced numbness and tingling in the fingers, showing that sensation, if good, was not perfect. Mr. Bland Sutton urged that it did not follow, because restoration of function had taken place after joining the cut ends of the nerve by means of a piece of the posterior tibial nerve, that the latter had become incorporated with the median nerve. In experiments that had been carried out on animals it seemed that anything which acted as a conductor, so to speak, along which the reparative material passed, bits of chicken bone, catgut, etc., had been found to answer the purpose. The bullæ which had been noticed generally took some time to form, and he suggested that the patient was now getting the symptoms which would have followed had the grafting not been effected. He hoped that the future progress of the case would be carefully watched, and the additional informa-

*Vide The Lancet, Vol. ii, 1887.

tion added to the report when published in the transactions. The president mentioned the case of a man from whom, in the course of an operation for the removal of a tumor, he had accidentally removed a large piece of the external popliteal nerve—too much, in fact, to admit of the ends being brought together. Loss of sensation and muscular degeneration followed in the parts supplied by the nerve, and the patient left the hospital in a rather unsatisfactory condition as regarded the leg. Some months later he looked the patient up, and found to his surprise that function had been restored, and the patient said he was as strong in the leg as ever he was. Mr. Mayo Robson, in reply, admitted that the case was not yet an unqualified success, but its progress had been so uninterruptedly satisfactory that he quite anticipated it would ultimately become so. He had passed a very fine catgut suture through the whole thickness of the nerve. He observed that even if the piece of the posterior nerve had not become incorporated with the median nerve, yet, in view of the successful issue of the case, most persons would be inclined to commend the course that had been adopted.

Alcohol has a very powerful influence in intensifying the effects of lead. My friend Mr. Abott, late of Almondbury, tells me that the worst case of lead poisoning he has seen is that of an inebriate painter; whilst a practitioner in a neighboring township, where an epidemic of "water-supply lead poisoning" is occurring, assures me that the case of the landlord of a beerhouse is the most severe one he has had under his care.

Although Dr. Clifford Allbutt has observed the frequent concurrence of spirit drinking and lead poisoning, he thinks the increased ingestion of lead-laden water which is taken with the spirit explains what is evidently not a mere coincidence. Here I should join issue with Dr. Clifford Allbutt, and allot a considerable share of the toxic work to the alcohol. As we have seen, both alcohol and lead interfere with metabolism and check excretion. The result is the alcohol locks in the lead; the lead chains up the alcohol. A combination like this accentuates the action of lead, or produces a hybrid sort of affection, partly alcohol and partly plumbic, as in the two cases with general convulsions.

My cases justify, I think, the views I hold, but my contention is further strengthened by a knowledge of the remarkable way in which the kidneys excrete lead. In one of my cases I was uncertain whether the patient was suffering from plumbism or hidden malignant disease. To decide the question, I had, not only the drinking water, but the patient's urine, analyzed by Mr. Geo. Jarmain, F. I. C., the borough analyst. His report was that the drinking water contained 0.8 gr. of lead per gallon, the urine 0.28 gr. of lead per gallon. Thus the patient's urine contained such a proportion of lead as would have caused poisoning if present in drinking water. When we bear in mind the albuminuria of inebriety, fluctuating with each increase or diminution in the alcoholic consumption and disappearing, perhaps, during the abstemious intervals, and when we remember that a great outlet for the excretion of lead is the kidneys, we must allow that there is an *a priori* probability that the combination of lead and alcohol is not likely to be so readily got rid of as either substance singly. The question is important from a practical point of view, and I would suggest in all cases of lead poisoning, but more especially in the rarer cases where the higher nerve centres are affected, that a careful inquiry into the patient's habits be made.

INCOMPATIBILITY OF CHERRYLAUREL WATER AND MORPHINE.

One of the most dangerous incompatibilities, which is little known, is the formation of insoluble auxcyanide of morphine when this alkaloid is dissolved in cherrylaurel water. The precipitate forms gradually, and if the patient does not perceive it, he may take with the last dose a poisonous quantity of morphine and hydrocyanic acid. As cherrylaurel water has been recommended as a preservative of solutions of alkaloids of microscopic vegetations which decompose rapidly, this fact should be remembered, not only with regard to morphine, but other alkaloids also. Five or six drops of hydrochloric acid to thirty grams of the solution can prevent the formation of the cyanide of morphia; but, though this addition may be useful in certain cases, it is not so in solutions intended for hypodermic use.—*Rev. de Thérap. Revista de Ciencias Medicas.*

At a recent meeting of the Medical Society of London, Mr. F. Bowreman Jessett read a paper on a simple method of securing the lingual artery during the operation of excision of the tongue with scissors. He referred to the various means devised to control this vessel: Mr. Lockwood's compression forceps, which had been used by himself and others with satisfactory results; the snipping piece by piece through the fibres of the genio-hyo-glossi muscles and securing the artery before division; and the ligature of the artery in the neck, one advantage of which was that glandular enlargement could be removed through the same incision. The operation he proposed was only applicable when the disease was limited to the tongue itself, the floor of the mouth being free. The tongue was drawn well out of the mouth, and the frænum and mucous membrane of the floor, divided with scissors, slightly curved upon the flat; the organ was then drawn firmly forwards and upwards, and a few fibres of the genio-hyo-glossi divided and torn deeply through with the finger. Between the two genio-hyo-glossi an ordinary armed aneurism needle was now thrust, and brought out through the incision in the mucous membrane and opposite to the second molar tooth. The ligature, including the artery and some muscle fibre, was now tied firmly, and, if Chinese silk were used, it cut easily through the soft fibres, and so held only the vessel. A pair of clamp forceps, curved, and somewhat larger than those in ordinary use, were then applied to the tissues, distally to the ligature, in order to prevent the latter being snipped as the organ was removed. If the whole tongue had to be ablated, the same manœuvre was carried out on the opposite side. Professor Annandale agreed that the principle was a good one to secure the arteries previously to removal of the tongue, in order to prevent hæmorrhage. He himself used to tie the vessel opposite to the second bicuspid tooth, but he now did it in the neck, as he had found that the malignant growth so frequently extended in the tongue along the line of the artery.

FATAL ALCOHOLIC POISONING IN A CHILD.

A boy, aged 5 years, was in good health, playing on the street, when his mother called him in for dinner. A few minutes elapsed from the time the child was called until

the mother was prepared to place him at the table, not over twenty minutes. When she looked around for the child she saw that he appeared to be intoxicated. In the sitting-room there was a bottle containing some six or eight ounces of whisky, along with some cake—a visitor had come in and been treated by the mother. She found the bottle empty. This occurred between twelve and twenty minutes after 12. The child was put to bed to sleep the liquor off. After the child had taken the whisky it became blanched, and this was followed, in an hour or so, by purging and vomiting. About 6 o'clock I saw the child. It had a rapidly running pulse and a normal temperature. The pupils of the eyes were dilated and did not respond to light. There was slight twitching about the face, and an occasional tremor about the hands and fingers. I put my nose to the child's breath and it was identical with that of a man who had been intoxicated by whisky. I did what I could for the patient under the circumstances. I gave it bromide of potassium and coffee. I saw it again at 11 o'clock and found it in general convulsions. It died about half-past 11, eleven hours from the time it took the liquor.—*Dr. MacFarlane, Allegheny Co. Med. Society.*

PROGNOSIS IN DISEASES OF CHILDREN.

The diseases affecting children have a very different prognosis from the same diseases when met with in adults.

An elevation of temperature to 40 deg. C. (104 to 105.8 deg. Fahr.), is of itself not very critical, and a rapid pulse (130 to 140) does not necessarily indicate a dangerous state of affairs. On the other hand, a dimunition in the secretions (sweat urine) in children gives reason to fear an unfavorable termination. All diseases of the respiratory tract in children under two years of age are always to be regarded seroiusly; while simple coryza must be carefully treated, as in suckling children it often leads to pneumonia or digestive disorders, we must bear in mind that "snuffles" is frequently the first symptom of hereditary syphilis.

Laryngitis should also engage our serious attention, and demands the same amount of care; sometimes a laryngitis presents the appearance of an attack of croup that threatens life. False croup (laryngismus), which always comes on at night, has a favorable prognosis in children under

two years of age. Diphtheritic croup, of course, is always serious, and no correct prognosis can be made.

Emphysema, which arises sometimes from bronchitis of measles but more frequently from whooping cough, permits us to make a very good prognosis in regard to a *restitutio ad integrum*. Broncho-pneumonia, as a secondary disease, almost always ends in death in suckling infants, and is even of very uncertain issue in children up to four years of age, while tipical lobar pneumonia is an absolutely fatal disease only in new-born children.

Pluritis does not appear very often in children under twelve years of age, and gets well easily and completely; on the other hand, pleurisy in adults, which often arises from tuberculosis, is not easily cured.—*Gazette des Hôpitaux, Deutsche Med. Zeitung.*

THE SCARLET FEVER AGE.

The last annual report of the superintendent of health of Providence, R. I., contains an interesting table, showing the number and proportion at different ages of 854 persons who were attacked by scarlet fever, The figures indicate that the disease is most likely to attack children between the second and eighth years, over 57 per cent. being between these ages, and that after the fifteenth year there is little liability of a person contracting scarlet fever.

This is an important fact, which parents should bear in mind, that no effort be spared to protect the children from this disease during this period of susceptibility.—*Sanitary Volunteer.*

QUININE HYPODERMICALLY.

Injections made hypodermically of a solution of quinine (which shall not induce pain or provoke local reaction) have been carried out successfully by Buermann. This neutral salt he obtains by dissolving twenty parts of muriate of quinine in one part of pure hydrochloric acid and fifteen parts of water. The solution is filtered, and each syringeful contains nine grains of quinine chloride. His experiments have been made upon typhoid patients and also upon those afflicted with neuralgia and rheumatism, whose sufferings he has relieved without their experiencing any of the unpleasant after-effects of quinine administered by the mouth.—*Boston Medical and Surgical Journal. Pharmaceutical Era.*

ACNE FACIEI.

In facial acne there are two indications to be fulfilled: first, to relieve the congestion of the face; second, to remove the causes which give rise to the congestion. For this purpose two measures may be resorted to:

1. Externally: (a) washing the face night and morning with a fine sponge dipped in water as hot as can be borne, without wiping. The skin becomes very red; then after the evaporation, the cold constringes the cutaneous vessels and restores their tone; (b) lotions morning and night with Gowland's solution:

℞ Hydrarg. bichlor.
Ammon. mur. ..... aa 10 cgm.
Emulsions amygd. amar. ..... 200 gm.

Or with the following solution:

℞ Ether sulphur. ..... 10 to 15 gm.
Sulphuris sublim. ..... 30 gm.
Aquæ ..... 250 gm.

(c) linear scarifications every week upon the affected areas, in order to disengorge the skin and to diminish the formation of pustules of acne. N. B.—*Not more than one kind* of external treatment should be used at a time, and the line of treatment selected should not be abandoned unless it fail to give relief in two or three weeks.

2. Internally: the diet should be watched; highly seasoned food, pork, fish, game and alcoholic liquors should be forbidden. Furthermore, the bowels should be kept open.—*Jour. de Méd. de Paris; Gaz. Méd. de Liége.*

SURGERY.

INTRAVESICAL MEDICATION BY MEANS OF A NEW INSTRUMENT.

Dr. Carl Beck, of New York, exhibited to the German Medical Society of New York, a new instrument which he had devised for the treatment of various bladder troubles. It consists of two parts; an open catheter and a strong metallic stylet carrying at its end a rounded brass knob, just large enough to fill the lumen of the catheter: a convenient handle is attached to the outer end of the stylet. He calls his apparatus a *pistol;* it is a modified Dittel's *porte-reméde*, which is used for the introduction of suppositories into the prostatic portion of the urethra.

The instrument is used as follows: the stylet is placed in the catheter, and the latter then introduced into the bladder; the stylet is withdrawn, and a plug of cocoa-butter (containing the medicament) is pushed into the lumen of the catheter, and the plug (or suppository) is then forced along the catheter by the stylet, at the end of which is the rounded knob. The cocoa-plug (or balls, or suppositories) may contain boracic acid, creolin, iodol, resorcin, sulphate of zinc, or cocaine. The introduction of the plug is painless, and the patients do not complain of presence of the cocoa-plug in the bladder. The cocoa-butter is quickly melted by the heat of the bladder, and is easily retained in the bladder for hours, especially when cocaine has been added to it.

Dr. Beck's experience has covered cases of acute and chronic catarrh of the bladder, enuresis, and hysterical neuralgia of the bladder. In the first two, he used preferably plugs containing one or two per cent. of creolin or iodol; and in the two, iodol with cocaine.

A girl of nine years had been treated unsuccessfully for years for a nocturnal enuresis. He devised a special instrument for her, and instructed her mother in the use of it (as the family lived out of the city.) A cocoa-plug was inserted every night. During the last four weeks (March 3, 1889), she has had no relapse. Perhaps a urethral dilatation contributed to the cure.

A colleague introduced into the bladder of a patient a plug containing nitrate of silver; the bladder rebelled, the patient complained, and the doctor blamed the instrument; but this was not at fault. Dr. Beck considers his method a very safe one.

The instrument does not cost more than $1.50, and the cocoa-plugs very little. The former can be procured from the instrument maker, Eissner, and the latter from any competent druggist.—*N. Y. Medicinische Monatschrift.*

A CASE OF RATTLESNAKE BITE, SEEN TEN MINUTES AFTER THE ACCIDENT—RECOVERY.

By W. M. Memminger, M. D., of Charleston, S. C.

As it is not usual for a physician to see a case of this kind so soon after the infliction of the wound, and as the result of my treatment was so satisfactory, I take this opportunity of presenting the case to my colleagues in the profession.

The patient was a colored laborer of about 30 years of age. While engaged in cleaning some brushes away he was struck in the forefinger of the right hand, the fang of the snake entering the side of the finger at about the middle of the last phalanx. Seeing that it was a rattlesnake which had bitten him, he gave a cry for help, and ran towards some of his fellow laborers, a distance of about 50 yards. By the time he had reached them he fell in an unconscious condition. One of the men had the presence of mind to put a ligature tightly around the wounded man's arm above the elbow, and a half pint of whiskey was poured down his throat; he was then brought immediately to my office—the whole time, as well as I can judge, not being ten minutes before he was presented to me.

The arm, by this time, was enormously swollen; whether from the ligature or from the poison I do not know, but I think from the poison. The patient was completely unconscious; pulse thirty to the minute; respiration slow; extremities cold, and involuntary evacuation of the bowels. To all appearances there was no hope, and I must say I was somewhat at a loss to know what to do. I made a free incision, down to the bone, through the wound, cutting both vein and artery of the finger; I then applied Esmarch's tourniquet just below the shoulder. After having applied this, thinking that perhaps it might be well to try to drive as much blood out of the arm as possible, I applied Esmarch's elastic bandage, beginning from below the tourniquet and descending; this seemed to act well and bled the arm very thoroughly.

There are certain facts just here which I think are worthy of mention. The tissues through which I cut were almost black in color, and the blood extracted from this arm failed to coagulate. In all he bled about a quart. I also resorted to a method which I have seen recommended —that is, of injecting into some of the larger veins a solution of ammonia in water 1-3: 20 minims every half hour; this I injected into the median basilic, twice during the first hour and afterward one after each collapse. The next theory I carried out was giving the patient the poison gradually.

In about an hour's time after he was brought in to me he had recovered almost entirely—so much so that he was able to sit up and talk with his friends. I now tried the process of giving him the poison. I loosened the

tourniquet; no sooner had I done this than he fell into an unconscious condition, and apparently in as dangerous a state as before. The tourniquet was loosened for, I suppose, not more than three beats of the heart. This alarming and dangerous condition was caused, I presume, from the effects of the poison, the effects of the whisky having worn off several times during the day, the man being perfectly sober in the intervals between the periods of collapses produced by the slackening of the tourniquet. This process I repeated six times within seven hours, the patient rallying each time within an hour. At the end of the seventh hour the tourniquet was removed entirely, the wound dressed with boracic acid, and the man removed to his quarters, partly delirious.

He was bitten on Saturday morning, and on Monday morning he walked to my office to have his finger dressed. The hand had a somewhat erysipelatous appearance, and pained him considerably, but in no other way did he feel any bad effects.

Erysipelas did not set in, and in a few days he had competely recovered. The snake was killed a few minutes after the accident, and proved to be a rattlesnake about two and one-half feet long.

FOREIGN BODY IN BRONCHUS.

Dr. Rigg presented a small piece of bone and its history. On the 28th day of May, 1888, Mr. O'Neil, while drinking a bowl of soup choked on something. After vomiting, he put his finger down his throat and succeeded in dislodging it. Not feeling relief completely after this occurrence, he consulted a physician, who examined his throat and found nothing there, and merely prescribed for the irritation of the throat. Two days later he developed a severe cough. He consulted a physician, who examined his larynx, his vocal organs and throat as far as possible, and stated that he could not see anything wrong—he had bronchitis—which I think was correct. About the first of August he came to me with this history, stating that he had been perfectly well up to the date of the accident. He had no fever, his pulse was very little excited; he had a very severe cough, mucous rales over both lungs, more particularly over the left lung. I examined the throat, larynx and vocal cords, and they seemed to me to be in

a fairly healthy state. He got much better and went to work. In December he ran down, and developed a severe pneumonia of the right side. From the 1st of February he improved slowly but steadily until the latter part of March, when he improved more rapidly. He got out of doors in April, walked around, and gathered up very satisfactorily. Still, however, the cough remained; the right side improved, the left side remaining pretty much the same throughout. On the 1st of June he began to run down again, looking more like he had looked when he came into my hands in August. On the 4th of June he expectorated some pure blood while coughing—about a teaspoonful of pure, bright blood. He coughed up mucus afterward. He came to me and said he felt something jagging in his throat. I paid very little attention to that, however, but saw that he was running down. This was on the 4th of June. On the 11th, after coughing, this bone came up. Since that time the patient has been improving; he has felt more comfortable and seems to be improving to some extent; however, the damage done to the lungs is extensive, and the ultimate outcome is uncertain.—*Reported at Meeting of Allegheny Co. Med. Soc., June 18th, 1889.*

POTATOES AS A SUBSTITUTE FOR LAPAROTOMY.

At a meeting of the Imperial Society of Physicians in Vienna, Dr. Salzer reported a communication from Dr. Cameron, of Glasgow, upon the "potato cure," first recommended by the Scotch observer.

Dr. Cameron has used this plan of treatment in several cases of ingestion of large foreign bodies with gratifying success. Salzer has also had an opportunity to try the potato cure in the case of a boy who had swallowed a brass weight of twenty grammes. Potatoes were fed to the child, cooked in a variety of manners, so as to encourage his appetite. He took them willingly. After five days the brass weight was compelled to retreat, overwhelmed by the constant accessions of reinforcements from above, and passed out, leaving the potatoes in possession of the field.

In the same manner he treated the ingestion of a set of artificial teeth, while in another case a scarf pin proved no match for its farinaceous antagonist. Dr. Salzer believes that this form of treatmemt will subserve a useful purpose

in many cases in which, up to now, gastrotomy appeared to be the only form of relief available. He also advised the members to place no trust in sauer kraut, which has been recommended for the same purpose.

Dr. Hochenegg related the case of a boy who had swallowed a nail 6 ctm. long, in 1884, and had been treated by gastrotomy. He had swallowed a similar nail two years later, when the potato cure had proved successful.

Dr. Billroth spoke of the difficulty which exists in the removal of foreign bodies by laparotomy, and was strongly in favor of the potato cure.

AN ERRONEOUS DIAGNOSIS.

Dr. Meletti reports the case of a woman, aged 70, who had suffered since twenty years from symptoms pointing to cholelithiasis, the region of the gall bladder being occupied by a long movable tumor. Laparotomy revealed a normal gall bladder, but it was found that the suspensory ligament of the liver was fenestrated, and that a portion of the omentum and of the pyloric end of the stomach protruded through the opening. The ligament was resected sufficiently at its free border to remove the fenestra, and the viscera were restored to their normal position. The wound healed by first intention and the patient was permanently relieved.—*Gazzet. degli ospital.*

ORBITAL PHLEGMON IN A NEW-BORN CHILD.

M. Dujardin mentioned in the *Journal des Sciences Médicales de Lille* a case which shows that in certain cases orbital phlegmon may arise spontaneously. The patient was a child nineteen days old, which, without apparent cause, presented, after three or four days' suffering, swelling of the eyelids with the characteristic erysipelatous redness, a pronounced exophthalmia, with absolute fixity of the eyeballs and considerable chemosis internally. The general symptoms were not marked, and the child continued to take the breast. However, the existence of an orbital phlegmon could not be doubted. A puncture was made at the inner side of the orbit, and a large quantity of mixed pus and blood escaped. This pus escaped also through the mouth and nose of the child. The cure was complete at the end of fifteen days.

The origin of this phlegmon was obscure. It might be said that there was an inoculation, during labor, of a septic liquid through an abrasion already existing on the eyelids.

The fact of the spontaneous evacuation of the pus through the nasal fossæ is to be noted. It has been observed several times before, but most frequently after necrosis of the bones of the nose. In the above case, it may be asked if the pressure of the fingers upon the inner wall of the orbit, after the incision was made, did not cause a perforation of the os unguis.—*Journ. de Med. et Chir. Prat.*

GYNÆCOLOGY.

MAGGOTS IN THE UTERUS.

Dr. J. F. Haines reports the following interesting case in the London *Lancet:* Some months ago I was called to see Mrs. P——, who stated that she had had "a miscarriage" three days previously, and was now suffering from considerable pain. There was an intensely fetid discharge, and, on making an examination, I was surprised to discover a number of maggots in the vagina. I injected a solution of carbolic acid, which, however, had but little effect, only a few maggots coming away with the return of the fluid. I then used as an injection a solution of perchloride of mercury, which killed and brought away a very large quantity of them. The patient now expressed herself as considerably relieved, and, there being no urgent symptoms, I prescribed a mixture, containing tincture of opium and liquid extract of ergot. Next day I repeated the injection of the perchloride, and on the following day a mass about the size of a small orange was expelled, which was riddled with holes, and contained a number of dead maggots. I was unable to satisfy myself as to whether it contained any fœtal structure or not. After this the patient steadily improved, and made a good recovery.

DERMATOLOGY AND HYGIENE.

The Louisiana State Board of Health has issued the following "Sanitary Regulations to be observed in houses infected with Small-pox, Diphtheria and Scarlet Fever," and a copy of them is left by the sanitary officers with responsible person in charge of the case:

Care of Patients.—The patient should be placed in a separate room, and kept there until the attending physician determines that the danger of contagion has passed; and no person, except the physician, nurse or mother, should be allowed to enter the room, or to touch the bedding or clothing used in the sick room, until they have been thoroughly disinfected. As children are more liable to contract contagious disease than grown persons they should be removed far from the sick room and, if possible, sent away from the house.

Infected Articles.—All clothing, bedding or other articles, not absolutely necessary for the use of the patient, should be removed from the sick room. Articles used about the patient, such as sheets, pillow cases, blankets or clothes, should not be removed until they have been disinfected by placing them in a tub with the following disinfecting fluid: one ounce of bichloride of mercury in twelve gallons of water.

They should be soaked in this fluid for at least one hour, and then placed in boiling water for washing.

Mothers and relatives are commanded not to put away or conceal articles used by patients during illness, as these may communicate the disease to others when brought to light many weeks or months thereafter. The disinfecting solution will not destroy the fabric of even the frailest material, and has the great advantage of rendering it safe for future use. It is furnished free by the Board of Health.

Feather beds and pillows, hair pillows and mattresses, and all flannels or woolen goods, require fumigation, and should not be removed from the sick room until after this has been done. Whenever the patient can be removed from the sick room the attending physician will notify the Board of Health, and the officer will, as soon as possible thereafter, perform the work of fumigation.

All vessels used for receiving the discharges of patients should have some of the same disinfecting fluid constantly therein, and immediately after use by the patient, be emptied and cleansed with boiling water. Water closets, privies, and open drains will be disinfected with the same fluid, or a solution of copperas, one pound to a gallon of water. Unless the privy vault is in excellent condition, the officer will order it emptied.

It is advised not to use handkerchiefs for cleansing the

nostrils and mouth of the patient, but rather soft rags, which should be immediately thereafter burned.

The ceilings and walls of the sick room, after removal of patient, should be thoroughly cleaned and lime-washed when practicable, and the woodwork and floor thoroughly scrubbed with soap and water.

Compliance with the above reasonable recommendations will almost certainly prevent any further appearance of the disease in premises infected, saving cost and trouble and probably the lives of many other children.

NEW METHOD OF PRECIPITATING SEWAGE.

The problem of the disposal of the sewage of large towns has long defied the efforts of sanitary engineers to cope with it in a satisfactory manner. A new method of sterilizing and precipitating sewage has just been brought out which, it is claimed, accomplishes all that can be required of it at as little cost as any such system can be worked. The method has been put in practice experimentally at the Wimbledon sewage works, England. The principle underlying this plan of dealing with sewage is the employment of "amine" salts, in combination with milk of lime. At Wimbledon herring brine is used, and on mixing with the lime a very soluble gaseous reagent is evolved, to which the inventor has given the name of "amerinol." This reagent possesses a peculiar briny odor, and when introduced into sewage is said rapidly to extirpate all microörganisms capable of causing putrefaction or disease. The effect is almost instantaneous. By the action of the lime violent flocculation is caused, and subsidence takes place in about half an hour, the putrid smell of the sewage being replaced by the peculiar briny odor. According to Dr. Klein, the destruction of microörganisms is absolute. The total cost per annum of treating London sewage by this method is put at £125,000 Should the residue prove to possess any value for agricultural purposes its sale would tend still further to reduce the expense.—*Medical Press and Circular*, August 31, 1889.

The seventh annual meeting of the American Rhinological Association will be held at the Palmer House, Chicago, Oct. 9, 10 and 11, 1889.

DISINFECTION OF INFECTIOUS DEJECTIONS.

Dr. Uffelmann (*Berliner Klin. Wochenschrift*) has made a large number of experiments with a series of substances for the purpose of determining the best method of disintecting infectious stools. His conclusions are as follows:

1. Sulphuric acid and water, equal parts, completely destroyed all microbes after two hours' action.

2. Sulphuric acid, one part, and water, two parts, destroyed all microbes in six hours.

3. Hydrochloric acid and water, equal parts, destroyed all microbes in twelve hours.

4. Hydrochloric acid, one part, and water, two parts, destroyed almost all microbes in twelve hours, but positively in twenty-four hours.

5. Carbolic solution, five per cent. After one hour's action, numerous colonies formed and also a few typhus-colonies; after twenty-four hours' action, very few colonies and no typhus-colonies.

6. Creolin in 25 per cent. emulsion. After twenty-four hours' action, a few colonies grew, but none of typhus or cholera.

7. Equal parts of potash and water. After one hour's action a few colonies grew, but not after exposure for six hours.

8. Caustic lime, 1 decigram, feces, 10 cub. cent. After one hour's action, and even after twenty-four hours, numerous colonies grew, also a few of typhus, but none of cholera. Caustic lime, 2 decigrams, feces, 10 cub. cent. After twenty-four hours' action a few colonies grew, but none of the bacilli of typhus or cholera. Milk of lime (20 per cent.), 2½ parts to one part of feces, destroyed the bacilli of Eberth within two hours.

9. Non-acidulated solution of corrosive sublimate (1:500). After fifteen minutes' action, many colonies grew, together with those typhus and cholera. After half an hour's exposure, fewer than before; after exposure for twenty-four hours, very few or no colonies, and none of typhus and cholera.

10. Acidulated sublimate solution (1:500). The colonies were much fewer than after the addition of the non-acidulated solution. After exposure for fifteen minutes, very few colonies grew, and none of typhus or cholera.

After exposure for twenty-four hours, no colonies developed.

11. Boiling water acts only when eight parts of boiling water are added to one part of feces, and is not certain in its action.

According to Uffelmann's experiments, the mineral acids are the most active, and after them acidulated sublimate solution and caustic potash with an equal part of water.—*Deutsche Medizinal Zeitung.*

LANOLIN URETHRAL INJECTIONS.

Stern recommends the following formulæ for injection into the urethra;

(1) ℞ Lanolin anhyd 25.0
Ol. Amyg 75.0
M. Basis injection.

(2) ℞ Zinc-sulph 0.5
Aquæ 4.5
Lanolin, anhyd 20.0
Ol. amyg 75.0

(3) ℞ Acid-salicylic 0.25
Ol. amyg 75.0
Lanolin-anhyd 24.75

Other medicinal agents may be used in like manner.

The first named (basis injection), if held five or ten minutes in the urethra, is mild and soothing. Fat particles are found in the urine for twenty-four hours, and this long retention explains the utility of the drug in gonorrhœal processes.

Stern recommends this injection in the acute stage of gonorrhœa.

In eight or ten days he adds antiseptic or astringent remedies, and terminates the treatment by injecting a one-and-a-half per cent. solution of resorcin in water

In chronic anterior urethritis lanolin injections are of special value.—*Jour. of Cutaneous and Genito-urinary Diseases.*

An egg is said to contain as much nourishment as a pound and an ounce of cherries, a pound and a quarter of grapes, a pound and a half of russet apples, two pounds of gooseberries, and four pounds of pears, and that 114 pounds of grapes, 127 pounds of russet apples, 192 pounds of pears and 327 pounds of plums are equal in nourishment to 100 pounds of potatoes.—*San. News.*

Publications Received.

Nervous Syphilis. By H. C. Wood, M. D.

Essentials of Physiology. By H. A. Hare, M. D.

Infant Feeding. By C. D. Earle, M. D. Reprint.

Prolapse of the Womb. By Lewis H. Adler, M. D.

Antiseptic Obstetrics. By C. D. Earle, M. D. Reprint.

Observations in Vienna. By C. D. Earle, M. D. Reprint.

Nervous and Vascular Charts. By F. A. Davis, Philadelphia.

Catalogue Général par Ordre Alphabetique. By Octave Doin: Paris.

Essentials of Pathology and Morbid Anatomy. By C. E. Armand Semple.

Essentials of Materia Medica and Therapeutics. By Henry Morris, M. D.

Index Catalogue of the Library of the Surgeon General's Office, U. S. Army.

Cephalhæmatoma of the New Born. By C. D. Earle, M. D., Chicago: Reprint.

Physicians' Pocket Daybook, Journal and Ledger Combined. By Dr. S. L. Kilmer.

The Treatment (not Preventive) of Puerperal Fever. By C. D. Earle, M. D. Reprint.

Retained Debris as one of the Causes of Puerperal Fever. By C. D. Earle, M. D. Reprint.

Influence of Sewerage and Water Pollution on Diphtheria. By C. D. Earle, M. D. Reprint.

Climatoterapia Española a la Tisis Pulmonar. Por D. Augustin, Bassols y Prim. Jaime Seix, editor.

Observations in Chiara's Clinic and the Hospital St. Maria Nuova. By C. D Earle, M. D. Reprint.

Address of President C. D. Earle, M. D., before the Illinois State Medical Society, May 21, 1889. Reprint.

On the Healing of Aseptic Bone Cavities by Implantation of Antiseptic Decalsified Bone. By N. Senn, M. D.

Distended Gall-Bladder Simulating Floating Kidney. Cholecystotomy by the Lumbar Incision. By J. Ewing Mears, M. D.

A Few Observations on the Etiology, Prognosis, and Cure of Incipient Catarrh Without Operative Interference. By A. R. Baker, M. D.

An Experimental Study of Intestinal Anastomosis, with Some Practical Suggestions as to a Modified Technique. By A. V. L. Brokaw, M. D.

Ophthalmology and Ophtalmoseopy for Practitioners and Students of Medicine. By Dr. Hermann Schmidt-Rimpler. New York: Wm. Wood & Co.

Notes on the Electro-Magnetic in Ophthalmology, with a Report of Nine Cases. By Wm. Ellery Briggs, M. D. (Reprint from "Occidental Med. Times."

The Treatment of Fractures of the Neck of the Femur by Immediate Reduction and Permanent Fixation. By N. Senn: (Reprint from "Jour. Am. Med. Ass'n.")

Book Notices.

Physicians' Pocket Day Book, Journal and Ledger combined. By Dr. S. L. Kilmer. South Bend, Ind.: Tribune Printing Co., 1889.

This is a very handy account-book, which, as its title sets forth, combines the advantages of a day book, journal and ledger. It is well arranged, and will save labor to any physician using it, as on one page the whole history and standing of an account can be read off.

Electricity and the Methods of its Employment in Removing Superfluous Hair and Other Facial Blemishes. By Plym. S. Hayes, A. M., M. D., late Prof. of Chemistry and Toxicology, Woman's Medical College; Prof. of Analytical Chemistry, Chicago College of Pharmacy; Prof. of Gynecology and Electro-Therapeutics, Chicago Polyclinic, etc. Chicago: W. T. Keener, 96 Washington street, 1889.

The title of this small book explains its purpose. A chapter is devoted to the histology of the skin and hair; others describe the necessary apparatus, mode of operating and the various blemishes met with.

Though revealing nothing new on this subject, the author attains satisfactorily the purpose for which it was written—namely, that of teaching some practical points in the use of electrolysis. Some good hints are given as to the shape of needles as well as how to shape them.

H. W. B.

Materia Medica and Therapeutics, for Physicians and Students. By John B. Biddle, M. D. Eleventh edition, revised and enlarged, with special reference to therapeutics and the physiological action of medicines. By Clement Biddle, M. D., U. S. Navy, and Hy. Morris, M. D. With numerous illustrations. Philadelphia: P. Blakiston, Son & Co., 1889. New Orleans: Armand Hawkins, 194 Canal street. Price, $4.25.

The publication of eleven editions of a work speaks very forcibly in its favor. Dr. Biddle's work covers the whole field of materia medica, but it does not deal with details that would perplex and embarrass the student

rather than aid him; the book is thus kept within the bounds of a suitable text-book, while at the same time giving a clear exposition of each subject. This last edition considers all of the recent valuable additions to our stock of drugs, thus keeping this edition close upon the heels of progress. The classification of drugs is that found in most, if not all, of English and American text-books, and not the more modern one of Rabuteau. In all other respects, Dr. Biddle's work is excellent, and fully deserves the popularity which it has acquired. A. McS.

Essentials of Physiology. By H. A. Hare, B. Sc., M. D. Second edition. Philadelphia: W. B. Saunders, 1889.

Essentials of Pathology and Morbid Anatomy. By C. E. Armand Semple, B. A., M. D., etc., with forty-six illustrations. Philadelphia: W. B. Saunders, 1889.

Essentials of Materia Medica, Therapeutics and Prescription Writing (arranged in the form of questions and answers). By Hy. Morris, M. D. Philadelphia: W. B. Saunders, 1889.

These three books are members of the series of "Saunders' Question Compends." Medical readers have become so familiar with the class of books represented by the above publications that it is unnecessary to describe the text in detail. It is universally acknowledged that quiz-compends have an unfortunate tendency to wean the student from his cumbersome but complete text book, and it is the part of the virtuous reviewer to swell with righteous indignation whenever one of the tempting little books falls into his hands. The efforts of the pure-minded reviewers have, however, been directed in vain against the movement of supplying students with a kind of literature that will help them to "pack" for examination. While it is understood, therefore, that we condemn, in a lofty and distant manner, the practice of printing quiz-compends, we still feel that the above members of Saunders' series answer admirably the purpose for which they were intended. On page 28, of Dr. Armand Semple's work, we notice that the author says that "the posterior *cornua* are the seat of charge in locomotor ataxia." This, no doubt, was due to an oversight in revising the proofs, but as the book will be read chiefly by beginners in medicine it ought to be corrected. A. McS.

Medical News and Miscellany.

The Death of Professor Loreta.—This eminent man, who was recognized as the leading operator in Italy and one of the foremost practical surgeons of the day, died at Bologna on July 23 by his own hand. This melancholy termination to a brilliant career has caused a most painful sensation to his professional brethren in his own country, where he was universally honored as a practitioner and both revered and beloved as a teacher. Loreta, whose hereditary title of count was lost in the greater dignity of his professional designation, was born of a noble family at Ravenna, in 1831. Both his preliminary and his strictly medical studies were pursued at Bologna. They were interrupted for a time when he took an active part in the revolutionary movement of 1848, and it was 1858 before he took his degree. The years from 1858 to 1861 were spent in an obscure country practice; but in the latter year he was called to Bologna as head of the anatomical laboratory, and in 1865 he succeeded Rizzoli in the chair of clinical surgery. In spite of the intense activity of his professional life, Loreta found time for politics; he was an ardent liberal, and some months before his death had been returned to the Italian Parliament by an immense majority of his fellow-citizens. He is best known, perhaps, by his operation for the relief of stricture of the pylorus, and by his method of dilating œsophageal stenosis from below through the cardiac orifice; but his operative work covered the whole field of practical surgery. He was the first to resect the liver, and it is only a few months ago that a memorial tablet commemorating that achievement was placed in the hall of the University of Bologna. His published works include papers on a new method of perineal cystotomy, a new method of treating aneurism, remote effects of contusions of the head, and many others. Bologna honored the deceased surgeon with a public funeral.—*London Med. Recorder*, Aug. 20, 1889.

Perry Davis' Pain Killer.—Alcanna, 1 oz.; pulverized myrrh (astringent), 3 ozs.; guaiac (stimulant and alterative), 2 ozs.; camphor, 1 oz.; tincture of opium, 4 drams; capsicum, 4 drams; alcohol, 1 quart; water, 1 quart.

Second Congress for the Study of Tuberculosis — In this congress, which will be held about the end of July, 1890, under the chairmanship of Villemin, the following points will be discussed: 1st, the identity of tuberculosis in man, cattle, poultry and other animals; 2d, the bacterial and morbid relations of tuberculosis; 3d, the hospitalization of tuberculosis; 4th, the agents capable of destroying Koch's bacillus, not injurious to the system, from a prophylactic and therapeutic point of view.—*El Siglo Medico.*

Pasteur reports that from May 1, 1888, to May 1, 1889, there were treated in the Institute Pasteur 1673 persons who had been bitten by dogs which were mad or suspected to be mad; 1487 of these were French and 186 were foreigners; 118 out of the total number of 1673 persons were bitten about the face or neck. Six persons, 4 of whom were bitten about the head and 2 in the limbs, took rabies during treatment. Four others were attacked by rabies less than fifteen days after the end of the treatment. Three persons, bitten about the head, succumbed after the entire completion of the treatment. That is to say, there were only *three* failures of the method out of a total of 1673 persons operated upon; one case out of 554. Even counting in, although improper, the 10 deaths outside of these 3 cases, we have 13 deaths out of 1673 persons; that is, one death out of 128 persons treated.—*Comptes Rendus*, June, 1889.

Tapeworm.—Gerhard is said to have used Schaflint's remedy in every case with complete success. No wonder; most of the tænicides in the list are rammed down with this load:

℞ Granati cortici rad ..... oz. ss.
Seminorum peponis ..... oz. j.
Pulv. ergotæ ..... dr. j.
Aquæ bul ..... oz. viiij.
Ft. infusio.

℞ Ext. filicis maris ætherici ..... dr. j.
Olei tiglii ..... min. ij.
Pulv. acaciæ ..... dr. ij.
Ft. emulsio.

Mix the emulsion and infusion and give at one dose, previously having taken a full dose of salts. The worm that fails to flee before this battery deserves to live. The strage statement is added that he always escapes with his head buried in his side. We don't blame him.—*Ind. Med. Journal.*

THE DOCTOR.

[Sympathetically dedicated to the medical fraternity by a convalescent.]

Who works from morn till set of sun,
Is all day long upon a run,
And yet whose work is never done?
The doctor.

Who, when at last he seeks repose,
And falls into a gentle doze,
And makes sweet music through his nose?
The doctor.

Who's roused up in the dead of night,
By some one in a dreadful fright,
Who's sure she's going to die outright?
The doctor.

Who, when the days are scorching hot,
Can seek no cool, sequestered spot,
Because he must be on the trot?
The doctor.

Who must an even temper keep,
And hide his thoughts and feelings deep,
To cheer up those who wail and weep?
The doctor.

Who has to hear of countless ills,
And deal out multitudes of pills
To those who never pay their bills?
The doctor.

Who must be always very wise,
Ready to give profound replies,
Whatever question may arise?
The doctor.

Who, when the mercury is low,
Long, weary miles must often go
Through cutting winds and blinding snow?
The doctor.

Who must not show that it's a bore
To hear each family history o'er
Five generations back or more?
The doctor.

Who takes our aches and pains away,
And gives us courage day by day,
To cheer us on our healthward way?
The doctor.

Who should be placed among the saints,
Whom history with us acquaints,
For patient list'ning to complaints?
The doctor.

—Minnie May Curtis, in *Inter-Ocean*.

MORTUARY REPORT OF NEW ORLEANS

For August, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	1	6	3	4	4	3	7
" Congestive	4	1	4	1	2	3	5
" Continued,	1	...	1	.....	.....	1	1
" Intermittent	1	.....	1	.....	1	.....	1
" Remittent	4	4	2	6	6	2	8
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	4	.....	3	1	4	.....	4
" Puerperal	1	.....	.....	1	1	.....	1
" Typho-Malarial	3	2	2	3	3	2	5
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	12	4	5	11	.....	16	16
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	7	.....	6	1	1	6	7
Pneumonia	3	8	2	9	5	6	11
Bronchitis	4	.....	2	2	2	2	4
Consumption	46	27	36	37	68	5	73
Congestion of brain	6	5	4	7	6	5	11
Diarrhœa	9	3	7	5	6	6	12
Cholera infantum	8	1	7	2	.....	9	9
Dysentery	9	2	7	4	10	1	11
Debility, General	3	2	2	3	5	.....	5
" Senile	17	6	9	14	23	.....	23
" Infantile	10	4	7	7	.....	14	14
All other causes	156	69	114	111	145	80	225
Total	309	144	224	229	292	161	453

Stillborn children—White, 23; colored, 18; total, 41.
Population of city—White, 184,500; colored, 69,500; total, 254,000.
Death rate per 1000 per annum for month—White, 20.10; colored, 24.86; total, 21.40.

DIPHTHERIA RECORD FOR AUGUST, 1889.

Dist.	Cases. White.	Cases. Colored.	Cases. Total.	Deaths. White.	Deaths. Colored.	Deaths. Total.
1	3	.....	3	.....	1	1
2	11	2	13	6	1	7
3	.....	.....	.....	.....	.....	.....
4	1	1	2	.....	.....	.....
5	13	3	16	6	2	8
6	1	.....	1	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	29	6	35	12	4	16

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—AUGUST.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Precip. in inches and hund.
1	84.0	92.0	76.0	T
2	82.0	88.0	76.0	.01
3	83.0	90.0	76.0	.03
4	82.0	89.0	75.0	.06
5	83.0	90.0	76.0	.05
6	76.0	79.0	73.0	.50
7	76.0	80.0	71.0	1.68
8	74.0	79.0	70.0	.17
9	80.0	85.0	75.0	.18
10	81.0	88.0	74.0	.....
11	83.0	90.0	76.0	.....
12	82.0	88.0	76.0	.10
13	84.0	89.0	76.0	.07
14	83.0	90.0	76.0	.96
15	81.0	88.0	74.0	.18
16	82.0	88.0	76.0	.....
17	80.0	87.0	72.0	.....
18	80.0	87.0	73.0	.....
19	80.0	88.0	72.0	.15
20	82.0	89.0	76.0	.08
21	80.0	88.0	72.0	.81
22	81.0	88.0	74.0	.....
23	81.0	89.0	73.0	.....
24	81.0	89.0	73.0	.....
25	82.0	90.0	73.0	.....
26	82.0	90.0	74.0	.....
27	81.0	88.0	74.0	.....
28	80.0	87.0	74.0	.56
29	79.0	84.0	74.0	.....
30	78.0	85.0	70.0	.....
31	80.0	88.0	71.0	.....
Sums	....	....	....	9.13
Means	....	87.4	73.9	.....

SUMMARY.

Mean barometer, 30.044.
Highest barometer, 30.137, 14th
Lowest barometer, 29.908 23d.
Mean temperature, 80.7.
Highest temperature, 92.0, 1st.
Greatest daily range of temp., 17.0, 25th, 31st.
Least daily range of temperature, 6.0, 6th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..82.8	1876..81.9	1881..82.8	1886..81.4
1872..82.5	1877..82.8	1882..80.5	1887..81.0
1873..81.0	1878..83.6	1883..83.3	1888..78.2
1874..83.8	1879..80.8	1884..82.3	1889.. —
1875..79.1	1880..81.1	1885..80.4	1890.. —

Total deficiency in temperature during month—36.
Total deficiency since Jan. 1—343.
Prevailing direction of wind, S. E.
Total movement of wind, 4,772 miles.
Extreme velocity of wind, direction, and date, 30 miles, S. E. on 12th.
Total precipitation, 5.59 inches.
Number of days on which .01 inch or more of precipitation fell, 16.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874..... 4.82	1879..... 10.44	1884..... 0.87	
1875..... 8.61	1880..... 4.60	1885..... 4.25	
1876..... 4.44	1881..... 4.21	1886..... 2.40	
1877..... 2.54	1882..... 9.47	1887..... 7.42	
1878..... 5.31	1883..... 4.12	1888..... 22.74	

Total excess in precipitation for month—0.26.
Total deficiency since Jan. 1—6.35.
No. of clear days, 11. No. of part cloudy days, 13. No. of cloudy days, 7.
Thunder storms on 20th. Excessive rainfalls, none. Frosts, none.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable.

R. E. KERKAM, *Signal Corps Director.*

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

NOVEMBER, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should the so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompanies the paper.

A Case of Hydrophobia.

By J. P. SAIZAN, R. S., Service of Dr. A. B. Miles.

In February of this year an unusual case claimed the attention of the resident and visiting staff of the Charity Hospital. The case was one of hydrophobia, and was interesting on account of the difference between the results of clinical observation and those obtained by bacteriological investigation. The history of the case, in brief, is as follows: The patient was admitted to ward 25, service of the house surgeon, Dr. A. B. Miles, early on the morning of Feb. 13. The patient was perfectly rational, readily and unhesitatingly answering all questions, but at times, while engaged in conversation, he would experience a sudden paroxysmal contraction of the throat, with a sense of impending danger, which sensation he described as that of a drowning man. The paroxysms would last three or four seconds; but he would not become afraid and startled as if in fear of some bodily injury about to be inflicted by human beings. He gave no history of any venereal trouble, neither of lungs or heart.

A careful physical examination was instituted, which revealed his whole system at its physiological maximum, except the above mentioned trouble.

The mere suggestion of the use of an instrument for the examination of his throat seemed to cause a paroxysm, with a catch in the breath, resembling that due to the affusion of cold water on the upper portion of the body.

Dr. Miles at once suspected hydrophobia. The previous history of the patient regarding that affection was carefully investigated, with the following results: About twenty-five years ago he was bitten on the right index finger by a rat. This finger was amputated five years later on account of an injury sustained by a field battery. One year ago he was treated in this hospital for a broken leg, which united well. He also stated that he had a pet dog at his home which frequently licked his hands; and I may here remark that on his admission a sore was noticed on the stump of the patient's amputated finger of twenty-five years ago. I may also state that from latest accounts the dog is well, and presents no symptoms of hydrophobia.

Patient states that on Feb. 12, the day previous to his admission here, while drinking a cup of coffee at dinner, he experienced a sudden paroxysmal contraction of the throat, which caused a regurgitation of the fluid which was about to descend the œsophagus. He spent a sleepless night, suffering several times from a recurrence of the trouble.

Such is the history presented by the patient.

Let us direct our attention to the patient's condition on Feb. 13. At about 11 : 30 A. M., two and a half hours after the patient was first seen, I observed that cutaneous impressions, such as a draught of cold air, the contact of cold hands, etc., would throw the patient into a paroxysm, which two and a half hours previously was not the case.

At 2 P. M. the suggestion of a glass of water would also cause a convulsive constriction of larynx, pharynx and œsophagus, which was not noticed before; yet the patient expressed himself as feeling better. This was probably due to the effect of a hypodermic injection of one-fourth grain of sulphate of morphia administered at 12 M.

I went again to see patient at 3 P. M. He seemed much excited and exceedingly nervous, but by assuring him of my friendly attitude toward him he soon became calm and composed. While in that state I laid my hands gently upon the patient's arm to administer another hypodermic injection of the sulphate of morphia, when patient experienced another choking sensation, accompanied this time apparently by a severe sympathetic reaction of the whole nervous system. The patient jumped out of bed and eyed me in a peculiar, suspicious manner, combined with great fear. Kind words had the desired effect, and the patient was soon calm again, and I succeeded in giving him the hypodermic.

Patient was again seen at 6 P. M. Nothing new was noted, except great mental disturbance.

At 9 P. M. I again went to see patient, and was told by the night watchman that at his entrance in the ward the patient jumped out of the bed and ran in a corner of the room, appearing greatly frightened. I went up to him and my presence seemed to afford him great assurance of safety. Slowly and calmly, not infrequently interrupted by slight paroxysmal constriction of the throat, etc., he spoke of the snares and strategems which he imagined the other patients were laying to injure him bodily. He appeared totally irrational. I gave him another hypodermic injection of one-fourth grain of morphia sulphate.

At 12 M. patient seemed more rational, and he recognized and spoke to two acquaintances whom he had not seen for a year; still he was now quite nervous and in a high state of excitement. Dr. Miles then entered the room, and his presence appeared to pacify the patient somewhat, but only momentarily.

His paroxysmal attacks then followed in quick succession. His intervals of rest were short, but on being asked a question he would answer rationally enough. For the first time I noticed he hawked a great deal, at first producing a peculiar noise with his throat resembling the

œsophageal noise produced by violent, ineffectual efforts at vomiting. Following these hawking spells a quantity of viscid saliva poured from his mouth. A hypodermic injection of sulphate of morphia was again administered.

On Feb. 14, at 2 A. M., his hallucinations were not so great, delirium not so violent. The patient was lying down, and the paroxysmal attacks were slight compared to two hours previously. During the paroxysms he suffered from labored breathing instead of an acute choking sensation, as formerly. He was then more rational, but quite exhausted. At 3 A. M. he was more restless and would sit up in bed. Another hypodermic injection of one-fourth grain of morphia sulphate was given him, but with no effect. At 7 A. M. the patient's nervousness and excitability were still present, but were less intense; his paroxysms not so severe, but he was perceptibly much weaker. The dose of morphine was again repeated, again without any perceptible effect, when Dr. Miles ordered medicinal treatment to be suspended.

Patient remained about in this same state the rest of the day and night, and part of the following day, yet steadily growing weaker.

On Feb. 14, at 10 A. M., he vomited a brownish-green fluid. At 11 A. M. he drank voluntarily of coffee and milk punch. At 3 P. M. the patient died, apparently of exhaustion.

An autopsy was held three hours after death, with the following results: All the viscera were normal except the kidneys, the capsules of which were adherent at several points. The brain, spinal cord, and meninges were highly congested. The pia mater in places presented opaque patches of sero-fibrinous exudation.

In order to confirm the diagnosis, a bacteriological investigation was made by Dr. Ernest Laplace. All the steps in the investigation were made with all the minute care and precaution which are indispensable to the success of such examinations. A piece of the medulla was removed by

Dr. Laplace with an aseptic knife, and then put into a sterilized test tube. This substance was then made into an emulsion by rubbing it up with water. Some of this emulsion was injected by means of a hypodermic syringe, beneath the dura mater of two large rabbits, through a small aperture made through the skull with a small trephine. The wound made through the integument of the head of each rabbit was sutured and dressed antiseptically.

The time required for the development of rabies in rabbits inoculated with the virus is invariably from nine to eleven days. Death takes place, as a rule, on about the twelfth day. Neither of the animals inoculated by Dr. Laplace, however, succumbed to the inoculated disease. One of them was living at the end of two months, and the other died at the end of three weeks of suppurative meningitis, as shown by the autopsy.

The bacteriological investigation, therefore, gave only negative results, and does not mean absolutely that the patient could not have had hydrophobia. It would have been interesting if the results of Dr. Laplace's studies had confirmed the diagnosis; but, though there was a discrepancy between his results and the diagnosis ante mortem, still, in the opinion of those who saw the case, the clinical phenomena unmistakably pointed to hydrophobia.

Report of a Case of Rupture of the Male Urethra.

[By J. D. THOMAS, M. D., Professor of Genito-Urinary and Venereal Diseases, Western Pennsylvania Medical College, read at Allegheny County Medical Society.]

The case I beg leave to report is one of rupture of the urethra, in its fixed portion, from trauma. These cases do not occur very often, but they are of sufficient frequency to merit attention. Like cases of strangulated hernia, if not interfered with surgically early enough, they almost inevitably result in the death of the patient. The text books lay down certain rules of conduct to be followed, but I believe that a case from actual practice is more instructive, and often brings forward difficulties that

the text books may not touch upon; and, moreover, among gentlemen of much experience, such as compose the majority of the members of this society, the discussion may bring out points of very great interest and instruction.

J. S., aged 61, on April 3, at 7 P. M., of the present year, whilst standing on a ladder, with his back to the same, and in the act of stepping with one foot to the second floor of an out-building, accidentally slipped with the other foot that was upon the round of the ladder, and slid down backwards, and struck, with considerable momentum, his perinæum upon a pick handle that was resting against the ladder. When he struck upon the pick handle, he lunged forward, his body taking the handle with it for a moment, and then the handle projecting forward between his thighs as he fell forward on his face. He felt considerably hurt, but did not become faint. After resting awhile, he visited a drug store four blocks away, and purchased a lotion for application.

At 10 P. M., or three hours after the accident, he made an attempt to pass his urine, but failed, when he sent for me.

After getting the above history of the case, I made an examination of the parts, and found the following conditions: There was already some discoloration of the perinæum, but no abrasion. On his under drawers I found about a half dram of blood, that had evidently come from the meatus. There was no distention of the bladder, as he had passed his water immediately before the accident. All I did at this visit was to give the patient opium, and order him to bed.

April 4, 8 A. M.—The patient made an attempt to pass his urine, but failed. I then introduced a soft catheter, which passed to five inches, and, after a little delay, went one inch farther. On its removal, there was a little blood in the eye. I then substituted an ordinary silver catheter, which would not pass. This also contained some blood in the eye. Both of these efforts were made with the

utmost gentleness. At this visit there was some swelling and a good deal of discoloration of the perinæum and scrotum. Opium continued, and sitz baths ordered; no attempt at catheterization.

3 P. M.—Visited my patient, prepared to aspirate, if necessary, but he had urinated whilst in the bath some time before my arrival, and percussion over the pubes showed the bladder empty.

April 5, 8:30 A. M.—The patient passed four ounces of urine during the night; this urine was saved for my inspection, and it contained no blood. He passed a restless night, however, owing to the pain in the perinæum and scrotum. No distention of bladder. The scrotum is very large, and almost black from extravasation of blood; the penis is now also discolored. Opium, and the scrotum supported.

3 P. M.—Passed urine twice since morning visit, and feels comfortable, resulting, as he thinks, from the support given to the scrotum.

April 6, 9 A. M.—Passed two pints of urine, at intervals of two hours, during the night. The scrotum is immensely distended, measuring 16 inches in circumference; penis much swollen and discolored like the scrotum. Otherwise doing well.

April 7, 9 A. M.—During the past twenty-four hours the patient passed a fair quantity of urine, somewhat discolored with blood. The penis is reduced in size, but scrotum the same as before.

April 8, 8 A. M.—Two pints of urine passed since last visit. Patient complains sorely from the swelling in the scrotum.

11 P. M.—Suffers very much from the distention of the scrotum. I passed a large aspirating needle in three or four places over the scrotum, expecting to find effused blood in the vaginal cavities, but nothing but a little bloody serum was evacuated.

April 9, 8 A. M.—Passed a restless night. Some urine

passed per urethram, but the discharge from the punctures made in the scrotum the day before has a urinous odor; this last fact caused me to decide at once as to the necessity of opening the urethra in the perinæum.

2:30 P. M.—Operation. I attempted to pass solid instruments, in decreasing numbers, in order to have a guide, but failed. Fortunately, however, a soft instrument went past the obstruction, and this served the purpose. After cutting down upon the guide, a very free incision was made. On the right side of the urethra quite a slough was found. A soft catheter was then introduced into the bladder, through the wound, and permitted to remain. Four incisions were made into the scrotum—two on each side of the raphe. The operation lasted a little less than an hour, inclusive of anæsthesia.

April 10.—Patient doing fairly well. Scrotum reduced to 11 inches in circumference. No fever.

April 11.—Condition good. Evidence of a slough on the right side of the scrotum, at the seat of one of the incisions. Made two more incisions on the right side.

April 12.—Doing well. During the night the catheter became clogged, interfering with the discharge of urine. I removed the catheter, a silk one, and found it covered with incrustation, and the catheter material disintegrating. Passed a soft rubber catheter per urethram, and tied it in.

April 13.—In fair condition. Catheter removed, but to be introduced every three hours, to insure complete emptying of the viscus. Poultices to be applied over the slough on the scrotum.

April 14.—In splendid condition. All of the wounds looking well, including the sloughing one, which is cleaning off somewhat. Scrotum reduced to nearly normal.

April 15.—Doing well.

April 16.—Slough almost clean. Patient says he was a little chilly during the night, but no elevation of temperature has followed, and pulse is normal.

April 17.—Doing well.

April 18.—Doing well.

April 19.—Slough entirely clean.

April 20.—Wounds all doing well. Poultices discontinued.

April 21.—Doing well.

April 22.—Doing well.

April 23.—Doing well.

April 24.—Doing well.

April 25.—Doing well. Got out of bed today, and passed urine unaided for the first time.

April 26.—Doing well. Catheter to be passed twice in the twenty-four hours, as there is about three ounces of residual urine.

April 28.—Everything well.

April 30.—Everything well.

May 2.—Everything well.

May 4.—Everything well.

May 6.—All wounds on scrotum healed, and patient took a walk out of doors.

May 9.—Doing all right.

May 20.—Wound in perinæum healed soundly.

During the entire treatment the wounds were irrigated, frequently, with a solution of mercury bichloride 1 : 4000. After the perinæal section, the patient did not take a dose of medicine, as all of the functions were performed normally, and there was at no time an elevation of temperature. A full-sized steel sound was passed every third day, until the perinæal wound was perfectly healed, and occasionally afterward. The catheter was discontinued about the time the wounds were all healed, as the patient emptied the bladder perfectly by his own efforts.

In this case I appreciated, from the beginning, the fact that the urethra was torn, and stood ready to open the perinæum at any time, but, as the notes show, the patient was voiding urine in sufficient quantities, and presented no dangerous symptoms. I presumed, therefore, that nature had glazed over the rent in the urethra, and that the

patient would recover without a perinæal section. When I relieved the tension of the scrotum by multiple puncture (for this tension, I believe, was caused by capillary effusion), the urine was permitted to pass through the rent, which had, evidently, not become glazed over, and then it passed through the loose scrotal tissues, and gave the discharge from the punctures a urinous odor; for when the punctures were made there was no urinous odor to the fluid which was evacuated. There was, however, some infiltration in the neighborhood of the rupture, as the condition of the parts demonstrated at the operation.

We had in the case not only a rupture of the urethra, but of the deep perinæal fascia (known here as Buck's fascia) as well, for the urine passed directly to the scrotum, without first showing evidences of infiltration behind this fascia.

I would not advise the opening of the perinæum in all cases, simply because there was a rupture of the canal; but the moment infiltration of urine is suspected, operate immediately, and afterward pass full-sized sounds, until the healing of the wound has taken place.

Although this case could not have terminated better, an earlier operation, evidently, would have been proper.

Selected Articles.

THE RELATIVE VALUE OF THE DIFFERENT METHODS EMPLOYED IN PRODUCING HYPNOTISM AND INCREASING THE SUGGESTIBILITY, FROM A THERAPEUTIC STANDPOINT.

By Prof. Bernheim, of Nancy. Communication read at the International Congress of Experimental Therapeutic Hypnotism, August, 1889.

[Translated from the *Revista de Ciencias Medicas*, of Barcelona, by A. McShane, M. D.]

The hypnotic state is that particular psychical state susceptible of being provoked, and which increases suggestibility in various degrees; that is to say, the aptitude of being influenced by an idea accepted by the brain, and of realizing it.

Such is the definition which I propose for the word *hypnotism:* a definition more comprehensible than the one generally used, since to define hypnotism as a provoked sleep is to eliminate from it a series of cases of intense suggestibility, amounting even to hallucination.

Sleep, when it can be obtained in an undoubted manner, habitually indicates a state of profound suggestibility; but the hypnotic state is not necessary to produce suggestion. *Hypnotism without sleep exists.*

In order to demonstrate this I proceed sometimes in the following manner, with very responsive individuals:

I commence the hypnosis, or suggestion, rather, by movements or sensibility. I raise the subject's arm; it is catalepsy; I provoke contracture. Then I add analgesia, after which I induce hallucinations, or make him do acts, which he can not stop. All these suggestions are realized in a perfectly waking state; the individual retains his memory. Then I merely say: "Sleep," and he goes to sleep, as the result of a special suggestion, not necessary for the performance of the preceding acts. In regard to the procedures for provoking hypnotism, it may be said that they are as numerous as the hypnotizers themselves.

All these procedures are so different, so original, some simple, others complex, that they posses absolutely nothing in common, either as manipulations or as sensorial excitations. A singular fact is that the same brusque, luminous, or auditory impressions, the same slow and monotonous impressions, the same passes have often accidentally affected hpnotizable individuals without causing hypnosis; they caused hypnosis only when this was the special object of the manipulations. They may all succeed in a subject when he is warned beforehand, and it is really because only one element enters into all these procedures; that is, *suggestion.* The individual sleeps (or is hypnotized) when he knows that he ought to sleep, when he believes that he is going to sleep, and when he experiences a sensation that invites to sleep. It is his own faith, his psychic impressionability which puts him to sleep.

No doubt Braid could make persons go to sleep by directing them to fix their gaze steadily upon a brilliant object, without telling them that they were going to sleep. But fatigue of the eyelids is a sensation which, to many individuals, gives an idea of sleep. It is this sensation which suggests hypnosis.

The passes, the contact, the sensory impressions succeed only when they are associated with the idea expressed to the subject, or guessed by him, that he ought to sleep. The pretended hypnogenic zones do not exist. These may be artificially created in all individuals accustomed to hypnotism. I touch any point whatever of his body, and he sleeps; or, rather, I believe that there are certain definite points, and contact with these only will provoke sleep; and I believe that there are others, contact with which awakens the subject. All is due to suggestion. Passes, fixation of the gaze upon a brilliant object, and all kinds of contact are unnecessary; speaking alone suffices.

Gestures are merely useful to reënforce the suggestion by serving to concentrate the attention of the subject upon something plain.

All these procedures, then, are reduced to one, namely: suggestion. The problem is to impress the subject and make the object of sleep enter his mind.

Experience shows that the simplest and most effective medium of impressing the subject is speech. Some, though exceptionally, are so easy to impress that a single sentence is sufficient to provoke all the phenomena of hypnotism, with or without sleep. From the very first, and without having witnessed any experiment, I would raise the arm of such a subject, and say: "You can not lower it;" and, indeed, he could not. I would say to him: "Your body is insensible," and stick him with a pin, and he would show no signs of pain.

I might dwell upon the grave social and medical interest presented by the study of such extremely suggestible natures, which are by no means rare. Delivered up with-

out resistance by their organization to the annoyance of all conscious or unconscious suggestions which they may encounter, these natures are frequently irresponsible, and become either heroes or criminals, or alternately the ones or the others. They are fortunate, indeed, if the early suggestions of a well directed education can prevail against later injurious suggestions. It rests with the teachers to discover in childhood these highly suggestible natures, and to build up in their minds a resistance proof against future bad suggestions.

It is good for a person about to be hypnotized to witness the hypnotization of others, so that he may become imbued with the thought that everybody is susceptible of suggestion. It is prudent to keep timid ones from seeing the spectacle of hallucinations, or other emotional phenomena, until they shall first have been influenced themselves. They should be allowed to see only the mild beneficial effects of hypnotism.

When I have to deal with a very timid person, or one who has been frightened, I generally wait and do not try to coerce him. I simply tell him that hypnotism would be useful to him, and I show him the happy effects, and then wait until he (or she) requests me to apply hypnotism.

Hypnosis is generally easy; the subject is lying or seated upon a large chair. I let him concentrate himself for several moments, while I tell him that I am going to put him easily into a quiet, gentle sleep, like natural sleep.

I gently put one hand near his eyes, and say, "Sleep." Some close their eyes instantly, and are hypnotized; others do not close their eyes, but gaze fixedly, and present all the phenomena of hypnotism; others blink, opening and closing the eyes alternately. As a rule, they do not keep the eyes open a long time. If they do not close them spontaneously I keep them shut for some time; and if I still find resistance, I add: "Your eyelids are heavy, your limbs are asleep, sleep is coming; sleep!" It is rare for one or two minutes to pass without the occurrence of

hypnosis. Some subjects remain motionless and inert from the beginning; others try to recover, waking up, and opening their eyes every moment; I insist, keep the eyes closed, and say, "Continue to sleep."

The operator should be cool and self possessed. If he doubt his own power, or seem to doubt it, the subject, on this account, will experience a counter-suggestive influence; he will not sleep, or else wakes up. If it appear that it costs the operator much trouble to hypnotize the subject, the latter will think that he is difficult to hypnotize, and the more he dwells on the idea, the more does he resist the hypnotizing. Calmness, confidence, and simplicity in the procedures are the surest means of succeeding.

Some operators, who have not had sufficient experience, allow themselves to be influenced by the signs of the subject, such as laughing, gesticulating, opening the eyes, speaking, and, on this account, consider them refractory. They forget that the subject is a conscious being, who hears, and who appreciates all the influences of his surroundings. Every day I teach my hypnotized alumni that they laugh when anything funny is said; there are even some who seem to simulate, and inexperienced observers think that the subjects are making fun of them. Notwithstanding, I demonstrate that these subjects are analgesic, have hallucinations, and are amnesic when they wake up.

The majority of hypnotic individuals, however, when they are not drawn out of their stupor, remain inert, impassible, with a serious countenance, the forehead wrinkled and having a characteristic expression; but they continue to be conscious, in spite of this type of inertia.

Whatever procedure may be adopted, every operator will acquire the habit of changing his methods and adapting them to the psychic individuality of each subject. Gentleness succeeds best in some cases, brusqueness in others. Closing the eyes, friction of the eyeballs, prolonged, continuous, and monotonous exhortation, an authoritative tone

of voice, a material suggestion, such as heat, concentrating the attention upon one sensation, and making the sensorium captive so that it can not be distracted by other objects, all these are not subject to any fixed rule. Every operator fashions, in the course of time, his own *modus faciendi.*

In Nancy, Drs. Liébault, Beaunis, and Liégeois, as well as myself, has each his own particular manner of operating by suggestion. It is also a question of personal sagacity and psychical observation. Hypnotism may be taught on a large scale under good direction, just like auscultation, laryngoscopy, or ophthalmoscopy. He is no hypnotizer who has merely hypnotized two or three persons who could hypnotize themselves; but he may be considered a hypnotizer who, in a hospital in which he has authority over the patients, has influenced eight or nine individuals out of ten. In proportion as this result is lacking, he should reserve his conclusions, and consider that his education is not yet complete.

A word on awakening the hypnotized subjects. It takes place in the simplest manner possible by suggestion. Usually I say to them: "It is finished; wake up!" The most of them wake, but some seem to have some trouble in doing so, at least in the first few sittings. It seems that they do not hear the command. They have not enough initiative to emerge spontaneously from the hypnotic state. Then I say to them: "Open your eyes! You are awake." Or, reënforcing the suggestion by means of a material practice I direct an assistant to touch any part of the head or body, and say: "It is only necessary to touch this point in order to make him open his eyes immediately." This measure hardly ever fails. It suffices that I merely touch or press the place mentioned; the patient immediately wakes. I never employ frictions or insufflations upon the eyes. Waking becomes a very simple matter, when it is remembered that it is all due to suggestion.

It sometimes happens that certain individuals who are

hypnotized and easily aroused by one magnetizer, fail to respond when they are in the hands of a person not very well versed in hypnotism.

This is what takes place in such a case. The inexperienced operator desires to awaken the subject, but the latter does not wake up immediately. The operator becomes uneasy, and shows his perturbation; he rubs and blows on the eyes, and strains himself over the subject. The subject, a silent witness of the efforts and anxieties of those around him, becomes confirmed in the idea that it is difficult to awaken him until the arrival of the man in whom he has confidence, or who operates with more certainty.

A command does not always succeed in arousing the subject; a quiet and positive affirmation that the subject is going to wake up succeeds. If I dwell upon this fact it is to show with how much reason I say that all is owing to suggestion.

Hypnotism, from a medical point of view, has for its object to increase suggestibility and to place the cerebro-spinal system in such a state that suggestion incites it to perform acts conducive to cure.

Suggestion may take place without hypnosis. In subjects rebellious to hypnotic phenomena, we can, notwithstanding, practice therapeutic suggestion on them. I obtain notable effects without sleep; I request the patient to close his eyes and concentrate his attention upon me; I endeavor to impress him and enchain his will, and I affirm to him that certain functional disorders have disappeared. It is suggestion by speaking, without hypnotism.

This suggestson should be adapted to the individuality of the subject; the speaking should be repeated, and should be based on theories that the individual might understand, and accompanied with gestures, friction of the affected part, suggestions of heat, etc., intended to concentrate the attention, to fix the mind, and to materialize the idea, so to speak, into a physical sensation.

Sometimes the suggestion of a functional disorder, of an

acute pain, may act instantaneously, either definitively, or only during a certain time; at other times the disappearance is gradual, after prolonged sittings; this depends upon the nature of the disorder, and the degree or kind of suggestibility.

Hypnotism and speaking do not enjoy a monopoly of suggestion. This may be produced by other agencies; in all times it has been practised by all physicians, consciously or unconsciously. Purging with bread-pills, the cure of convulsionists through fear of the guardians of public safety, sleep produced by peroxide of hydrogen, the miraculous water of Lourdes, the practices of the faith healers, of hydrotherapy, of metallotherapy, of electrotherapy, of secret ointments, of the granules of Mattei, of homœopathy, of suspension of persons afflicted with locomotor ataxia, act either wholly or partly by suggestion. No doubt, hydrotherapy and electrotherapy have themselves an undoubted action upon the functions of the organism, but this action is imperfectly known, and the statements of authors concerning the therapeutic value of these various methods are vague and conflicting, precisely because they did not eliminate the element of suggestion.

Electricity frequently relieves pains, neuralgias, rheumatism, lumbago, nervous aphonia, etc., when I state to the subject that the symptom ought to disappear under the influence of electricity, at the same time fixing his attention upon the effect obtained while the agent is being applied.

Electrization, accompanied by suggestion, may succeed, where suggestion alone would fail. One of my patients suffered for several months from atrocious lumbar and sciatic pains. I electrized him, and used suggestion (in the working state), and the pain disappeared at each sitting, though only for several hours. Then I tried hypnotic suggestion; the individual reached the second stage, but the effect obtained was less. The patient had more confidence in electricity; he suggests to himself that

hypnosis alone has no action upon him. I resorted to electricity again, and cured him completely in two or three weeks.

In metallotherapy I have only observed a purely suggestive virtue. Many times have I applied metals or magnets to the anæsthetized skin of hysterical patients, without telling them anything, and, while they were unable to see what I was doing, no effect was ever produced. Then I would place the same metal in her hand, and say to the subject, or to the assistants: "I am going to apply this metal (or magnet) to her hand, and, in three minutes, she will recover sensibility in the hand and half of the forearm." By acting in this way I frequently obtain the desired result.

The suspension of ataxic patients has lately created a great stir. The surprising improvements obtained have been attributed to changes in the circulation in the spinal cord, or to the stretching of the nerves. From the beginning I thought that suspension constituted an eminently suggestive apparatus. Dr. Hans Halser, chief of clinic of my colleague Spillman, has tried the method in a great many cases, and has obtained happy results, not only in ataxic patients, but also in other varieties of myelitis, in rheumatism, hysteria, nocturnal incontinence of urine, and in the most varied neuroses; but he concludes that suggestion plays the most important curative part, if not exclusively so, in the new method.

In order to eliminate the hypothesis of a muscular modification, or a nerve stretching, I have tried horizontal suspension. The subject is elevated horizontally by a belt around his body, while his feet and arms were raised by means of bracelets. Under these circumstances there is no congestion or stretching, and, nevertheless, I have obtained notable cures. An alcohol paraphegic, who could neither walk nor stand up without support, was able, after a few suspensions, to walk around without assistance.

A sufferer from sciatica, who had already failed to ob-

tain relief from suggestion, quickly improved after several suspensions; and this patient, who had been confined to her bed for several weeks, could rise up again. A diffuse myelitis, with absolute paraplegia, improved after ten sittings. A hysterical hyperæsthesia of the abdomen, accompanied with vomiting, disappeared after two sittings. Suggestion alone, embodied in some impressive material manipulations, has produced these results.

Modern medicine, too much influenced by organic ideas, tries to explain all the mysteries of life by mechanics, physics, and animal chemistry. Notwithstanding spirit is something in the human organism, psycho-biology exists, and there is also psycho-therapy.

From all this I think I can deduce that suggestive therapeusis rests upon the undeniable evidence of the influence of spirit upon matter. The influence of the mind upon digestion, nutrition, respiration, heart movements, the secretion of sweat, urine, bile, etc., upon the excretions, menstruation, etc., is well known; as all of the organs, and all of the functions, are in automatical and physiological relation with cerebro-spinal centres, every point of the body, so to speak, has its connection with a nerve cell. Every cerebral cell actuated by an idea tries to realize this idea by putting into activity the nerve fibres corresponding to its realization. The idea tends to transform itself into an act. The whole of suggestive psycho-therapeutics is based upon this physiological fact.

The hypnotic state created by suggestion, suppressing the intellectual initiative, increasing the cerebral automatism, increases in its time the suggestibility, that is to say, the attitude of transforming ideas into acts.

Hypnotism is only one of the means employed to facilitate suggestion; it is the most efficacious, and at times the only efficacious auxiliary to therapeutic suggestion.

Suggestion in the waking state, or by different material practices appropriate to each individuality, does not really differ, in regard to mechanism, from hypnotic suggestion.

Whatever be the moral cause that incites the psychic nervous centre to intervene to modify usefully the organic functions of our bodies, the dynamic mechanism of suggestive therapeutics is always the same.

It is faith that saves, and the most skeptical always have faith (I no not refer to religious belief); they cannot shake it off, just as we can not shake off the hallucinations of dreams. Credulity (I do not refer to creeds), is inherent in the human spirit. By means of this the human spirit is the great artificer of miracles.

Hospital Reports and Clinical Notes

A CASE OF ANGINA PECTORIS SUCCESSFULLY TREATED WITH ANTIPYRINE.

[By E. Denegre Martin, R. S. Service of Dr. J. H. Bemiss.]

The subject of this sketch was a well educated man, of more than average intelligence; and thinking that his own language would give the most forcible and exact description of his sufferings, I requested him to write a short history of his case. He handed me the following:

"My father has suffered from angina pectoris since he was 21 years of age. I have been afflicted with the same disease for fifteen years, and think it is hereditary, as all of my family have suffered more or less in the same manner. I suffer more when my general health is impaired than at any other time. The first symptoms are acute pains in the region of the heart, followed by sharp cutting pains, running up the spine to the base of the brain, with spasmodic contractions of the muscles of the throat, giving rise to a choking sensation. The pain in the region of the heart made me fell as though somebody had placed my heart between two colanders, and were trying to squeeze the blood out. Then follow severe convulsions, lasting during the paroxysms, which are usually of from fifteen to twenty minutes' duration. On one or two occasions I have been unconscious for several hours, but

never so long as from the present attack. In 1883 I suffered so severely that I was almost an invalid for six months. It was in this spell that I first used antipyrine and tincture of digitalis. Up to that time I had always used chloral during, and bromide of potash after the attack. For the past five years I have always used nitrite of amyl during, and antipyrine after the attack, and always with beneficial results."

The above is the patient's own account of his malady, and the treatment. He first came under my care in August last, and just at the end of the severest spell he has ever had. He was unconscious when brought to the ward. He had been brought to the hospital in the ambulance the night before, and had been given by the students in attendance morphine and trinitrine; neither had had the slightest effect. All this I learned several days later. When I first saw him he was in a paroxysm of pain. Five drops of the nitrite of amyl were given by inhalation; the effect was almost magical. I then ordered a large dose of antipyrine with digitals to be given, with a view to diminishing the reflex functions, and ordered the same to be repeated three times daily. I did not at the time know that the patient had already used antipyrine. On the arrival of the physician of the ward, Dr. Bemiss, we visited the patient, and finding him returned to consciousness, I was advised to continue the same treatment. On the third day the antipyrine was stopped, but the patient complained of pain on the fourth day. The same treatment was again employed, and in ten days the patient expressed himself as feeling better than he had felt for some time.

I have under my treatment now another case of angina pectoris, but I regret to say that I can not claim the same results here from the use of antipyrine, for my patient is more inclined to exaggerate the symptoms. She was admitted for malarial fever. My observation is that, as her health improves, the symptoms of angina are less marked. From the history of these two cases we might

conclude that malaria, and probably other causes as well, will bring on these attacks, and it is possible that the good effect of antipyrine was due as much to its antipyretic qualities as its action upon the nervous centres.

Leading Articles.

THAT CASE OF YELLOW FEVER.

On Oct. 3, 1889, the serenity of the city of New Orleans was somewhat disturbed by the report that a man had died of yellow fever on that day. The victim was Mr. Enrique De Villa, the consul of the United States of Colombia. He had been in the interior of Central America, and returned to New Orleans by way of Livingston, a port of Guatemala, where he boarded the steamship City of Dallas, Capt. Galt. The history of the case is best set forth in the words of Dr. S. D. Kennedy, president *pro tem.* of the state board of health. The secretary of the board telegraphed the facts to Surgeon General J. B. Hamilton, M. H. S., and then wrote him a letter At the same time letters were written to all of the state boards of health, in accordance with the resolutions adopted at the conference held at Toronto, Oct. 5, 1886, to report promptly any case of yellow fever that may appear in our midst.

Dr. Kennedy's report is as follows:

To the members of the Board of Health of the State of Louisiana: Gentlemen—I beg to submit the following report in regard to the death of Mr. E. De Villa, which occurred at No. 149 Decatur street, on Oct. 3, at 11:35 o'clock in the morning.

A about 10 o'clock that morning (Oct. 3), Dr. J. C. Castellanos called at this office and left a note, stating the existence of a suspicious case at No. 149 Decatur street, and inviting the board to take such steps as were proper. I received this note a few moments after it was written and proceeded at once to the designated place, arriving there while Drs. Castellanos and Matas were in consultation. These gentlemen informed me that in their opinion there was no doubt as to the nature of the case—it was genuine yellow fever.

I suggested, before making official report to that effect, it would be proper to call in the board of experts, and this was immediately agreed to. Then, accompanied by the physicians, I was shown some of the vomited matter also. Calls were immediately issued from this office to several of the members of the board of experts, and 2 P. M. fixed upon for the consultation.

In the meantime, owing to the very suspicious nature of the case and anticipating the decision of the board of experts, Dr. Blanc, chief sanitary inspector of the board, was instructed to be in readiness to make a thorough disinfection of the premises.

News of the fatal termination of the case was received at 12 o'clock, and Dr. Blanc and his assistants immediately went to the residence of the deceased and began the work of disinfecting. The details he will himself give you; suffice it to say that every part of the premises and all the contents were thoroughly treated, the officers remaining until after the removal of the body, and they then redisinfected and fumigated.

At 5 in the evening the board of experts brought in their report, hereunto annexed. Instructions were issued to have the burial before night, and these were carried out, the officers accompanying the remains to the cemetery.

The main facts were immediately telegraphed by Dr. Salomon to Dr. Wilkinson, and Dr. Hamilton, of the United States marine hospital service, and to the various state boards of health, the details being forwarded by mail.

The history of the case, furnished by Drs. Castellanos and Matas, shows that Mr. De Villa was sick while on the ship—probably even before reaching the Mississippi river quarantine. In the latter case, how the illness escaped the notice of the quarantine officer is a question for your serious consideration. In order to obtain information in this connection, the following telegrams were sent:

NEW ORLEANS, Oct. 3, 1889.

Dr. Harry Hayward, Mississippi Quarantine: Passenger on the City of Dallas, Enrique De Villa, from Livingston, died this morning from yellow fever. Was sick on arrival of the vessel. Send by first mail captain's affidavit.

S. D. KENNEDY, Acting President.

This was answered as follows:

QUARANTINE, Oct. 3, 1889.

Dr. S. D. Kennedy, New Orleans: Passengers and crew of the City of Dallas inspected by me after disinfection of baggage. Nobody sick at time of release. Clean bills from all ports. Captain made affidavit that there was no one sick during the voyage. Will forward papers.

HARRY HAYWARD, M. D., Assistant Physician.

This was then sent:

NEW ORLEANS, Oct. 4, 1889.

Dr. Harry Hayward, Mississippi Quarantine: Wire date and hour of the arrival of the City of Dallas. Did Mr. De Villa appear on deck at inspection?

S. D. KENNEDY, M. D., Acting President.

Answered:

QUARANTINE, Oct. 4, 1889.

Dr. S. D. Kennedy, New Orleans: Dallas arrived 6:30 A. M., Oct. 1, released 10 A. M. same day. Mr. De Villa appeared on deck, and apparently well on inspection.

HARRY HAYWARD,
Assistant Physician.

I have since received a letter from Dr. Hayward, in which he states positively that if Mr. De Villa arrived here sick, he must have been taken ill after leaving quarantine. He has forwarded also the Dallas' bills of health, with consular certificate and the captain's affidavit. I have also

Dr. George Huhner's certificate from the mate of the Dallas, to the effect that there was no sickness on board between the quarantine and the city. Nevertheless, there can be no reasonable doubt that De Villa was ill several days before reaching here. Whether the affidavits of the officers of the vessel were made in genuine ignorance of the fact or not is a matter for your special consideration.

In any event, the occurrence of this case can in no way be regarded as a reflection upon the present system of quarantine, or upon the management of the station.

Granting this, it follows that the importation of this case demonstrates that, even at this late season, it is unwise to permit the carrying of passengers to this city by fruiters not subject to detention at quarantine.

The whole matter is now in your hands, for such action as you deem proper. Very respectfully,

S. D. KENNEDY,
President *pro tem.*

The promptness with which the officers of the board took measures to prevent the spread of the disease is highly commendable. Away down in the depths of our soul we feel that there are many people, especially in rival seaports, who fling back at us this question: "Why did not the inspecting division of your health service show as much zeal and promptness in keeping out the disease?"

A careful review of the facts of the case will convince any fair minded man that the quarantine inspectors were not derelict in their duty.

An investigation was instituted by the board through its attorney. The facts brought out by the investigation cleared the captain of all blame. It was shown that Mr. De Villa had never acted like a very sick man. He walked about, after his chill, like the other passengers; and the testimony of the steward (or waiter) showed that Mr. De Villa took his meals at table with the rest of the passengers, and did not mope around like a man who felt in any way sick. Neither the captain nor crew thought of Mr. De Villa as a sick man, and when he presented his bills of health to the quarantine officer he made affidavit that there was no one sick aboard. The officer, Dr. H. Hayward, then inspected all on board. Mr. De Villa stood in line with the rest. Finding no one visibly sick, Dr. Hayward allowed the vessel to proceed up to the city, where she arrived at 8:30 P. M., Tuesday, Oct. 1. The passengers left the vessel, and Mr. De Villa went to his office and residence, No. 149 Decatur street. On Thursday, at 11:35

A. M., he died, say, about forty-eight hours after passing inspection at quarantine.

Five days after leaving Livingston Mr. De Villa was in New Orleans; on the third day after his departure he had a chill. Coming directly from Livingston, or other Central American ports, these fruit steamers can make the run in less than ninety hours. How long is the period of incubation of yellow fever? In Pepper's "American System of Medicine," Dr. S. M. Bemiss, of honored memory, writes:

"The periods of time which may intervene between exposure to yellow fever poison and attacks of the disease are extremely variable. The shortest period of incubation which has come under my observation was about twenty hours. In three cases, in which I was able to fix the hours of first exposure with precision, attacks followed in 72 hours, 83 hours, and 101 hours, respectively. Of fifty-five unacclimated physicians who exposed themselves at Memphis during the epidemic of 1878, fifty-four suffered attacks of yellow fever. In these cases the periods of incubation varied from one to twenty-five days, the average duration being ten days."

Rational quarantine detention must be based upon a knowledge of the period of incubation of the disease that it is proposed to exclude. When the time required for transportation from an infected locality to New Orleans is much less than the average period of incubation of yellow fever, then a fatal defect exists in the system or regulations; and no amount of vigilance at the outposts will avail. How can yellow fever be completely excluded, when a person can have the *materies morbi* in his system when he undergoes inspection? When the carrier of the infection reaches the city the disease will declare itself. But the enemy is already within our gates, and confidence in the strength of our outworks is shaken. The crucial point is touched upon towards the end of Dr. Kennedy's report, when he says: "Granting this, it follows that the importation of this case demonstrates that even at this late

season it is unwise to permit the carrying of passengers to this city by fruiters not subject to detention at quarantine."

What is the lesson of this case? It shows that while the system of *maritime sanitation*, inaugurated by Dr. Jos. Holt, and continued and improved by Dr. C. P. Wilkinson, is capable of preventing the introduction of yellow fever by means of vessels, or cargoes, there is still one part of our quarantine service that has not kept pace with the rest in the onward march. Some years ago all passengers coming from the yellow fever zone were detained five days. That was a wise plan. At one time no passengers at all were allowed to come in on the fruit steamers from the Central American main, from May to November of each year. The restriction was removed (unwisely, we think), and this case of yellow fever rudely recalls our attention to the weak spot in our armor.

We have a board of health, composed of intelligent and progressive men. They have solved the problems connected with yellow fever before, and they are able to meet the one that now confronts them. The actions of this board and its predecessors have done much to remove the feeling of distrust towards Louisiana that was formerly entertained on all sides. The authorities do not conceal anything; on the contrary, they strictly carry out their promise to publish any cases of yellow fever that may occur, but more, they *impress, by their conduct, the fact that they are amply prepared to meet any emergency that may arise.* They fear no criticism, they need no help or interference. Mistakes will occur, however, in all things human. This late accident need not shake the confidence of our neighbors, for our board is both able and willing to close the breach in our defenses, and guard the Mississippi Valley against the intrusion of the dreaded monster.

AGRICULTURE AND DISEASE GERMS.

At the recent congress of hygiene (*Journal de Médecine et Chirurgie Pratiques*), Grancher and Richard

showed that pathogenic microbes are found in great numbers in the soil; the superficial layers are extremely rich in germs, but at a certain depth there is a point at which the number diminishes abruptly, and it continues to diminish until they disappear completely. This depth varies from 30 inches to 8 feet.

The duration of the germs in the soil may be prolonged, but they may there find causes of death. Dessication is the most active of these, after which comes elevated temperature; then the action of saprophytes or, microbes, that live upon the products of decomposition, and finally the action of light. This last is so energetic that the best method of destroying pathogenic germs, outside of direct disinfection, consists in allowing it to fall on substrata, or culture-media, in which intensive cultures are being carried on; it is thus that tilling the soil acts in malarious localities. But when a certain district has lain undisturbed for a long time ploughing at first causes an enormous pullulation of germs. *This has often been noticed with regard to yellow fever*, according to Grancher and Richard.

The passages through which germs infect man are the air (by means of the dust) and water. When water, however, has been purified by passing through a sufficient thickness of earth, it does not contain any germs; but there may happen to be fissures in the protecting layer of earth, and through these the germs may infect the water.

The work of the hygienists is constantly bearing good fruits. Preventive medicine is engaging the attention of all investigators; for the world has realized the force of the old saw, that an ounce of prevention is worth a pound of cure, and all thinking men are impressed with the necessity of applying this piece of wisdom to the human family on a large scale.

One of the results of the studies of Grancher and Richard is the fact that working the ground destroys the pathogenic micro-organisms. The fact embodied in their statement, namely, that cultivation prevents disease, has

long been known. The deadly Campagna, near Rome, was at one time the scene of great activity, and not a menace to health, but the downfall of the Eternal City, and the subsequent sleep of the dark ages, caused the Campagna to be neglected; and, instead of being the scene of brightness, it came to be regarded with fear and shuddering. Now, however, the drainage works constructed by the Italian government will again deprive the place of its terrors, and make it fit for happy homes. In our own country, the recent great activity manifested in the Yazoo delta, in the state of Mississippi, has borne out the statement of Grancher and Richard.

The rich, virgin soil of this region has caused a great influx of farmers. The breaking of a large area of new ground has given rise to the proliferation of malarial germs, and the number of cases of malarial hæmaturia in that region has been striking. Much, if not all, of the land in that delta is bottom land, containing a large amount of organic matter, which renders the soil highly productive, but furnishes at the same time a suitable medium for the development of micro-organisms. When the surface of the new soil is broken the fresh earth exposes sleeping germs to the atmosphere; they pullulate at a lively rate, and those who are the pioneers have to withstand the assault of the newly hatched brood of disease-makers. All new stretches of country have to go through this ordeal. We can not see how they can evade it. Grancher and Richard have shown how the thing comes about; it is now in order for them to show how this bitter initial experience may be averted.

Scoffing, "practical" men may sneeringly remark that science is here following experience with a very limping gait. No matter; every ray of light shed on any obscure question regarding human health will, at some period, give life to ideas that will redound to the benefit of mankind. In 1882 Koch discovered the cause of tuberculosis. Have we yet found a remedy, specific, for consumption? No;

but does any rational man fail to perceive that a gigantic stride in advance has been made, and that Koch's discovery has shown us in what direction we must look for a remedy for this frightful disease?

The remarks of Grancher and Richard, with regard to yellow fever, are of particular interest to us, Louisianians. We regret that we have not the full text of their discourse; but we gather from the materials at hand that the germs of yellow fever are *capable of living in the soil*, and that the *turning up of the latter starts a fresh crop of germs*, and it requires no very acute mind to see in these an explanation of a fresh epidemic.

In New Orleans we do not find the conditions necessary to test the accuracy of this statement thoroughly. When a yellow fever victim is buried, his grave remains undisturbed, and the yellow fever germs are, perhaps, destroyed by the saprophytic organisms which abound in our damp and decomposing soil. Our cemeteries, it is believed, have never been found guilty of having started a fresh epidemic of yellow fever. New Orleans, though, is hardly the place to apply the test of Grancher and Richard's statement, for it is a settled fact that yellow fever will not originate here spontaneously, but that it must be imported in order to make a starting point for an epidemic. But, if they are right, then hygienists will have to regard the soil as a very prominent factor in dealing with the yellow fever problem. What do the learned writers propose as a remedy? Nothing, as far as our reports show us. They have left undone, in this matter, what Koch left undone in tuberculosis. The hiatus still exists, and the importance of filling it might well arrest the attention of Sternberg, or any other earnest student of yellow fever,

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We beg to acknowledge the receipt of the following:

The trustees of the Philadelphia Polyclinic and College for Graduates in Medicine request your presence at the laying of the corner stone of the new hospital, on Lombard street, west of Eighteenth, at 3.30 P. M., Saturday, Nov. 2, 1889, with Masonic ceremonies, by the R. W. Grand Lodge of Free and Accepted Masons, of Pennsylvania.

The American Academy of Medicine is endeavoring to make as complete a list as possible of the alumni of literary colleges in the United States and Canada, who have received the degree of M. D. All recipients of both degrees, literary and medical, are requested to forward their names, at once, to Dr. R. J. Dunglison, secretary, 814 North 16th street, Philadelphia, Pa.

We have been notified of the change in the management of the *Gazette de Gynécologie*. Dr. P. Ménière, whose health has been very bad for some time, has transferred his journal to Dr. Philippeau, and has retired from the practice of medicine.

CORRESPONDENCE.

BUENA VISTA, Ark., Oct. 22, 1889.

Editors Medical and Surgical Journal:

Having myself been a sufferer from pruritus ani for four years, I desire, through the medium of your excellent journal, to offer a formula of my own, from which I obtained signal relief:

℞ Hydrargri bichlorida ..... gr. xv.
Aquæ ..... ʒ iv.
M. Sig.: Apply locally.

I have used many remedies, but none has given so much relief as this. I do not claim that this will give immunity against the affection, or that all cases will be entirely relieved by it, for this disease is difficult of cure, even in the hands of the wisest surgeons. See chapter xiv, page 94, Diseases of the Rectum, by Mr. Allingham.

That this may come under the eye of some whose duty it is to relieve "painful itching of the anus," with the assurance that he will greatly mitigate this "distressing malady," is my only excuse for troubling you. Yours truly,

E. L. DAWSON.

WEAVER'S STATION, Ala., Oct. 24, 1889.

Editors Medical and Surgical Journal:

In compliance with your request to write an article on the treatment of "snake bites," will give you my plan of treatment: Away back in the sixties I saw an article on the "bites of snakes and insects," stating that the poison, by analysis, proved to be an acid. I conceived the idea that an alkali would neutralize it. On being called to my first case, I tried my plan, which is this: Open wound or wounds caused by tooth, etc., with a small lancet, or some suitable instrument, wide enough to introduce, or pack, into the cut bicarbonate of soda. Renew the application frequently, until the blood changes from the dark to its natural color. Dampen the soda with water and apply over and some distance around the wound. Give, internally, one teaspoonful of soda in water, and repeat the dose if necessary, which will seldom, if ever, be the case. I have never used any kind of spirits in the treatment, and do not think it of any curative value, as I have seen several cases of such bites that had been made very drunk before my arrival, and which had been growing worse all the time. Stopping the whiskey and using the soda would relieve them in fifteen or twenty minutes, and they would continue to improve until entirely well. S. C. HARVY, M. D.

ABSTRACTS, EXTRACTS AND ANNOTATIONS.

MEDICINE.

URÆMIA, AND ITS RELATION TO THE ALKALOIDS AND EXTRACTIVE ACIDS OF THE URINE.

[J. L. W. THUDICHUM, in the *Medical Press and Circular.*]

Traube explained the nervous phenomena of uræmia by the appearance of œdema of the brain and anæmia. According to Thudichum's view, these phenomena are due to the urinary alkaloids and the products of their decomposition, which, by their retention, give rise to these symptoms.

Thudichum used, as reagents for the alkaloids, phosphomolybdic acid and phosphotungstic acid. By means of these he found six alkaloids in the urine: 1, creatinin; 2, urochrome; 3, reducin; 4, uretheobromin; 5, an alkaloid that forms an insoluble precipitate with zinc; and 6, an alkaloid that contains an aromatic nucleus, and which combines with platinic chloride.

In the healthy subject these alkaloids contain from 3 to 5 per cent of the nitrogen excreted; but in disease they contain 40 per cent and more.

Thudichum can not ascribe any positive role to the extractive acids in the uræmic process. He deems urea toxic when the cerebro-spinal fluid contains not less than 2 per cent of it.

Treatment should be directed toward securing free diaphoresis; purgatives should also be given, but should not cause disturbance of digestion.—*Deutsche Medizinal Zeitung.*

SINGULAR CAUSE OF DIABETES MELLITUS.

Dr. Ivan Michael (*Deutsche Arch. f. kl. Med.*) reports a case of diabetes mellitus which, in its etiology, is perhaps without a parallel. A strong, young man of 20 acquired a moderately severe diabetes mellitus without any apparent cause. When the disease had lasted about three months the patient sought medical aid on account of weakness and torturing thirst. While in the hospital he had inflammation of the middle ear and left side; but his general condition was so much improved at the end of three months that he requested to be discharged. He returned in a few days, however, with another attack of inflammation of the ear, and an extraordinary loss of strength. The patient died in coma two days after his return to the hospital—about six months after the beginning of the diabetes. The urine, when the patient first came under observation, contained 2½ per cent of sugar. It gave a marked acetone reaction.

At the autopsy the cause of the diabetes was seen to be a free cysticercus racemosus in the fourth ventricle. There were numerous granulations and polypoid growths springing from the ependyma of the fourth ventricle. A remarkable feature of the case was that, outside of passing headaches, there were no symptoms that would indicate

an affection of the central nervous system. This was doubtless due to the slow growth of the intruder. According to Prof. Steinbrügge, inflammation of the middle ear is by no means rare in diabetes.

Several cases of cysticerci in the fourth ventricle have been recorded, but none of them had mellituria. One case, however, had diabetes insipidus.—*Deutsche Medizinal Zeitung.*

CONTRIBUTIONS TO THE LITERATURE OF TETANUS.

1. Telluric origin of tetanus.

Dr. Paul B. Bassano (*Révue de Médecine*) says that Nicolaier has already made the observation that animals inoculated with infected earth died four days after the inoculation; and that pus from these animals, when inoculated into other animals, caused death on the following day. Dr. Bassano repeated Nicolaier's experiments, and obtained the following results:

Three similar infectious pieces of earth were inoculated into three series of guinea pigs. The first animal died at the end of four days; the second, inoculated with pus from the first, died in twenty-four hours, with very marked tetanic phenomena; the third, inoculated with pus from the second, died in thirty or forty hours (oftentimes later in some series); the fourth died at the end of three days; the fifth finally withstood the inoculation of pus from the fourth animal. The fifth presented often very light symptoms of tetanus, which lasted only forty-eight hours.

In another series of experiments, Bassano obtained somewhat different results, since the first seven guinea-pigs were not affected by the inoculations. It so happened, however, that the first experimental animal furnished very little pus; so that the subsequent inoculations had to be made with pieces of tissue clipped from the edge of the wound. But when these "terminal animals," which had become refractory to the disease, were inoculated with some of the infectious earth originally employed, they died of tetanus, not, however, at the end of four days, but six days after the inoculation.

2. Etiology of tetanus. Dr. J. Lumniczer, in *Wiener Med. Presse.*

The nature of tetanus has recently been the subject of earnest and profound study. For the purpose of clearing

up this question, a number of experiments were made on rabbits and mice. The materials used for inoculation were pieces of tissue and saturated tow from the wound of a man, aged 27, who had died of tetanus supervening upon a gunshot wound of the hand. The animals that were inoculated with pieces of tissue, under strict antisepsis, showed merely a slight local inflammatory reaction; but those inoculated with pieces of the tow presented, in from twenty-four to forty hours, the plainest symptoms of tetanus, ending fatally. The same was observed when the inoculations were made with particles of tow that had already been used once, or with the pus that formed around the tow. When the animals were inoculated on the back, the hind legs would be first affected; but when inoculated between the two shoulder blades, the fore leg nearer to which the inoculation had been made was the one which first showed tetanic symptoms. When the matter was inoculated into the side, pleurosthotonos followed; when into the abdominal region, the body was bent forwards. Inoculations with the blood of inoculated animals that had succumbed, gave no results.

In regard to the bacillus of tetanus, it was evidently present upon the wadding of tow that had been in the wound. The bacilli found on the tow produced numerous colonies; undoubted cultures were made, but neither the blood nor the organs gave rise to colonies. The causation of tetanus by means of infection with the tetanus bacillus can no longer be regarded as doubtful.

3. Tetanus treated with curari. Dr. F. A. Hoffman, in *Deut. Arkiv. fur Klin. Med.*

Although the favorable course of tetanus in a young gardener, who had stuck a splinter into his finger, might with some doubt be attributed to the curarin, still, in the clinical record of another case treated by Prof. Boehm, the effects of his new preparation of curarin were evident. With ordinary doses the respiration became irregular; in larger doses peculiar spasms of the muscles of the lower jaw appeared, increased flow of saliva, and hiccough. The maximum doses employed were twelve milligrams ($\frac{1}{5}$ grain) subcutaneously. When the disease lasts a long time the patient quickly becomes accustomed to the drug; at first one or two milligrams had as great an effect on the pulse (falling from 76 to 48) as four and a half milligrams had later on. The constant decrease in the pulse

rate and respiration after small doses is striking. If any danger on the part of the heart arise the drug is contraindicated. Curarin has the advantage over curare in that it does not give rise to acceleration of the pulse.—*Deutsche Medizinal Zeitung.*

CHRONIC PERITONITIS.

At a recent meeting of the New York Academy of Medicine, Dr. Jacobi read a paper on "chronic peritonitis with special reference to the differential diagnosis of some of its varieties."

He stated that most of the cases were of a secondary nature, and having referred to a number of the causes that have been found operative in its production, went on to say that perhaps the most frequent cause of peritonitis is a preceding peritonitis. Indeed, in most cases examined after death the positive proofs of one or more attacks previous to the fatal one are found. He did not remember a case of peri-typhlitis that did not exhibit the adhesions, discolorations, and contractions due to former peritonitis; and he thought it probable that there are but few, if any, cases of foreign bodies entering the vermiform process unless the latter has previously lost its elasticity and contractibility by an inflammatory change.

Alterations of the mucous membrane of the intestine, he said, constitute the initial stages of local peritonitis in many instances, and of general peritonitis in some. It is not only the *intima* and the submucous tissues which suffer, but the muscular layer also becomes implicated in the morbid process. The vascular connection between the three principal layers of the walls of the intestine is such as to facilitate the transmission of an inflammatory process from one to another, with the results of giving rise to œdematous infiltration, paralysis, and constipation. Thus it is also that a mere diarrhœa is able to develop in a shorter or longer time a local peritonitis. No morbid process can remain isolated in a locality supplied with an active blood and lymph circulation, and hence an intestinal catarrh grows to be an enteritis; the enteritis is a peritonitis.

This condition of things is still more frequently observed in cases of intestinal ulceration, both acute and chronic. Even without perforation an ulceration will lead to peritonitis which is most local, but liable to change into an

acute attack under favorable circumstances. Where there is an open ulcer, or even one that has cicatrized months or years before, in the stomach or in the intestine (no matter of what nature), we frequently find opposite it a local peritonitis. In the peritoneal covering there is a thickening, circumscribed and distinct, which in recent cases is rather soft and accompanied by much vascular injection. In old cases the original cell proliferation has undergone organization and hardening, and the thickened spot is gray or whitish and firm. It has lost its elasticity, and is very apt to burst under a moderate amount of pressure, thus leading to perforation. In the midst of apparent health intestinal perforation will often set in, and death ensue within a day; and at the autopsy the physician will learn that the patient has been the victim of the perforation of the cicatrix of a typhoid ulceration perhaps contracted a dozen years before.

The diagnosis of chronic peritonitis is frequently missed. Unsuspected adhesions often exist around tumors, movable kidneys become fixed, intestines become glued together, all without recognizable symptoms. Respiration is not necessarily accelerated, and particularly is this the case in pelvic peritonitis, perimetritis, and peri-cystitis. There may be occasional vomiting, especially where there happens to be an intercurrent catarrh; but there are other conditions, as, for instance, renal and biliary colic, which are more liable to exhibit this symptom and to an excessive degree. It is often entirely absent, and even in many acute cases of peritonitis it is not met with. Constipation is frequent, but diarrhœa is not unusual. The horizontal position is often quite uncomfortable, but a common colic, depending on gas not absorbed or expelled, also causes drawing up of the knees. When, however, the horizontal posture is shunned in chronic peritonitis, the patient is more apt to remain quiet with raised knees than one who is suffering from flatulency, in which case the limbs are generally turned about continually. While the abdomen is apt to be tumid, it must be remembered that general adiposity is most fully developed in this region, that women who have borne children are likely to have a large and prominent abdomen, that the abdomen of a healthy infant is so large as to measure one-third of its whole length, that a simple hysterical inflation may simulate the tumefaction resulting from peritonitis, and that there may

occur a local dilation of the intestine from constipation only. Moreover, in hysteria there is sometimes met with an œdematous swelling of both hypogastric regions, which will complicate the diagnosis still more seriously.

The surface of the abdomen exhibits net works of dilated veins more frequently in peritonitis and hepatic diseases than in any other conditions. Inspection may also reveal solitary convolutions rising above the surface, and palpation and percussion may lead to the discovery of exudations of various sizes and shapes, nodules, loops, and cakes, which may be either hard or soft, and which are either organized material, thickened omentum or intestines glued together. Fluctuation will show the presence of fluid more readily than percussion, which may fail in this, that there may be adhesions between the parietal peritoneum and intestines in the flanks. The gas contained in the adherent bowel would yield the tympanic percussion note although the region might be filled with fluid. A change of position from one side to the other, or from the horizontal to the vertical posture, or *vice versa*, may contribute to dispel the doubt.

A chronic peritonitis is sometimes diagnosticated in the following manner: The patient is on his back, with the extremities now extended, now flexed. Pressure of various kinds, light or firm, sudden or gradual, superficial or deep, is tried in the usual way. According to the seat of the pain experienced, inflammation or adhesion is made manifest. In many cases, however, the following manipulation answers best. With the palm or finger deep pressure is first made. Perhaps there is no pain. Remove the pressure suddenly, and a local, very distinct, and circumscribed pain may be felt. Repetition of the experiment will always give the same result, the symptoms being elicited by the sudden change in the relative position of the bowels. Not only pain, but the presence of hard floating exudations, can be distinguished by this and similar manœuvres.

Every change in the relative position of the bowels may give rise to pain. A sharp pain after a full meal may point to adhesions of the stomach; three or four hours after eating, to chronic colitis; a quickened inspiration or cough, to peri-hepatitis; pain towards the end of micturition, to peri-cystitis. Pain of varying degree and persistency is a very frequent symptom in chronic peritonitis. Its variability often depends on the degree of irritation or con-

gestion present, and acute attacks are frequent where there is a cause for exacerbations. The seat of pain varies with the location, and the extent of the lesion. Extensive peritonitis in the pelvis may not give rise to pain except such as results from defecation, sexual intercourse, or micturition. The pain attending peri-cystitis is quite characteristic, appearing when the urine has been about one-half voided. In this, however, it resembles the spasmodic pain of vesical catarrh, with the exception that it is more localized above the pubes, and manifests itself more readily by pressure.

In some cases the pain of chronic peritonitis can not be diagnosticated from the enteralgia produced by other causes, such as abnormal contents, fermentation, and flatulency. Indeed, the anatomical causes of chronic peritonitis give rise to these very conditions; for by it the intestinal movements are retarded, and from it there may result stenosis and also twisting and adhesions, and through these every function is seriously interfered with.

The results of chronic peritonitis are very various. A simple attack of acute exudation may shape the whole future of the patient, and the histories of previous acute attacks are often not remembered. A few years ago an eminent physician and surgeon in New York died of peritonitis occurring during convalescence from typhoid fever. He had often complained of enteralgia during the twenty years that Dr. Jacobi had known him, but it was only just before his death that he recalled having had an attack of peritonitis thirty years previously. At the autopsy there were found discolorations of the serous membrane in many places, and degeneration and atrophy of the colon to such an extent as to result in a number of perforations. From such a case it became evident that the most extensive adhesions and other changes may occur without any known history whatever.

In the latter portion of the paper Dr. Jacobi took up the subject of tabes mesenterica. Having mentioned the various symptoms noted in connection with it, he said that the different manifestations met with in difierent cases appeared to prove that there are several distinct forms of tabes, depending on different causes and attended with varying anatomical alterations. Besides the simple hyperplasia of the mesenteric glands, resulting in obstruction and tubercular infiltration, terminating in the same disturb-

ance of function, there was a third condition met with, namely, chronic tubercular peritonitis. At the present time we were justified in the belief that only those cases of chronic peritoneal tuberculosis will have a chance of recovery which are local, and not the result of general tubercular infection.

The diagnosis of tubercular peritonitis was apt to be quite difficult, and there were many cases which could not be differentiated from non-infectious peritonitis and simple inflammatory processes. There were, however, cases of tumid abdomen with atrophy of both an acute and chronic character, in which the nature of the affection could be made out with some degree of certainty. When the distention of the stomach appeared after an intestinal catarrh, when it continued after the diarrhœa had ceased in frequency, when the temperature remained high, and the symptoms (occasionally) exhibited a typhoid character, the existence of an acute attack of tubercular peritonitis was probable. This diagnosis was rendered the more probable by the presence of some other symptoms, although mistakes were possible even then. Among these were cough, pulmonary symptoms, or dullnes over the *manubrium sterni* or below one or both clavicles (pointing to swelling of the tracheal or bronchial glands), a concomitant history of tuberculosis in the family, and a more intense degree of emaciation than the short duration of an intestinal catarrh would account for.

The prognosis of socalled tabes mesenterica was always uncertain except in the very worst cases. It was absolutely fatal when there was peritoneal and glandular tuberculosis complicated with or depending on generalized tuberculosis. In cases where the diagnosis of a non-infectious hyperplasia of the mesenteric glands could be made out, it was decidedly more favorable. When the diagnosis of chronic peritoneal tuberculosis had been made, the case was less promising; although the possibility of recovery or partial recovery was not excluded.—*Boston Medical and Surgical Journal.*

THE TREATMENT OF LOCOMOTOR ATAXIA BY SUSPENSION.

By Charles L. Dana, M. D., New York, Professor of Nervous Diseases in New York Post-Graduate College, and in Dartmouth Medical College.

In a letter to the *Medical Record* of April 13, 1889, I reported the results of my experience in the treatment of

locomotor ataxia by suspension in six cases. Since that time this treatment has been extensively tried in this country and Europe, and I have myself continued the work upon other patients; so that now one can, I think, form a pretty definite opinion of the value of the method. My cases treated by suspension now number twenty-one, and they have received altogether over 700 suspensions. A study of the twenty-one cases shows the following:

Very marked improvement in..... 4
Much improvement in..... 3
Slight improvement in..... 7
No improvement in..... 4
Discontinued in..... 3—21

Number.	Sex.	Age.	History of Syphilis.	Duration. Years.	Locomotion.	Muscular Power.	Amount of Pain.	Condition of Bladder.	Sexual Function.	Number of Suspensions.	Result.
1	Male.	60	Yes	10	Very poor	Good	None	Good	Absent.	4	Discontinued. No improvement.
2	Male.	50	Yes	8	Poor	Mod.	Severe	Good	Absent.	30+	Very great improvement in gait, strength, and freedom from pain and tremor.
3	Male.	48	Yes	5	Good	Mod.	None	Good	Absent.	35+	Much improved in gait and strength.
4	Male.	42	?	3	Poor	Mod.	Severe	Good	Absent.	25+	Very much improved in gait and strength, and freedom from pain.
5	Male.	37	?	4	Very poor	Very poor	Severe	Inc.	Absent.	6+	Discontinued.
6	Male.	40	.....	8	Very poor	Mod.	Mod.	.....	Absent.	30	Much improvement in gait.
7	Male.	47	Yes	6	Poor	Mod.	Mod.	Poor	Very weak.	26+	Very great improvement in gait, bladder, sexual function, and strength, and bowels.
8	Male.	43	Yes	9	Very poor	Good	Mod.	Poor	Absent.	40+	Very great improvement in gait, co-ordination, and general strength, bowels, and in vision.
9	Male.	55	No	7½	Abs't	Very poor	Mod.	Ret.	Absent.	16	Very slight, if any, improvement. Treatment not completed.
10	Male.	50	?	8	Poor	Poor	Mod.	Good	Absent.	24	Great improvement in gait and sexual power.
11	Male.	34	Yes	10	Good	Good	Severe	Good	?	32	No improvement.
12	Male.	68	No	10	Good	Mod.	Severe	Ret.	Absent.	29	Considerable improvement in strength; none in bladder.
13	Male.	50	Yes	10	Poor	Poor	Mod.	Good	?	15	No improvement.
14	Male.	44	No	1½	Abs't	Poor	None	Good	?	70+	No improvement.
15	Male.	62	No	3	Poor	Poor	Mod.	Poor	Absent.	30+	Considerable improvement in gait and strength. Return of sexual power. Bladder better.
16	Male.	50	.....	5	Good	Good	Mod.	Poor	.....	60+	Somewhat better.
17	Male.	61	No	3	Poor	Poor	Severe	.....	.....	.....	Discontinued.
18	Male.	53	?	8	Abs't	Poor	Mod.	Poor	.....	25	Improved in bladder and co-ordination.
19	Male.	57	No	10	Abs't	Poor	.....	.....	.....	50+	Slightly improved in bladder, general strength, and co-ordination.
20	Fem.	50	Yes	20	Poor	Poor	Mod.	Poor	.....	60+ 70	Moderate improvement in gait. Pains relieved.
21	Male.	40	Yes	2	Good	Good	Mod.	Good	Good.	15	Considerable improvement in ataxia.

The nature of the improvement was oftenest in the gait, strength, and capacity for locomotion generally, and in a subjective sense of better physical health. Next to this there was improvement in regularity of the movements of the bowels, in control of the bladder, in sexual power, and in pains. In one case vision was improved. In no case did the knee-jerk or the light reflex return. The improvement in a few cases was most striking and remarkable. This remarkable improvement occurred always in walking cases, though one case that came into the hospital bedridden was able to walk with help after suspensions. The paralytic cases, as a rule, improved but little. The cases nearly all had been suffering from the disease for six to ten years. I have treated but one in the initial or pre-ataxic stage.

My results agree in the main with the reports of others, namely, that in 15 to 20 per cent very great improvement, and in about the same proportion a moderate improvement occurs. In the light of my experience all the *à priori* condemnations of the method seems to me very absurd. Suspension is an undoubted acquisition to the therapy of tabes. In the second stage it is remarkably helpful in a a good percentage of cases; in the third stage patients are often improved in the bladder and rectum symptoms, and the pains are sometimes relieved.

I have had no accident worth mentioning, but have had two patients nearly faint while in the apparatus. I several times suspended one man 70 years old for six to nine minutes, not only without harm, but to his great comfort and relief. Still, three fatal cases are on record, a good many syncopal attacks have been observed, and the suspensions must always be made in a systematic way and with great care and attention to detail. The effect upon the heart, in several cases in which I tested it, was to slow the beat. Usually it is slightly accerated, and arterial tension raised.

The number of suspensions necessary to secure the best results is not known, and seems to vary in different cases. One of my patients was suspended over ninety times, sometimes twice daily. Motchoukowsky kept up suspensions for nearly a year, giving eighty or ninety. Usually improvement occurs within a fortnight. I have used both the chin-support alone with a spring-balance, and the chin and arm supports. I am not able to say whether one method is superior to the other.

I have used the suspension treatment in a good many spinal troubles other than tabes, and sometimes with surprisingly good results. It does no good in paralysis agitans, however, and only rarely in the various forms of chronic myelitis. In certain functional spinal maladies it is very helpful.

The modifications in technique by Pochery and others may extend its usefulness somewhat. In Motchoukowsky's original descriptions it will be seen that in some bad cases he kept patients on an inclined plane, and that he kept up suspensions nearly a year.

Of the recent contributions to the literature of this subject the most interesting are those of Eulenberg and Mendel, of Bernhardt, and of Dujardin-Beaumetz. These represent results of treatment upon nearly a hundred cases, and contain conclusions substantially in agreement with those given here.

Four of the cases reported here were in my service at the Montefiori Home, and were also suspended during the service, and under the direction of Dr. B. Sachs and Dr. Seesel. One patient was seen in consultation with Dr. F. T. Kidder, of Woodstock, Vt. One patient was sent to my clinic by Dr. Wm. M. Leszyisky.—*Boston Medical and Surgical Journal.*

ENURESIS.

Dr. Richards recommends a combination of bromide of potassium and tincture of belladona in nocturnal incontinence. He reports two immediate cures in boys of 12 years where the affection had lasted from infancy. Ten grains of the bromide, and fifteen or twenty minims of the tincture were given at night.—*British Medical Journal.*

CREASOTE IN DIABETES.

In two cases of diabetes, in which the ordinary remedies had been used without effect, Valentini gave from six to ten drops of creasote in water during the day, and in both cases he obtained gratifying results. In one patient no more sugar appeared in the urine, although he ate food containing starch and sugar. Valentini also mentions a case of another physician, in which creasote cured the disease.— *Gazz. Med. di Torino: Deutsche Medizinal Zeitung.*

AN INSTANTANEOUS CURE FOR WHOOPING-COUGH.

The instantaneous cure of whooping-cough was attained by Dr. M. Mohn as a result of accidentally observing that the disinfection of the sick room of the whooping-cough patient by sulphurous acid caused the disappearance of the paroxysms with a rapidity bordering on the marvelous. The patients are freshly clad in the morning, and placed in another room, in which they remain during the day. Meanwhile, one ounce of sulphur is burned in the sick-room to each cubic yard of space, and after the bedclothing, garments, etc., have been properly spread out, and the sulphurous acid been permitted to permeate the air for five hours, the patients return to the disinfected sleeping rooms in the evening, and are cured of whooping-cough.—*Archives de Pharmacie—Therapeutic Analyst.*

FAILURE OF APPLICATIONS OF MERCURY AND TURPENTINE IN DIPHTHERIA.

Dr. Kœnig: As I reported to this society some time ago, the success I had had in the treatment of diphtheria by local applications of corrosive sublimate and turpentine, I desire to report the following fatal case. This case was the third in the family, two recovering. The local treatment applied was one grain of corrrosive sublimate in one ounce of spirit of turpentine. The application should have been made every three hours, but owing to the restlessness of the patient it was omitted in the night. The primary seat of the membrane was the nares, and there was also a spot as large as a quarter upon the roof of the mouth. The membrane was black, hemorrhagic, and the child died, despite everything I could do, on the fourth day, from bleeding at the nose.—*Allegheny County Medical Society.*

OBJECTS OBTAINABLE BY FOOD.

By W. I. Thayer, D. D. S., M. D., Brooklyn, N. Y.

Under "News and Miscellany" in one of our medical journals was this statement: "*Whole* wheat preparations are proved to be richer in life growing elements than any other single article of food." Of all the true statements in this world, there never was a truer assertion than the above!

But what are we doing this day in regard to our bread foods? We are bolting out certain valuable parts of the

grain and throwing it away! Worse than that, we are inflicting very serious injuries in more ways than one upon generations, at least of the last three decades.

There never was a time in the history of this country when there were so many afflicted with flabby muscular tissue and wretchedly formed teeth as we find today. The teeth, especially, have suffered for want of proper food to build themselves up with. Their soft solids can get materials enough to form protoplasm with, but the calcareous matter is not supplied as it should be. The petrous tissues are not up to the standard that they should be to enable them to resist attrition and decay. Hence they are erupted only to melt and dissolve away. It is within the purview, superintendence, of the physician to correct this condition of affairs, to build better than the dentist can repair!

The enamel of the teeth is composed of 98 per cent of inorganic constituents, the dentine of 78, and cementum of 70 per cent, or *should* be, an average of 82 per cent. There are thousands of children only 8 or 10 years of age who have lost their six year molars, the first molars of the permanent set, and when they have arrived to the twelfth year the bicuspids and molars are seriously affected.

It is not the *soft solids* of tooth structure that enables them to resist disintegrating influences, but the *calcareous matter* that is interpersed between the interstices of the soft solids.

Now, since the teeth have a special time when this is accomplished, it follows that *at that time* they require to be fed with the lime salts. The teeth commence to form as early as the sixth week from conception. Therefore, the *mother* needs to be fed with calcareous matter, and the *nursing babe* not with lime water or other pharmaceutical preparations which do not furnish a rightly balanced pabulum that can be appropriated for this specific purpose, but with a food that is rich in the carbonate and phosphate of lime, especially the latter, that has been so *naturally*—not chemically—combined as to be *easily divisible* by the process of digestion, and hence *easily appropriated*. There is a food in which this can be easily accomplished in our various cereals. We *need* the "*whole* wheat," the *whole* of the corn or rye! To get the calcareous matter in our grains we need their *bran*, the immediate outside portions. Here we have the rightly *bal-*

anced proportions out of which to build up decay resisting, petrous tissues. Cellulose or gluten will not furnish calcareous salts. Where none of the latter, or very little, is provided there can be but one result, soft, frail teeth, flabby muscles, and constipation. Effect will follow cause, physiologically, as surely as in any other manner!

It will be remembered that teeth once built up *are built up forever!*

The mother ought to *eat liberally three times a day* of bread foods that are composed of the *whole* or *unbolted* products of the grain partaken of. Through the *umbilical cord* and mammary glands these calcareous salts should freely pass. To obtain the best results it is *highly important to feed the fœtus.* After the child has got so it can eat, it should receive a liberal portion of oatmeal and of the coarse bread foods.

If the mother is unable to feed her child from the maternal breast, and a wet nurse is employed, great care should be exercised to see that said nurse supplies herself liberally with this variety of food.

There are many infants that are compelled by various circumstances to be brought up on the bottle, and it becomes an important matter for the future welfare of that infant to inquire, what shall be put into that bottle, whether barley and rice water, which contains no calcareous matter, cow's milk, which has a larger proportion of casein than human milk, and which is so difficult to dispose of—disintegrate—that many children can not digest it, or what is best to use? As for obtaining a good variety of cow's milk in a large city, it is impossible to find. In such cases some form of artificial food must be substituted.

If this becomes necessary, we want a food *well supplied* with the *lime salts easy of digestion*, and that contains a slightly larger amount of the albuminoids than can be found in human milk. *Ease of digestion* and a sufficient amount of the *phosphate* of lime are too important points to be lost sight of. The proportion of the albuminoids, proteins, or nitrogenous matter in human milk is 17.08 per cent. The human teeth contain ten times as much of the phosphate of lime as they do of the carbonate. Another important point in feeding children by hand is, that they ought not to be overcrowded.

There are some eight different artificial foods designed for infants now upon the market, and all are different in their composition.

Starches.—Take barley or rice water, farina, corn starch, boiled *bolted* wheat flour, Boston or soda crackers, and such kinds of foods, while not only devoid of calcareous matter, they are very difficult of digestion for infants under one year.

The starches are disposed of—digested—by the amyolytic ferments found in the saliva, pancreatic and intestinal juices. Infants do not possess a sufficient amount of these ferments to digest raw starch. They are apt to pass through the intestinal tract, establishing entero-colitis and diarrhœa, removing the mucous epithelium, and creating serious bowel lesions. Therefore, any starch that may be in any artificial food should be converted into *dextrine* before it is ingested. Laboratory experiments will soon show that the conversion of starch into dextrine—that is, the breaking up of the starch cells—is a long and difficult process; but the conversion of dextrine into sugar, by the former absorbing the last molecule of water, is easily and quickly performed.

The amyolytic ferments of an infant are able to convert dextrine into soluble sugar, but *not* to change starch into dextrine. Therefore, artificial foods that contain unconverted starch are not a proper food for young infants.

Malts.—Maltose, or soluble sugar, is that form of starch which has received its full conversion. The hydro-carbons ingested into the stomach as maltose or soluble sugar meet first the lactic acid, and later the hydrochloric acid of the gastric juice, and are liable to be changed into alcoholic, putrid, or acetous fermentation, sour beer. So far as infants' artificial food, prepared for the processes of a physiological digestion, are involved, such food *must not* contain raw starch nor malted preparations.

The best artificial foods for infants contain cow's milk, and are known as "milk foods." But such preparations ought to have their desiccated cow's milk partly predigested with pancreatine freshly prepared, and their starches converted into dextrine by baking some eight hours or more at a temperature of 350 to 400 deg. F. If both of these processes are *honestly* attended to, then there will be produced an *easily digesting* food, quite as easily disposed of as is human milk.

Milk Foods.—Three of these eight foods are known as "milk foods." They are, Nestle's Food, Anglo-Swiss,

and Carnrick's Soluble Food. This last named food contains 18.22 per cent of albuminoid or nitrogenous matter. Woman's, it will be remembered, has 17.08 per cent, which is an important ingredient in either human or an artificial food. Of the calcareous salts and phosphoric acid, petrous tissue builders, there is respectively: Salts, 2.991; phos. acid, 0.874 per cent, and ease of digestion as high as 16.45 per cent. Anglo-Swiss albuminoids are 12.38; lime salts, 1.95; phos. acid, 0.800, and digestion, 11.20 per cent. Nestle's food, respectively, is albuminoids, 11.46; salts, 1.75; phos. acid, 0.630, and digestion, 11.09 per cent.

Malt Foods.—Two are known as "malt foods," Horlick's and Mellin's. Horlick's has of the albuminoids 11.30 per cent; salts, 2.76; phos. acid, 4.21, and ease of digestion, 10.85 per cent. Mellin's food contains of nitrogenous matter 8.34; salts, 3.00; phos. acid, 0.583, and digestion. 7.38, more than two and a quarter times more difficult to digest than soluble food.

Starches.—Of the starch foods, socalled for not containing milk or malts, we find Wells, Richardson & Co.'s, whose proteins are 9 05 per cent; salts, 2.26; phos. acid, 0.688, and digestion, 8.35. Dr. Ridge's food, albuminoids, 8.76; salts, 0.48; phos. acid, 0.260, and digestion, 7.97 per cent. Imperial Granum's nitrogenous matter is 10.73; tooth builders as low as 0.37 and 0.167, and digestion, 9.55.

In many cases the mother is enabled to nurse her child in part, but in that case she ought to feed herself liberally with the coarse bread foods.

It should not be understood by any teachings in this paper that one pregnant or nursing should eat no other food than above suggested. No, far from it! A mixed diet is especially to be sought after, but, however well selected such a diet may be, there is *no* food with which the writer is acquainted that has been arranged by the Almighty that is so rich in the *necessary* lime salts, and that can be so easily divided and appropriated by the needy tissues as the unbolted products of our cereal grains.

How pertinent are the remarks of a prominent New York physician, when he says: "The first duty of the physician to the public being the prevention of disease, there can be no more important subject for our consideration in this connection than the influence of diet upon

health, and none can more fully appreciate this factor than the physician who is constantly studying the causes of disease and their probable prevention.

"It is universally admitted that the great majority of non-contagious diseases are due to malnutrition." How true this is of the petrous tissues. "And this is largely occasioned primarily by *errors in diet, which would be preventable through a knowledge of the relative value of foods as nutrients, and of their requirements for digestion.*" Feed the petrous and muscular tissues with lime salts through the umbilical cord, mammary glands, or by the bottle, not forgetting the child and the youth!—*N. Y. Medical Times.*

SURGERY.

EMPYEMA OF THE ANTRUM OF HIGHMORE.

Krieg (*Würtemberg Medical Korrespondenzbl.*) distinguishes an acute and a chronic empyema. He himself suffered from the first form, and he has observed twenty-three cases of the chronic form—eight men and fifteen women. The youngest patient was 17 years old; the oldest, 55. The duration of the disease varied from fourteen days to eleven years. The disease was bilateral in one case, right-sided in twelve cases, and left-sided in twelve cases. In nearly every case dental caries was the cause of the abscess; the first molar and the second bicuspid were the chief sources. Krieg's treatment consisted in boring through the alveolar process in twenty-two cases, and through the canine fossa in two cases. Thorough washing out of the cavity is necessary.

M. Schmidt (*Berliner Klin. Wochenschr.*) says that, in order to confirm the diagnosis, he is accustomed to make an exploratory puncture, by means of a Pravaz syringe, that is provided with a canula, a little longer than an ear-catheter, and having about the same curve. The procedure was attended with success in sixteen cases. Schmidt looks for the causation of the disease in bad roots of teeth. He recommends, by way of treatment, a return to the opening of the alveolar process, especially by means of the borer. In toothless jaws Schmidt injects cocaine in the neighborhood of the second bicuspid, and makes a crucial incision; he then loosens the flaps and makes, first, a guiding canal, with a small borer, and then

a canal into the antrum. A small silver drainage tube is introduced, through which the patient himself can clean the antrum. Schmidt employs a solution of borax or permanganante of potash.—*Deutsche Medizinal Zeitung.*

QUININE IN TRAUMATIC TETANUS.

[Dr. W. W. Pugh, in *Southern Practitioner.*]

I was called to see Chas. B., Dec. 17, 1888, and found him suffering from tetanic spasms, which were caused by a splinter he had stuck in his thumb some three or four days previous. Having read a notice of some doctor advocating large doses of quinine, I at once administered 100 grains of sulphate of quinine and six drops of Norwood's tincture, and in twenty-five minutes he was sleeping, and he rested well for three or four hours. I repeated the dose in eight hours, then every eight hours, but reducing the dose to twenty grains. The convulsions left him in twenty-four hours, and on the sixth day he was up, and rode to my office to see me. The quinine must act on the vaso-motor nerves, as a nerve sedative, otherwise I am at a loss to explain its action in this trouble.—*Epitome.*

[Was the above a case of tetanus, or one of tetany?—Eds.]

A SIMPLE METHOD OF FISTULA IN ANO.

[Dr. J. M. Matthews, in *American Practitioner and News.*]

Several years ago I read a paper before the Kentucky State Medical Society, suggesting what I was pleased to call "A new operation for fistula in ano." It was described in the following words: "The plan is this: Taking the ordinary exploring probe, it is inserted in the external orifice of the fistula, to determine, if possible, that only one sinus exists. Being satisfied of this fact, I then take a long, slender laminaria tent and push it gently into the fistulous sinus to the fullest extent it will go. This is allowed to remain for several hours, keeping the patient under observation during the interim, at the end of which time it is withdrawn. The procedure causes but little, if any, pain. The laminaria tent is preferable to sponge, for the reason that it furnishes its own moisture, which assists in its withdrawal. After this dilatation, I take a urethrotome with a small point; closing the instrument tightly, it is pushed gently as far into the sinus as it will go, and then, by the

aid of the screw attachment, dilate the sinus. When this is done, the turning of the screw at the side of the instrument will cause the concealed knife to protrude at the distal end according to the measurement desired. The instrument is then carefully withdrawn, cutting through the wall of the sinus throughout its whole length. The cut, as will be perceived, has been made subcutaneously, and the pain is insignificant. What hemorrhage takes place is easily controlled by pressure. In several instances I have turned the instrument and reinserted, practicing the same procedure upon the opposite side at one sitting. If this is not thought advisable, the patient is allowed to go for several days before repeating the operation, which is to include the other side. The advantages that I claim for the operation are, viz: Over the injection plan it must take precedence, for the reason, as above stated, that the injection of any agent that is commonly used for such purpose does not accomplish what is desired. The sinus is lined by a thick membrane, which, in many cases, resists the action of said agents; hence it is impossible to get healthy granulations. With this instrument both the top and the bottom, or each side, if necessary, can be cut through, thereby insuring a good granulating surface, and this, too, without pain. Over the ligature, either elastic or non-elastic, it possesses the advantage of cutting both top and bottom, or each side of this thick membranous sinus, while the ligature can not possibly go through any portion but the top of the sinus as it cuts its way out, leaving, of course, the callous bottom, which in many cases would refuse to heal, it being a positive rule in surgery, in the operation for fistula, established by Mr. Simon, that the bottom of all these tracts must be divided to insure a cure. Again, in using the ligature, the sphincter muscle or muscles must of necessity be cut through by the ligature if the internal opening be above them. In the operation with the instrument the muscle is not divided or interfered with. Over the knife it can be claimed: (1) That this operation dissipates all horror in those patients that dread the knife; (2) that excessive hemorrhage is avoided; (3) the sphincter muscles are not cut; (4) the patient is not confined to bed or taken from business; (5) the tissues are not cut.

In the majority of cases which I have treated by this method I have done so without the patient knowing that anything in the nature of an operation had been done.

Exhibiting the instrument to them, the knife being concealed in its case they have never known other than it was a probe. If I find, after waiting a few days, that a sufficient depth was not reached, the instrument is again inserted and the same procedure practiced. The patient is kept under observation a sufficient length of time to be assured of a perfect cure. Where pus cavities are found, or many sinuses exist, of course this operation is not advised, but in the selected cases mentioned I am sure that the advantages claimed for it will be realized. A score of cases in my practice attest its value.

I encountered many disadvantages in operating upon the fistulous tract with the urethrotome: (1) It was too large to enter the orifice of the sinus, and recourse was had to the laminaria tent; (2) it only cut upon one side, hence required a second introduction to effect a division of both the top and bottom of the socalled pyogenic membrane. To meet these difficulties I had Tafel make for me a modest little instrument, and which, for a better name, I call a fistulatome. You will observe that it is very small—but little longer than a good sized probe. It has within it two concealed knives. It is probe-pointed, hence easy of introduction. In the end is an eyelet, which I sometimes thread with a filiform, the object being to search out or enter any small branch that may exist when the instrument is pushed to the very bottom by the screw arrangement at the distal end. Both knives are uncovered at once. They are of sufficient length to cut entirely through the indurated membrane as the instrument is withdrawn. Patients very seldom complain of any pain. In a few cases I have injected mur. cocaine into the sinus, and then done the operation. I shall recite only one case out of the many so operated on:

Case—Mr. B., a mechanic referred by Dr. Anderson. After an extensive fistula, with a number of branches, had been laid open, and all the wounds had healed, I discovered, by examining, that a small orifice existed at the original site. Introducing a probe, I found that it entered, fully six inches, a superficial sinus that I had evidently overlooked in the operation. The fistulatome was introduced, the knives uncovered, and the instrument withdrawn. A little bleeding occurred, some soreness was complained of, and at the end of a week no sinus could be discovered. I want to be explicit in saying that the cases in which this

little instrument will prove of service are limited, and yet I do believe that any fistula that could be cured by the ligature, elastic or non-elastic, can be cured, for reasons already named, by this instrument, and that it will be found of more service than some other methods that have been recommended. I am now having an instrument made of the same size and after the same device, which carries four knives instead of two. It has occurred to me that the freer the division of the walls, the more satisfactory would be the result.

CONTRIBUTION TO THE STUDY OF DISEASES OF THE NASAL SINUSES AND TO THE THEORY OF THE ESCAPE OF CEREBRO-SPINAL FLUID THROUGH THE NOSE.

Dr. John Berg reports a case of osteoma of the frontal sinus, in which trephining of the sinus was performed, and thirteen tumors successfully removed. The cavity was excavated principally towards the cerebral cavity, and the dura mater was exposed over a large area. The patient recovered. During the course of his disease, lasting for several years, he noticed, on several occasions, an abundant flow of clear liquid from one nostril, which gave him great relief. It was this fact in connection with the case which caused Dr. Berg to publish it.

The second case was that of an unmarried woman, aged 25, who began to suffer, ten years ago, from a progressive diminution in the power of vision, and, in the last year, she had violent headache and a feeling of heaviness over the eyes, moderate exophthalmia, partial loss of smell, and, at intervals, an abundant flow of a clear, yellowish liquid from the nose. The headache was relieved while the flow lasted. Examination revealed bilateral atrophy of the optic nerve. The patient could barely perceive light. No other cerebral symptoms. The roof of the naso-pharynx seemed to be slightly depressed.

Dr. Berg, thinking that the probable cause of the disease was dropsy of the sphenoidal sinus, trephined this cavity by piercing the posterior part of the inner wall of the orbit, after enucleation of the right eye. A yellowish liquid escaped from the sinus and filled the orbit; the liquid pulsated plainly. The headache disappeared immediately after the operation. The patient's general condition improved. The liquid continued to flow for four months through the drainage tube left

in the orbit. The headache gradually returned during the winter. Suspecting the presence of an osteoma, Dr. Berg was led to dilate, a little more than a year after the operation, the track of the wound enough to allow the end of a finger to be inserted into the sphenoidal sinus. No tumor was found. The cavity, moreover, did not seem to be enlarged. The second operation was followed by a tolerable state of health. Sight was not improved.

Dr. Berg claims that his method of trephining possesses the following advantages over the methods proposed by Zuckerkandl and Schech: the possibility of permanent drainage, effective irrigation, and room enough to extirpate a tumor eventually.

The absence of well marked ectasis of the sphenoidal sinus rendered the theory of pressure untenable, and directed Dr. Berg's attention to the peculiar morbid condition characterized by the abundant flow of aqueous liquid from the nose, and to certain obscure cerebral symptoms, of which the most frequent is bilateral atrophy of the optic nerve.

Dr. Berg has succeeded in collecting eleven cases from medical literature. He notes the considerable variations in the clinical course of these cases, and speaks of the various theories that have been advanced to explain them, and especially that of Leber. As the cerebral symptoms present in all the cases were vague and uncertain, as the appearance and chemical composition of the liquid varied in most of the cases, and as this liquid did not always have the same characteristics as the cerebro-spinal fluid, Dr. Berg believes that the supposition of Leber of a primary internal hydrocephalus as the cause of the affection is not borne out in the great majority of cases.

Recalling the results obtained in the researches of Key and Retzius into the lymphatic vessels of the nasal mucous membrane, Dr. Berg regards it as more probable that the flow is due to an exudation, or to a rupture of the enlarged lymphatics connecting the subarachnoidean space with the mucous membrane of the nose, rather than, according to Leber, to a cranio-nasal fistula, caused by increased pressure of the cerebro-spinal fluid.

Berg sums up his conclusions as follows:

1. In some cases the escape of cerebro-spinal fluid through the nose is due simply to enlargement of the naso-cerebral lymphatics. The large cavities (sinuses) hol-

lowed out in the bones, forming the base of the cranium, probably play an important part in these cases. It might also be supposed that the Pacchionian bodies, which are normally found around the cavernous sinus, perforate the bone gradually, and constitute the cause of the flow.

2. In a certain number of cases an increase of the intracranial pressure has been the primary cause of an abnormal dilatation of the above mentioned capillary communication, giving rise, in the nasal mucous membrane, to lymphangiectasis, exudation, or rupture.

3. In a certain number of cases, there is no reason to admit the existence of a primary increase of intracranial pressure, and the flow of lymph depends in these cases upon an inequality between the afflux of lymph from the brain to the mucous membrane of the sphenoidal (or frontal) sinus, and the flow of lymph from this cavity, giving rise to a lymph-stasis in the mucous membrane of the cavity.

4. The cerebral symptoms, and chiefly the atrophy of the optic nerves, do not necessarily depend upon increase of intracranial pressure, but they may be explained, according to the theory of Deutschmann, by the supposition that the phlogogenous matters of the stagnant lymphatic circuits in a frontal or sphenoidal sinus pass into the subarachnoidean and subdural spaces, and their branches along the optic and olfactory nerves.—*Nordiskt Medicinskt Arkiv.*

WHAT DRESSING SHALL LIE NEXT TO THE WOUND?

(A paper read before the American Medical Association, at Newport, on June 27, by Robert T. Morris, M. D., New York.)

The worst type of dressing is represented by vaseline or oils spread upon lint or upon any textile fabric, because the oleaginous material mingles with exuded lymph and serum and prevents organization, and because new epithelial and connective tissue cells become entangled in the fabric. This type of dressing is also bad because there is nothing in its make up to prevent decomposition of the exudates that nature intends to use for purposes of repair.

There are only two types of the perfect dressing. One of these is represented by an iodoform covering for small wounds. The iodoform forms with lymph a thin form coagulum that is not readily penetrated by micro-organisms, and even when a few are at work beneath it the ptomaines which they produce are neutralized by the iodoform.

The best dressing is composed as follows: First, a strip of sterilized Lister's protective oiled silk which is just large enough to cover the wound or the line of sutures. There is nothing that will take the place of Lister's protective. Gutta percha tissue will not answer, because it is absolutely waterproof, and the skin beneath it becomes somewhat sodden. Spun glass is as objectionable as gauze, or cotton, or textile fabrics, because it entangles new epithelial and connective tissue cells. It is almost impossible to obtain repair by the beautiful process of clot replacement if we cover the clot with anything but Lister's protective; and in skin grafting we can use it to such advantage that it seems as though failures with other dressings must be more frequent than they are. Under the smooth and slightly porous Lister protective, epithelial cells shoot along over the surface of the wound unimpeded, and granulations in open wounds carry on the process of repair without the formation of pus under permanent antiseptic dressings.

Over the Lister's protective we need a thick layer of absorbent gauze or cotton to draw away serum from the wound, and to dry it so that it is not a fit food for micro-organisms.

EXPERIMENTS ON LIGATURE OF THE INNOMINATE BY A MEDIAN INCISION.

By Walter G. Spencer, M. D.

The author successfully ligated the innominate in a number of monkeys by the following method: The wound was made as if for deep tracheotomy, a vertical incision in the middle line down to the upper border of the sternum, and, at the lower end of this, a transverse one through the skin only, in order to obtain retraction of the muscles more easily. The deep fascia between the two sterno-mastoids was divided in the middle line, the sterno-hyoid muscle and the sterno-thyroid likewise separate along the middle line, from the muscles of the opposite side. These muscles were now retracted so as to get behind the sterno-thyroid, while the fascia in front of the trachea, and the inferior thyroid veins, were not touched. Behind the sterno-thyroid, at its outer border is the carotid sheath, which was opened on its inner side, about half an inch above the origin. A ligature was passed around the artery and tied tightly. The carotid artery then forms an

exact guide to the innominate, by following its inner side until it reaches the right border of the trachea. The sheath was separated sufficiently at this point to see that the ligature was placed below the point of bifurcation of the carotid and subclavian. The fascia between the artery and the sternum was hooked forward. In following along the inner border of the carotid to the innominate no structure is met with, and no vessel divided. The left innominate vein was never seen—it lies below; and, if it crossed higher up, it would be in a plane of fascia anterior to the artery, and might be hooked forward against the sternum. The ligature was passed from without inward and tied tightly. On releasing the retracted muscles they came together so that no cavity was left in the deeper parts of the wound. The skin was exactly united, and a dressing of carbolic gauze and collodion applied.

The wound healed by first intention. The animals were killed at five weeks, ten weeks, and twelve weeks respectively, after the operation. The innominate was found to be firmly closed by scar tissue on the proximal side of the ligature at the place where the internal coat had been cut through. Below this was decolorized clot firmly adherent to the walls, which, lower down, became looser and colored, tapering toward the commencement of the artery. The subclavian, at its origin, was closed by scar tissue, outside, which was decolorized, firmly adherent clot. The carotid on the distal side of the ligature was closed by scar tissue, and above this was firmly plugged by a decolorized clot for half its length, beyond which, until near its end, it contained colored clot.

The results of the author's experiments, and of his study of cases reported in literature are presented in the following conclusions:

1. *The incision and the characters of the wound.* Mott's incision has been followed more or less closely in nearly all the operations, and the insertions of the sternal muscles into the sternum and the inner part of the clavicle have been divided to a greater or less degree. The divided muscles retract, and they leave a cavity when the skin is closed, and since it is impossible to keep in a position the deeper surfaces of the wound by pressure, a cavity is left. This fills with blood clot, and from the cut ends of the muscles much oozing takes place. The record of the cases shows how easily the blood clot breaks down when a sinus

has been kept open too long, by the constant drainage of discharge from the edges of the cut muscles. In this way changes gain access to the ligature. Now, in the ligature of every other artery, division of muscles is carefully avoided for the above reason, and the operations for the ligature of other large vessels are so planned as to allow muscles superficial to the artery to be retracted, and not divided. The wound which has been made for ligature of the innominate resembles rather an amputation wound, with the further disadvantage that the ligature is placed at the most dependent part. Therefore the great necessity appears to be that the ligature should be completely buried by immediate union of the depths of the wound.

The point for application of the ligature is immediately to the right of the trachea; of course this point is behind the manubrium, but if a line be drawn along the upper margin of the manubrium and the clavicle, the shortest distance from such a line to the site of ligature must be by the median incision. Even with Mott's incision it is necessary to first find the carotid as a guide to the innominate. It is not unimportant, further, that the median incision is at the greatest distance from the aneurism, the inner part of which has encroached upon the wound made by Mott's in some cases. The median incision avoids the use of a drainage tube, except superficial to the muscles; in so many cases which have lived the longest the wound has been reduced to a sinus, not draining well, and hence the hemorrhage.

2. *The ligature.* The ligature must be aseptic. The cases all show that a ligature that has to come away, such as might be applied to the femoral or carotid, can not be used for the innominate. A silk ligature can be rendered more thoroughly aseptic than any other, without injuring its strength, and being aseptic it will remain quiet in position. The ligature should be drawn tight to divide the internal coats. All recent experiments agree in showing that the more antiseptic a ligation, the less the amount of coagulum, and the more has dependence to be placed upon the scar tissue which ensues on dividing the internal coat for closing the artery. The broad ligature, not dividing the internal coat, is a refinement which has been successfully employed for ligaturing arteries that were quite easily tied previously by the older method; but the object

in running the risk of ligaturing the innominate is that the artery should be firmly secured once and for all. From the position of the vessel it is impossible to cut down upon it and tie it again if the first ligation does not suceed.

3. *The carotid should be tied in addition.* A thrombus is then formed in the proximal end of the carotid, which extends to the bifurcation, and thus aids a thrombus in forming in the first part of the subclavian as far as the vertebral; othewise the blood-flow will pass from the subclavian to the carotid, close by the distal side of the ligature of the innominate, and so the operation will lack one of the important characteristics of a Hunterian ligation.—*Lancet.*

NERVE SUTURE.

By E. Etzold, M. D.

Experiments on animals have shown that nerves do not heal either by primary or secondary intention, and that divided nerves are regenerated by proliferation of the central end. Clinical observations have also shown that the proximal portion of the divided nerve is regenerated more completely and at an earlier period than the distal extremity. The return of sensibility is of no service in estimating the degree of nerve regeneration. The sysmptoms which permit us to assume that nerve regeneration has taken place, are: 1. Active muscular contractions. 2. The disappearance of atrophy, especially muscular atrophy. 3. The late appearance of improvement. 4. The faradic irritability of previously paralyzed muscles. The galvanic current has only slight value in the diagnosis of nerve regeneration. Spontaneous healing of divided nerves is very uncommon. The prognosis in injuries of the nerves is unfavorable when the injury is high up, even if nerve suture is resorted to. The formation of an extensive connective tissue cicatrix prevents the regeneration of the nerves. It is the duty of the surgeon to resort to nerve suture in every case of accidental division of the nerves. In the performance of this operation the avoidance of all irritation, the most stringent antisepsis and perfect hæmostasis are the main conditions which secure success. If symptoms of stasis follow the injury to the nerve, elevation of the parts, and the employment of massage after healing of the wound are indicated. • When the wound has healed, direct galvanization of the scar and massage should be employed. It has not been decided

whether the application of electricity to the parts supplied by the injured nerve limits the extent of degeneration and hastens regeneration. Peripheral paralyses are to be treated by massage and passive movements. The use of the limb after the injury appears to have a favorable effect on recovery.—*Deutsche Zeitschrift für Chirurgie; International Journal of Surgery.*

GYNÆCOLOGY.

MIXED INFECTION IN GONORRHŒA.

Analogous to the definite sequelæ which are observed in various affections, and which, as proved by bacteriological investigation, are caused by the entrance of various micro-organisms into the tissues at the same time, are the various complications of gonorrhœa, such as inflammation of the erectile tissues, peri-urethral abscess, bulbo-prostatitis, vesical catarrh, gonorrhœal rheumatism, peri- and para-metritis, inflammation of the Fallopian tubes, bartholinitis, and endocarditis. These are mixed infections produced by the gonococcus, together with other pathogenic micro-organisms. The author adduces, in substantiation of this statement, the assertion of Bumm, that the gonococci develop only in cylindrical epithelium, or in tissues, which, in their histological structure, are closely related to cylindrical epithelium, and the fact, as experimentally demonstrated by Rinecker, that when gonococci are injected into the connective tissues, they disappear without leaving a trace behind them. Throughout the entire course of gonorrhœa, however, opportunity is afforded for the entrance of other pathogenic organisms through the ulcerations of the mucous membrane. These find, in the profuse secretion present, the very best conditions for their propagation and further advance into the lymph and blood channels, whereby the complications of gonorrhœa arise. Were it not that gonorrhœa is a purely local affection of a mucous membrane, provided with cylindrical epithelium, these complications would be observed very much oftener. The relative frequency of these complications, however, is explained by the readiness with which micro-organisms, other than those of the gonorrhœal variety, find their way from the diseased mucous membrane of the genitalia into the tissues and lymph channels.

Bumm has discovered a yellowish-white diplococcus, which, as well as the staphylococcus aureus and albus (which are often found in gonorrhœal complications, together with the gonococcus), may easily be confused with the gonococcus, and thus mislead one into the belief that the pathological process is a uniform one; whereas, in point of fact, it is a question of mixed infection.—*Gerheim, Centralblatt für Gynäkologie.* — *American Practitioner and News.*

[If cylindrical epithelium be necessary for the development of the gonococcus, why does that festive animal (or vegetable) thrive so marvelously well on the conjunctiva?—Eds.]

NECESSITY OF CAUTION IN PRESCRIBING FOR UNMARRIED PREGNANT WOMEN.

At a recent meeting of the Allegheny Co. Med. Society Dr. Kearns spoke of the necessity of caution in prescribing for unmarried pregnant women. He said: "In March last, a young woman visited me for the purpose of ascertaining whether or not she was pregnant. I examined her, and, concluding that pregnancy existed, told her I could do nothing for her. Some time later she called again for certainty in the matter. I examined only her breasts, and pronounced her pregnant. A few days afterward she aborted, fell into the hands of the police, and was removed to the West Penn hospital. At her hearing I was called as a witness. The charge was that she had taken pennyroyal pills, sold her by a druggist. Both were acquitted. I desire to emphasize the fact that had I, at the time of her second visit to me, but introduced my finger into her vagina, or had I given her medicine of any kind, I would have made myself liable, perhaps to arrest, certainly to newspaper notoriety, as accessory to the abortion."

Dr. Kœnig: Dr. Kearns is over-cautious. I conceive that an examination under such circumstances is proper and safe. The same is true of giving any medicine that may be indicated in the case by any ailment that accompanies the pregnancy. The druggist puts on file and preserves the doctor's prescription; this is his safeguard. The druggist, however, who sells these pills, or any abortive, exposes himself to unpleasant consequences.

Dr. W. C. Shaw: I keep in my office an assortment of fœtuses in alcohol, and explain to my friends the growth,

life, etc., instructing them that, no matter how early they may destroy it, this constitutes a destruction of life. This has a powerful moral effect in preventing the induction of abortion.

BIRTH OF A DEAD AND OF A LIVING FŒTUS.

Dr. Green reported the delivery of a living and thriving fœtus of about seven months after an easy labor, immediately preceded by the extrusion of a dead fœtus of probably three and a half to four months' gestation. There were two placentæ, one a mass of fat, without any trace of vessels, the other, normal; each also possessed a separate and distinct sac. This was the second case of the kind he had encountered. In the first, the living child was born at term, and the dead one at three or four months.—*Allegheny Co. Med. Society.*

A NEW TREATMENT OF STERILITY.

In an article upon "The Obstacles to Fecundity in the Human Species" (*Journal de Medicine*, May 16, 1886), Professor Pajot says: "Has the woman an anteversion? Say to her: 'Have the kindness, if you please, every evening when you expect to have intercourse with your husband, not to urinate for five or six hours. Don't ask why; that doesn't concern you. Only don't urinate. You wish to have children? Yes? Well, then urinate after intercourse and not before.' If she has a retroversion, say to her: 'Madame, when your menses are over eat plenty of eggs and plenty of rice. Take every night for three or for days a little pill which I am going to give you.' (This little pill contains simply a third of a grain of extract of opium.) 'Manage not to go to stool for three or four days. Then have intercourse with your husband, but don't go to stool till afterwards.' You will say that all this is very ridiculous; yet the whole process is entirely rational, and is based upon anatomical and physiological principles."

DILATING THE OS UTERI.

Cinicifuga is one of the best remedies to cause dilation of the os uteri during labor, as it causes contraction of the longitudinal fibres. Dose, five to ten drops of the tincture in half a glass of water.—*Therapeutic Analyst.*

DERMATOLOGY AND HYGIENE.

SKIN DISEASES OF NERVOUS ORIGIN.

Jonathan Hutchinson has formulated three rules by which to recognize skin diseases originating in some disorder of the nervous system:

1. The disease will not occur in round patches, nor in oval ones, nor in streaks, but will be arranged according to the branching distribution of the filaments themselves; it will be panniculate or corymbiform. This is a conclusive argument, in his opinion, against alopecia areata being of nervous origin.

2. There will be no power of infecting adjacent structures: the patches will not be serpiginous. Eczema, psoriasis, lupus, and many others tend to spread by extension; there is no such tendency in the case of herpes or scleroderma.

3. The diseases develop themselves fully in the first instance; the results, when once declared, do not increase, from the fact that herpes zoster, if it occur a second time in a patient, never affects exactly the same area. Mr. Hutchinson draws the conclusion, that the nerve is disorganized by the kind of neuritis which produces the original attack of zoster, and so is incapable of being involved a second time. Recurrent herpes is a different affection, for it leaves no scarring behind it, as does true zoster; moreover, it is curable by arsenic, while arsenic is capable of producing an attack of zoster.

CAUSTIC POTASH AND CARBOLIC ACID IN RINGWORM.

Two years ago Mr. Harrison, Bristol, England, advocated an application of caustic potash to the scalp, for the purpose of softening the tissues as a preliminary to the use of a parasiticide in the treatment of ringworm. Mr. Harrison, after prolonged experience, suggests the following combination as an improvement upon the original method. He combines the remedies in an ointment composed of caustic potash, 9 grains; carbolic acid, 24 grains; lanolin and cocoanut oil, of each, half an ounce. To this may be added some perfume, and a small quantity of it rubbed into the affected parts night and morning. The caustic potash contained in the ointment acts upon and softens the hair matter, and in this way allows the car-

bolic acid to have free access to the fungus and its spores. The author thinks that there is a decided advantage in leaving, when it can be done, as much as a quarter of an inch of hair; the ointment seems to have better play, and is kept in the part affected.

To prevent the spread of the disease among children exposed to it, the following ointment is applied to their heads: boracic acid and oil of eucalyptus, of each, two ounces; oil of cloves, one-half fluid drachm; oil of cocoanut, sufficient to make six ounces.—*Medical and Surgical Reporter.*

WARTS REMOVED BY ARSENIC.

Mr. B. G. Pullin, of Lidmith (*Brit. Med. Clin. Jour.*) gives the history of a number of cases in which he has cured warts on the hands by the use of small doses of arsenic, from one to three minims of Fowler's solution twice a day. He states that in every instance the cure has been rapid and complete.—*N. Y. Med. Times.*

SUBCUTANEOUS INJECTIONS OF IODOFORM IN TUBERCULOSIS OF THE SKIN.

Dr. A. Morel-Lavalée has seen good effects follow the hypodermic injection of iodoform in liquid vaseline (1 per cent) in five cases of lupus. The injections, which are painless, need not be made directly into diseased tissue, but may be made a short distance away in the healthy skin without injury. Complete cure was not obtained in any of the cases, but improvement took place in all —*Annales de Dermat. et de Syphilis—Deutsche Med. Zietung.*

OBITUARY.

PHILIPPE RICORD, M. D.

Dr. Philippe Ricord, whose death we briefly referred to last week, was born at Baltimore on Dec. 10, 1800. He was the grandson of a distinguished physician of Marseilles, and the son of a once wealthy shipowner and member of the Compagnie des Indes, who came to the United States in 1790, in the hope of retrieving his fortunes. Philippe Ricord was the brother of Jean Baptiste Ricord, an accomplished physician, scholar, musician, and painter, and of Alexander Ricord, once a physician in the French navy. After pursuing a course of scientific studies with his brother Jean, Philippe began the study of medicine in

Philadelphia. In 1820 he visited Paris, taking with him a collection of animals for the National Museum. In 1826 he received the degree of M. D., and began to practice at Olivet, near Orleans. In 1828 he returned to Paris, and delivered a course of lectures on surgery: and in 1831 he was appointed surgeon-in-chief to the Hôpital des Vénériens du Midi. At this hospital, from which he retired on account of age in 1860, he gained a great reputation as a specialist. By a decree of July 28, 1862, he was appointed physician-in-ordinary to Prince Napoleon; and on Oct. 26, 1869, he was named as consulting surgeon to Napoleon III, whom he had attended during a recent illness, and who in return presented him with a snuff box and 20,000 francs. He was made a commander of the Legion of Honor in 1860, and a grand officer in 1871, for services as president of the ambulance corps during the siege of Paris. He also received many foreign decorations. He continued to practice his profession until his death. Among the many publications of his long life we can mention only a few: "De l'Emploi du Speculum" (1833), "De la Blennorrhagie de la Femme" (1834), "Monographe du Chancre" (1837), "Traité des Maladies Vénériennes" (1838), "De l'Ophthalmie Blennorrhagique" (1842), "Clinique Iconographique de l'Hôpital des Vénériens" (1842–51), "De la Syphilization," etc. (1853), "Lectures sur la Syphilis" (1854).—*Boston Medical and Surgical Journal.*

Book Notices.

Chemistry: General, Medical, and Pharmaceutical, including the chemistry of the United States Pharmacopœia. A manual of the general principles of the science, and their applications in medicine and pharmacy. By John Attfield, F. R. I. Twelfth edition. Philadelphia: Lea Brothers & Co., 1889.

Attfield's Chemistry is, we may venture to say, the most popular text book on chemistry among the students of medicine and pharmacy. This popularity has a good, substantial basis. It rests not upon any pretense to show a shorter or royal road to the acquisition of chemical knowledge, but upon real merits. Attfield's work combines, in

the happiest manner, a clear exposition of the theory, or science, of chemistry, with the practical application of this knowledge to the every day dealings of the physician and the pharmacist. Many works on chemistry contain an introductory chapter on physics. This, we think, is a mistake, for students are supposed to know their natural philosophy, which is a branch of study quite distinct from that of chemistry. Attfield's discernment is shown not only in what he puts into his work, but also in what he leaves out. His book is precisely what its title claims for it.

The admirable arrangement of the text enables a reader to get a good idea of chemistry without the aid of experiments; again, it is a good laboratory guide; and, finally, it contains such a mass of well arranged information that it will always serve as a handy book of reference. While the whole field of modern chemistry is traversed, still no mention is made of matters which are of no interest to anyone except a professor of chemistry, and which would only be a burden to a student's mind. Knowledge that is never used hangs like a dusty fringe around the borders of the mind. Attfield, however, does not allow any unutilizable knowledge to slip into his book; his long years of experience and good judgment have produced a work which is both scientific and practical, and which shuts out everything in the nature of a superfluity; and therein lies the secret of its success.

This last edition shows the marks of the latest progress made in chemistry and chemical teaching. It needs no prophet to say that Attfield's chemistry will retain its hold on the affections of medical students. A. McS.

The Physiology of the Domestic Animals. A text book for veterinary and medical students and practitioners. By Robert Meade Smith, A. M., M. D., professor of comparative physiology in the Univ. of Pennsylvania, etc., with over 400 illustrations. Philadelphia and London: F. A. Davis, publisher, 1889. Pp. 940.

This book recalls another, by Dr. Frank Billings, which the writer reviewed about five years ago. Billings is an able veterinarian, trained in the best schools of Europe. His thorough knowledge of his art, acquired mainly in Germany, where everthing is done thoroughly and care-

fully, rendered him fully competent to pass judgment upon veterinary institutions in any part of the globe. His criticisms, or strictures rather, upon the American methods (or lack of methods), of teaching veterinary medicine, were the judgments of an able and conscientious, though somewhat caustic, critic, delivered in a way that savored of the dogmatism of the land in which he had acquired a mastery of his art. He contrasted the chaotic condition of veterinary medicine in his own country with the perfect system of teaching the art scientifically in older lands. The picture presented was indeed a sorry one, and one which merited the censure which he so generously bestowed upon it.

Impressed, therefore, with the backward state of comparative medicine in our land, it is with particular pleasure that we turn to the study of Dr. Smith's work—study, we say, not a mere cursory perusal, for it is a work that in every respect deserves to be studied carefully. The literature of a science is a sure index of its condition at any time, or in any place. The work of Robert Meade Smith does not reflect a crude, undeveloped, or purely empirical state of affairs, but points to a high, thoroughly scientific plane of knowledge. If no other book should ever be written by American authors on comparative medical science, this one work would suffice to show that our countrymen are not blind to purely scientific pursuits, seeing only sordid objects, disguised under the name of "practical knowledge." We feel very grateful to Dr. Smith for having removed the reproach from American comparative medicine, and will hereafter point to it as an answer to those of our critics who uncharitably charge us with being unable to devote our energies to any object that does not materialize as the mighty dollar in the near future.

Dr. Smith's work deals with only one of the branches of comparative medical science, viz.: physiology. On our side of the water too little attention is paid to comparative anatomy and physiology; in Europe, medical men, as a rule, are much better informed upon these, and other branches of science, than American physicians. The study of the two branches above named broadens a man's mind. All knowledge is comparative; we get just ideas of things by comparing them, one with another. The physician who has a good insight into the vital processes, as they are carried on in the lower animals, will be all the

better fitted to appreciate similar processes as they occur in man. When we bear in mind that much of the progress in modern human physiology is due to experiments made upon the lower animals, it is easy to see that a knowledge of comparative physiology will enable one better to understand human.

After a short introductory chapter, which deals with general topics, Dr. Smith describes, in Part I, the properties of cells which form the basis of all life. Cellular physics then take up fifty pages of the text, in which the author discusses the physical properties of cells and tissues, the mechanical movements in cells, and the general conditions governing protoplasmic movement. In the section on cellular chemistry the subject is handled in the same thorough way as we find in classical works on human physiology.

In Part II, special physiology, foods, digestion, absorption, circulation, respiration, lactation, renal secretion, and the cutaneous functions are exhaustively considered. In the section on animal functions is a most interesting chapter on the physiology of movement; this does not mean that there are chapters in the book which are not interesting, for they are all both interesting and instructive. The movements of animals, however, are different from those of man, and serve to exemplify, in other ways, the laws of physics. The functions of the nervous system take up a large share of the author's attention. This section contains, among others, a number of colored drawings, taken from Ranney, which are of material assistance in enabling one to get a clear idea of the course of nerve-strands, and the relations of the different centres. Obviously, in such a large, comprehensive, and scientific work as the one before us, it is impossible for any one man to produce, unaided, all the materials which enter into its structure; the labors of many others besides an author are required to make up a work. Under such circumstances, it depends upon the author's judgment whether his book shall be a mass of disjointed and poorly digested matter, or a connected, systematic treatise. The long experience of Dr. Smith as a teacher of experimental physiology has made him a thorough master of all of the methods of modern physiological research, and has specially qualified him to select the materials necessary to make a complete work. The book we are now consider-

ing is a momument to the learning and good taste of Robert Meade Smith.

A synopsis of such a lengthy work is at present out of the question. When we say that it is a masterpiece, worthy to take its stand by the side of medical classics, we pay but a just tribute to its indefatigable author. But there is another feeling besides that of respect, which others may not share with the writer, and that is a feeling of triumph that men of science on our side of the "pond" are able to place themselves abreast of great men in other lands in regard to a branch of knowledge which has, we must sadly confess, been unjustly neglected by the too practical Americans. A. McS.

A Clinical Atlas of Venereal and Skin Diseases. Including Diagnosis, Prognosis, and Treatment. By Robert W. Taylor, A. M., M. D., Surgeon to Charity Hospital, New York, and to the Department of Venereal and Skin Diseases of the New York Hospital; late President of the American Dermatological Association. Illustrated with 192 figures, many of them life-size, on fifty-eight beautifully colored plates; also many large and carefully executed engravings through the text. To be completed in eight folio parts. Price per part, $2.50. For sale by subscription only. Philadelphia: Lea Brothers & Co.

Parts V and VI of this atlas do not fall short of those which preceded them, already noticed in our pages.

We have called attention of our readers to the many strong points of this able publication.

Among the diseases which the new plates delineate are the varieties of ringworm, together with other parasitic diseases of the skin, such as pediculosis corporis, and tinea versicolor. The different appearances of erythema are well represented, and there is an excellent illustration of one of the forms of the much discussed Duhring's disease, which the author here calls impetigo herpetifornus.

Referring in the text to *impetigo herpetifornus* and Duhring's classification of it, the author has this to say: "Dermatologists have not shown an alacrity in fully accepting Duhring's far-reaching system. * * * The truth of the matter is simply this: That while there is much in favor of thus grouping these anomalous cases, before we can speak of them with scientific precision, their

number must be greatly augmented, and they must be carefully observed and recorded in all their essentials. Dermatology, however, is much the debtor to Duhring."

We take pleasure in noting that Dr. Taylor has given, in the treatment of ringworm of the scalp, the results attained by Dr. Blanc with the oleate of copper. The same formula has been used by him since the report of cases in this journal some two years ago, and with very good results.

H. W. B.

Publications Received.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M. D.; Lea Brothers & Co.

Practical Notes on Urinary Analysis. By Wm. B. Caufield, A. M., M. D. State Board of Health Bulletin, (Tennesse).

The Fatality of Cardiac Injuries. By H. A. Hare, M. D.

The Effect of the Entrance of Air into the Circulation. By H. A. Hare, M. D.

Mother, Nurse and Infant, a Manual Especially Adapted for the Guidance of Mothers, and Monthly Nurses. By A. S. P. Sackett, M. D.

Transactions of the Texas State Medical Association, twenty-first annual session.

Reformation in the Practice of Medicine by the Dosimetric Method of Practice. By J. E. McNeill, M. D., Denver, Col.

The "Perfected Evacuator." By Fessenden N. Otis, M. D.

Resumé of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy. By Fessenden N. Otis, M. D.

A Year's Experience with Apostoli's Method, with Reports of Cases. By A. Lapthorn Smith, B. A., M. D.

Transactions of the Medical Association of the State of Alabama, 1889.

Chemistry: General, Medical and Pharmaceutical. By John Attfield, F. R. S.

Hypnotism: Its History and Present Development. By Frederick Björnstrom, M. D.

Urinary Calculus, and Lithotomy. By Thos. McKay, M. D.

Description of Grove's Spray Baths for the Million.

Annual of the Universal and Medical Sciences, 1889.

The Value of Creasote in Fifty Cases of Diseases of the Air Passages. By Wm. Perry Watson, A. M., M. D.

Atropine in Enuresis. By Wm. Perry Watson, A. M., M. D.

On the Possibilities of Preventive Surgery. By E. J. Ward, A. M. M. D.

Taylor's Clinical Atlas of Venereal and Skin Diseases. Parts VII and VIII.

San Francisco has a Chinese physician, Li Po Tai, whose professional income is stated to be $6,000 per month. He has been established in that city for thirty years.

Medical News and Miscellany.

Nasal Catarrh.—Prof. Leffert's solution for nasal catarrh is as follows:

℞ Acidi carbolici ..... 1 scr
Sodii coratis ..... 1 dr
Sodii bicarbonatis ..... 1 dr
Glycerine ..... 1 oz
Aquæ rosæ ..... 1 oz
Aquæ, q. s. ad ..... oi
M. Sig.: Use as a spray.

Deodorized Iodoform Ointment—

℞ Iodoform, in powder ..... 3 grms
Parched coffee, in powder, of each ..... 30 grms
Vasaline .....
—*Gazetta Medica di Torino.*

A Parisian medical society recently appointed a committee to consider the question of a universal language of science. The report of the committee was presented in the form of three questions, upon which the society voted as follows: "Shall a universal language be adopted?" "Yes." "Ought this to be one of the dead languages?" "No." "Shall it be the French language?" "Yes"—*American Practitioner and News.*

Dr. Sigmund Lustgarten, formerly of Vienna, has removed to America, and intends to reside in New York, Dr. Lustgarten was for some time a private docent in Vienna, and in that way is known to many Americans. He is widely known as the discoverer of the bacillus of syphilis, which is called by his name.—*American Practitioner and News.*

Intestine Changed into Bladder.—Zizzoni and Poggi had, at the Surgical Congress at Bologna, a living dog from which they had cut the bladder and made a new one from a loop of small intestine. At the first operation a loop of intestine was insulated, cleaned, tied at one end, and sewed to the front neck of the bladder; in a month the bladder was removed, the gut was cut through and sewed to the neck of the bladder and the ureters attached. There was incontinence for a week; then urine was passed naturally. Several dogs have been successfully operated on. The surgeons discussed the application to the human subject.—*Indiana Medical Journal.*

MORTUARY REPORT OF NEW ORLEANS

For September, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	6	7	9	4	8	5	13
" Congestive	10	6	12	4	12	4	16
" Continued,	1	.....	.....	1	1	.....	1
" Intermittent	2	.....	2	.....	1	1	2
" Remittent	2	2	2	2	2	2	4
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	2	.....	2	.....	2	.....	2
" Puerperal	.....	2	.....	2	2	.....	2
" Typho-Malarial	4	1	4	1	1	4	5
Scarlatina	1	.....	.....	1	.....	1	1
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	8	4	3	9	.....	12	12
Whooping-cough	.....	2	1	1	.....	2	2
Meningitis	4	1	3	2	1	4	5
Pneumonia	5	6	7	4	7	4	11
Bronchitis	5	1	5	1	3	3	6
Consumption	42	31	34	39	70	3	73
Congestion of brain	7	1	5	3	3	5	8
Diarrhœa	13	2	9	6	12	3	15
Cholera infantum	3	2	3	2	.....	5	5
Dysentery	5	2	3	4	7	.....	7
Debility, General	1	4	2	3	5	.....	5
" Senile	14	7	10	11	21	.....	21
" Infantile	7	1	5	3	.....	8	8
All other causes	170	88	127	131	145	113	258
Total	312	170	248	234	303	179	482

Stillborn children—White, 35; colored, 22; total, 57.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for month—White, 20.29; colored, 29.35; total, 22.77.

DIPHTHERIA RECORD FOR SEPTEMBER, 1889.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	4	.....	4	4	.....	4
2	3	2	5	1	1	2
3	3	1	4	.....	.....	.....
4	3	.....	3	.....	.....	.....
5	5	7	12	3	3	6
6	1	.....	1	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	19	10	29	8	4	12

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—SEPTEMBER.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	79.0	86.0	72.0	1.30
2	81.0	88.0	74.0	.03
3	82.0	88.0	75.0	.74
4	82.0	90.0	75.0	.03
5	82.0	90.0	74.0	1.33
6	82.0	90.0	73.0	T
7	83.0	90.0	76.0	.....
8	82.0	90.0	74.0	.....
9	82.0	90.0	74.0	.27
10	82.0	90.0	73.0	.....
11	84.0	91.0	76.0	.....
12	83.0	92.0	74.0	.....
13	84.0	94.0	75.0	.....
14	85.0	94.0	76.0	.....
15	84.0	92.0	77.0	.....
16	82.0	89.0	76.0	.....
17	83.0	90.0	76.0	.02
18	74.0	80.0	67.0	.15
19	68.0	78.0	58.0	.....
20	69.0	78.0	60.0	.....
21	74.0	84.0	63.0	.....
22	76.0	85.0	68.0	.....
23	76.0	85.0	67.0	.15
24	79.0	86.0	72.0	.35
25	75.0	80.0	70.0	2.03
26	74.0	79.0	70.0	.....
27	71.0	78.0	64.0	.....
28	70.0	79.0	60.0	.....
29	74.0	82.0	66.0	.....
30	78.0	86.0	70.0	.....
31	....	....	....	.....
Sums	....	....	....	.....
Means	....	86.5	70.8	.....

SUMMARY.

Mean barometer, 30.004.
Highest barometer, 30.298, 28th.
Lowest barometer, 29.684, 23d.
Mean temperature, 78.6.
Highest temp., 94.0, 14th; lowest, 58.0, 19th.
Greatest daily range of temp., 21.0, 21st.
Least daily range of temperature, 9.0, 26th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..75.8	1876..78.8	1881..80.1	1886..77.8
1872..79.3	1877..78.3	1882..77.6	1887..77.3
1873..78.5	1878..73.6	1883..79.4	1888..75.2
1874..78.7	1879..78.7	1884..80.9	1889.. —
1875..76.4	1880..76.5	1885..77.1	1890.. —

Total excess in temperature during month, 12.
Total deficiency since Jan. 1, 3.31.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 30 miles, S. W., on 25th.
Total precipitation, 6.40 inches.
Number of days on which .01 inch or more of precipitation fell, 11.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874..... 4.21	1879..... 3.15	1884.... 3.12
1875..... 7.89	1880..... 7.48	1885.... 3.55
1876..... 0.26	1881..... 4.47	1886.... 4.09
1877..... 3.21	1882..... 1.59	1887.... 6.51
1878..... 2.64	1883..... 0.25	1888.... 4.15

Total excess in precipitation for month, 1.54.
Total deficiency since Jan. 1, 4.81.
No. of clear days, 14. No. of part cloudy days, 14. No. of cloudy days, 2.
Thunder storm on 25th. Excessive rainfalls, 1.49, from 11:15 A. M. to 11:45 A. M., 25th; 2.03, from 10:15 A. M. to 3:50 P. M., 25th.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable.

R. E. KERKAM, *Signal Corps Director.*

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

DECEMBER, 1889.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

The Period of Incubation of Yellow Fever Among Passengers and Crews of Vessels from Infected Ports.

By Dr. C. P. WILKINSON, President of the State Board of Health of Louisiana.

"Rational quarantine detention must be based upon a knowledge of the period of incubation of the disease that it is proposed to exclude. When the time required for transportation from an infected locality to New Orleans is much less than the average period of incubation of yellow fever, then a fatal defect exists in the system of regulations; and no amount of vigilance at the outposts will avail."—*New Orleans Medical and Surgical Journal, November, 1889.*

"The periods of time which may intervene between exposure to yellow fever poison, and attacks of the disease are extremely variable. The shortest period of incubation which has come under my observation was about twenty hours.

"In three cases, in which I was able to fix the hours of first exposure with precision, attacks followed in 72 hours, 83 hours, and 101 hours, respectively. Of fifty-five unacclimated physicans who exposed themselves at Memphis during the epidemic of 1878, fifty-four suffered attacks of yellow fever. In these cases the periods of in-

cubation varied from one to twenty-five days, the average duration being ten days."—*Prof. S. M. Bemiss, M. D., in Pepper's American System of Medicine.*

The value of deductions from the illustrations cited by the above lamented and eminent authority must depend entirely upon the exact facts of their happening. It is most certainly known that very many people live for weeks and months in an atmosphere infected with yellow fever without manifesting any evidence of the disease. Should they finally succumb it would be manifestly improper to ascribe the cause of illness to first exposure to the poison. Where a number of people are attending yellow fever patients, and living every hour of the day and night in an infected town, when they do fall sick no value whatsoever can attach to the apparent period of incubation, for it is utterly impossible to fix with even relative exactness the date of reception of the poison which overpowered the individual forces resisting the elements of disease. The instances cited by Prof. Bemiss of early development of yellow fever following first exposure are of very great value in fixing with precision the possible shortest period of incubation of the disease. In the literature of yellow fever those cases cited of apparently long periods of incubation have been, in so far as I can find, of persons continuously exposed to the poison.

Little can ever be really known upon this subject until all these probably deceptive cases are eliminated from consideration. The period of incubation of yellow fever can only be fixed with even approximate precision when we are enabled to observe the development of the disease in a number of individuals who have been suddenly introduced into an infected locality, exposed to the infection for a limited time, and then removed to healthy and pure surroundings. A very few instances of this kind will prove of far more value than hundreds of cases happening after first exposure, but remaining continuously under the influence of the poison up to the hour of illness. It may be

urged that such possibilities of observation rarely exist. Not so rarely as may be imagined. The records of quarantine stations are the places to look for them, but these records can only be valuable when they have been kept with exactness and care, and are as far as possible freed from every source of error.

Let us illustrate that which not uncommonly happens. A vessel leaves a port infected with yellow fever. The passengers embark with their baggage, and the sailors store away in their lockers and bags little articles of silk, fancy woolen, or other goods to be smuggled, and sold at the port of entry. All continues well on board for ten days, and on that day a passenger gets up a trunk and dives down into its contents, seeking some particular garment; or Jack, having at last a moment of leisure, perhaps, and not uncommonly it is the captain, overhauls his stock of purchases. One or two days subsequently the passenger or Jack is laid up with a chill, and four or five days later a saffron-colored body is launched into the deep. An instance of this kind, and it is of every day occurrence, is invariably set down as *twelve days' period of incubation of yellow fever; whereas, in reality, it is only twice that number of hours.* Now let us further suppose that there are no passengers on board, the crew is small, and the voyage is a long one from an infected port. An actual case in my knowledge of fifty-two days from Rio; all well on board while in that infected port, and while at sea. While at the quarantine station the sailors' effects were all taken out of bags and boxes by the sailors themselves for fumigation. Forty-eight hours thereafter one man was taken with the initial chill of yellow fever. Is that a period of incubation of fifty-two days, or is it one of forty-eight hours?

Three other cases exactly similar in nature; one case within twenty-four hours after opening of effects preparatory for disinfection, one within thirty-six hours, and one within twenty hours; voyages from infected ports having

occupied, respectively, seven, fourteen, and twenty-one days. All of these cases came under my personal observation during my connection with the quarantine station from 1880 to the close of 1883.

The cause of the yellow fever epidemic at Fort Barrancas, Fla., was for a long time shrouded in mystery. A little trench dug in the pure white sand from the fort to the beach was for a time suspected of the evil. At last it came out that one summer night a bark from Havana, with three men ill of yellow fever, had sailed into Pensacola bay and anchored quite near the shore. Two soldiers from the fort clandestinely went on board of the bark and purchased orticles from the crew. Before dawn the vessel had gone on to the quarantine station. Within forty-eight hours of going on board of that bark, both of the two soldiers were down with yellow fever, and were the first cases of a local epidemic.

In September of 1887, a young gentleman left Puerto Cortez, then a perfectly healthy place, entirely free from yellow fever, and took passage on the steamship City of Dallas for New Orleans. The vessel stopped at Belize, where yellow fever was then prevailing. The young man referred to went into Belize on a carouse, spent ten hours in the place, and within twenty-four hours of the time of departure from there was ill with the initial chill of yellow fever, and died at quarantine station with a pronounced type. DeVilla himself, on the evening of Sept. 26, 1889, embarked on the City of Dallas, after a day only spent in Livingston, a place where we knew there was yellow fever in July, and among the most probably entirely acclimated population, or perhaps inured people, there were then alleged to be no signs of the disease; and on the morning of Sept. 29, about 9 o'clock, DeVilla was attacked with the initial chill of yellow fever, less than seventy-two hours subsequent to first and last exposure. Examination of carefully kept quarantine records will reveal that there is no well established period of incubation of yellow fever

covering more than seventy-two hours. The maximum amount of poison a passenger on a vessel from an infected port can receive, has been taken into his system up to the time of leaving port. He gets no more from the sea air, and if the cargo and effects, taken from the port of departure, are not accessible to him, and they very rarely are, he gets no more from any of his surroundings. There is not one chance in 10,000,000 that under these circumstances, forty-eight hours of zymosis will not result in entire exemption from the malady, or, the force being sufficient to overcome his powers of resistance, the individual falls ill within that time.

Now, it is certain that infection from an infected town is frequently brought in the baggage of passengers, in the effects of the crews, and in the cargo and the confined air of holds of vessels. The passengers and crews are then again, and for the last time, exposed to a certain amount of infection while opening baggage and boxes at quarantine stations, preparatory for disinfection. While it has been rare that yellow fever has been contracted at this time, still cases have developed—*invariably within a very brief space of time subsequent thereto*—and it is, therefore, never safe to omit consideration of this very probable source of danger. In other words, then, lengthy voyages should never be considered in any degree as part of a period of incubation or reckoned in favor of vessels in reducing periods of detention; *but the last exposure of persons on board a vessel from an infected port should invariably be dated only from the hour of completed disinfection, and the probable period of incubation computed from that time.* Any other quarantine doctrine is unsound and any other quarantine practice is decidedly unsafe. Keeping the possibilities of development of yellow fever among passengers and crews of vessels constantly in view, a very material and practical question arises, the answer to which is of great value. At what time subsequent to disinfection have cases of yellow fever developed on ship-

board? Subsequent to the process of disinfection in use at the Louisiana Quarantine Station during the last four seasons, 1886-'87-'88-'89, very rarely has the disease developed at all. In the the extremely few cases (there have been but two) *each was within twenty-four hours.*

Remember, there have been treated during those four summers, in round numbers, about 800 vessels. Of these certainly 50 per cent were from actually infected ports, and possessed every quality of danger to this city. Further: Of the number of vessels arriving at quarantine station these seasons with yellow fever on board, not one vessel developed another case of yellow fever subsequent to disinfection; and, practically, it would have resulted in no harm to this city had these vessels been released from quarantine station immediately after disinfection, instead of at the end of five days' detention thereafter. This exemption has not obtained under any process previous to the one now in use. It is most certainly established that the apparatus in use for four years past has disinfected. The proper and attentive application of the measures provided affords every reasonable ground for the reduction of quarantine detention from five to three days subsequent to sufficient treatment of vessels.

Examination of quarantine records, where every care has been exercised to eliminate sources of error, affords very much better facilities for correctly fixing the period of incubation of yellow fever than classification of cases from first, but afterwards continuous exposure to the disease in infected localities under epidemic influences. It is my belief that, as far as relates to maritime quarantine, three days will soon be considered as the extreme period of yellow fever incubation.

Hypnotism and Suggestibility.

Read before the Tri-State Medical Association of Tennessee, Alabama, and Georgia, Oct. 16, 1889, by W. C. Townes, M. D., Chattanooga.

I propose to examine the more interesting results of the work at home of the leading men on this subject, as shown in the congress recently in session in Paris.

This subject, in which we are daily becoming more deeply engrossed, is certainly, as has been the case with other branches of our science, destined to acquire before long a solid and firm scientific foundation.

Much of the trickery of charlatanism which has tended to bring it into discredit has now been exposed, and we can reasonably hope that the researches which are being made in this field will not only be of benefit to psychology, but that medical men will be found who will adopt and prosecute, and find in them an ample harvest of new ideas, applicable to the healing art.

Automatic writing, which seemed to have been abandoned to mediums and Slade's slates, has brought a smile to many a savant's lips, and the supernatural paraphernalia with which it was surrounded made it seem for a number of years mere knavery or trickery. But now, if we may accept the opinions of some of the members of the recent congress, there is a certain basis of truth underlying some of the surprising facts to which the public attention has been drawn. Fifty-five years ago M. Chevreul showed that certain of our movements were unconsciously made, and it was by movements of this kind that he tried to explain the phenomenon of moving tables.

M. Richet seems positive that these movements do exist, and are not imaginary, and that it is possible that they are performed consciously, or by the other half of the condition of double consciousness; that is to say, that they require a series of associated ideas, dependent upon complicated brain action, but as the person who makes these movements is still in possession of his faculties it follows that such movements depend upon the well known phenomenon of double personality.

M. Binet supported these ideas, and thinks that in these cases there is a sort of sub-consciousness which is independent of the person's general consciousness. As for the explanation of this sub-consciousness, of this unconsciousness of sensations, he thinks it lies in the low degree of

intensity of the impressions which come from the exterior, and produce the sensations.

These facts are not altogether above criticism, but when such an observer as the one above declares that they do not seem impossible, and that some of his personal experiments have given results that warrant him in carrying them further, one is led to hope that this mental transmission of thought will some day become a realized fact, and will, like the germ theory, form one of the most fertile discoveries of this age.

M. Bernheim, of the school of Nancy, has advanced some almost revolutionary ideas; still, the definition seems most strong. This is it: "Hypnosis (sleep brought on by hypnotism) is a peculiar psychical state that we have power to create and which increases in varying degrees our 'suggestibility.'" That is, our fitness to be influenced by an idea that enters the brain and our fitness to carry out this idea by an act.

From a purely medical standpoint hypnosis aims to increase our "suggestibility," and to place our nervous system in such a state that suggestion will incite it to perform acts that will lead us on toward a cure. This transformation of ideas into facts is realized more readily the obtainment of the permission for the transformation is favored by the torpor of the nervous faculties, as attention or will power.

We can also agree with M. Bernheim in his statement that physics, chemistry, and mechanics do not suffice to explain the mysteries of life, and he tries to ascribe to the mind a rôle which some physicians are too much disposed to deprive it of. Is it not clear that there is a science of psycho-biology? If so, then there is a science of psycho-therapeutics. There are numerous examples. This species of therapeutics, which has formerly been in the hands of the wonder workers, but which physicians should investigate in a scientific manner, is based on the influence of our moral nature over our physical nature. This is, truly, not an idea of the present day.

Since every organ, every function of our living being is connected with the nerve centres, and every part of the body ultimately ending in a nerve cell, and, since each nerve cell, influenced by an idea, puts in motion the nerve fibres which correspond to the realization of that idea, is it not easy to grasp the possibility of a science of psychotherapeutics by suggestion?

It is evident that certain waters, homeopathy, granules, many mysterious methods simply act by suggestion, and cures are brought about by these means. Who of you, with a little reflection, can not cite instances of the kind in his own practice?

We ought to take good and reliable parts from the ideas advanced by the Nancy school; but not let them lead us into a purely theoretic and hypothetic ground when they are in discord with the actual observation of facts.

This question of hypnotism has many sides for applications, and we cannot possibly view them all. And it is a little too early to say which of them will survive. But in connection with this a few of the affections in which good has resulted will be mentioned. M. Berillon has tried hypnosis in the treatment of the mental disease of vicious and degenerate children. On account of the many principles by which it is guided suggestion ought to succeed better with children than with adults, since it is the art of utilizing the fitness which a person presents to transform an idea received into an act. And you all know this fitness is highly developed in children, and it may be said that "suggestibility" is a characteristic feature of a child's mental state. May this "suggestion" not be used in a purely moral state, when many facts come from authoritative medical sources of its good results in the treatment of various nervous conditions in children, such as chorea, nocturnal frights, and incontinence of urine, diarrhœa, constipation, and in older children, dysmenorrhœa, rheumatism, etc.? But it evidently ought only to be used when the parents have confessed their failure in reconquering

their children. Some claim its utility when habits of falsehood, cruelty, theft, and laziness have to be dealt with.

This is truly an attractive idea. But can loss of authority and the fact of failure on the parents' part be ascertained? But if we consider the plain fact of the viciousness of the child, I can see no risk in trying the effect of suggestion.

One source of encouragement in the prosecution of this idea is the results obtained by M. Voisin, in hypnotizing the insane. It was considered impossible to hypnotize this class, and, indeed, it is said to be not easy, and a vast deal of patience and time is required, as so many as the twentieth séance often is necessary.

As a rule, in this way hallucinations have been modified, contractures cured, also certain paralytic troubles, due to various neuroses; and even greater claim is made in disorders of certain sensorial functions. One observer has noticed that melancholia is a form of mental disease, which has been most successfully relieved by this method. And the same method has been efficacious in his hands against writers' and telegraphers' cramp.

Here I will cite a case of a young American woman, who, since the beginning of her menstrual life, has suffered most excruciating pain at the menstrual epochs. Her parents had taken her to eminent gynecologists in this country, but with no permanent relief.

Thinking an ocean voyage would be of service, with change of scenes in European lands, they decided upon this course, but still in vain. London and Paris physicians were in turn consulted, yet no permanent relief was afforded. By chance they heard of my friend and classmate, M. Hugenschmidt, residing in Paris. They called upon him, and, after one hypnotic séance, administered now over two years since, she has had normal, painless menstruation, as written him in a letter received a few days before the recital of this incident. He related to me

several cases suffering from different affections, as mentioned above, in which from one to several séances had the happiest effect.

The facts that I have so far cited show how extended is the field of action of hypnotism, but it must not be overlooked that it has its drawbacks as well.

The number and nature of these drawbacks have not yet been fully determined, but one thing on which every one agrees is, that public séances of hypnotism are dangerous. They have been the cause of epidemics of mental trouble, in the form of hypnotic mania, and are capable of producing different neuroses in predisposed persons.

Also, it must not be forgotten that "suggestion" can be used for criminal objects, to be accomplished at a time more or less remote, and, finally, knaves and scoundrels can find in public séances the teachings they need to be able to handle hypnotism for the furtherance of their vice and immorality.

And now, for these reasons, I close this paper by appending the conclusions adopted by the congress on hppnotism, "in consideration of the danger of public séances of hypnotism, and, in consideration of the fact that the use of public hypnotism as a therapeutic agent belongs wholly to medical science, and all official teachings of its application to psychiatry, the congress makes public the following desires:

"1, Public séances of hypnotism should be forbidden by administrative authority, for the good of public hygiene and sanitary order; 2, the practice of hypnotism as a means of cure should be subject to the laws and regulations that govern the practice of medicine; 3, it is the desire that the study of hypnotism, and its application, should be introduced into the course of study of medical sciences."

L.

SELECTED ARTICLES.

PREVENTION OF TUBERCULOSIS.

Report of PROF. HELLER, of Kiel, read before the German Society of Public Health at Strassburg. Translated from the *Deutsche Medizinal-Zeitung* by DR. A. MCSHANE.

Consumption has been known from the remotest time; but it is only a hundred years since tubercles were first found, and since then the name tuberculosis has become current. Although consumption was always regarded as contagious, still the fact of its contagiousness was not scientifically proved until Villemin and his disciples entered the field twenty-four years ago. Koch went a step further, and showed that the undoubted cause of the infection was a vegetable organism.

Some localities are remarkable for an unusually great mortality from tuberculosis. According to the statistics received in Wurzburg, the deaths from tuberculosis, for every ten thousand of the population is, in Dantzic and Gotha, 25; Bonn, Frankfort, Dusseldorf, Leipzig, Strassburg, 35; in Brunswick, Mannheim, Wiesbaden, 30; in Nürnberg, 49; in Krefeld, 58, in Vienna, 77, in Remscheid, 88. Heller has examined a large number of reports of autopsies, and in the main they confirm the results noted in the statistics of Schleswig-Holstein. Only when the record from the first to the twentieth year of life is examined do we find any material differences. Autopsies made on subjects from all ranks of society showed, to 10,000 of the population, in the first year, 240 cases of tuberculosis; in the second year, 110; in the third, 30. Statistics of autopsies have this good feature, that they exclude errors of diagnosis; they show, however, that the reports of tuberculosis from the sixteenth year on are tolerably correct. Heller has performed about 3,000 autopsies, and has found about 800 cases of tuberculosis. In 100 autopsies no case of tuberculosis was found under four weeks, one case aged nine weeks, and forty-three cases ranging in age from fifteen to twenty

years. The importance of this disease is further shown in its long and slow course, thus differing from the other infectious diseases; the patient's savings become exhausted, and the support of the unfortunate individual devolves upon his family, or the community. Furthermore, this long duration increases the opportunities for sowing the seeds of the disease. It is necessary, therefore, for the state or city to take measures to destroy the germs of the disease, and thus prevent its propagation as much as possible.

Tuberculosis is, as a rule, less destructive among the rural populations than in cities, with the exception of Hohenzollern. Social conditions play an important part here.

According to Koch, the bacillus of tuberculosis could increase only in the animal organism; later researches, however, show, at least, that baccilli have great power of resistance to external influences, so that dried tuberculous sputum is still infectious after the lapse of 186 days. Every time a consumptive coughs he expels with the sputum 300,000,000 germs, so that when a patient coughs only once an hour, he expels 7,200,000,000 germs in twenty-four hours.

On account of the frequent appearance of tuberculosis in a family the disease has been assumed to be hereditary. Heller vigorously opposed this theory at the Copenhagen congress, while, on the other hand, it is still obstinately maintained by others. Heller does not doubt the possibility of heredity, since tubercles have been found in new-born and unborn calves. In the slaughter-house at Kiel, 13 per cent of all the cows brought there were found to be tuberculous; in 3,600 fed calves, from four to five weeks old, only five were tuberculous, and none of the new-born were affected. According to the combined testimony of pathologists tuberculosis has never been found in a new-born child. The few cases reported in literature are erroneous; syphilitic changes were mistaken for tuberculosis. Heller did not find a single case of tuberculosis in 300 new-born

children, although some of them were born of markedly consumptive mothers. Heller infers that tuberculosis can be found in children only when a sufficient length of time has elapsed after birth for the tubercles to develop. Nine weeks are long enough. In 549 children nine weeks old, examined post mortem, only one was found to be tuberculous, and then the meninges of the brain were affected. Epstein, in Prague, showed children born of tuberculous mothers, become tuberculous only when they remain with their mothers, but not when they are nursed by healthy nurses. Similar observations have been made in Nürnberg and Munich. Heller sees in this an explanation of the socalled heredity of tuberculosis. He does not, however, deny that a congenital disposition may exist, but with this public health officers have nothing to do.

The direct contagiousness is shown in one instance, where ten children attended by a consumptive midwife died of tubercular meiningitis in the course of a year; the midwife had a filthy habit of sucking the mucus out of the naval cavity, and of blowing wind into the children. Heller has furnished a similar example by bringing together healthy and tuberculous rabbits; the former became infected and perished.

Heller finds it a little queer that persons who are fearful of tuberculosis, or who are affected, adopt the whey cure without caring in the least about inspection of the cows. The milk of tuberculous cows will be used to the last gasp. The statistics of slaughter-houses do not give a very accurate idea of the extent of tuberculosis among cows, for many animals are killed outside, and, after the tuberculous organs are concealed, the meat is brought into the cities and sold for healthy meat. In some districts the number of tuberculous cows reaches 50 or 60 per cent of the whole number. The majority of infection-experiments with the flesh of such animals gave negative results. Pigs and chickens are also subject to tuberculosis, but it is not probable that they play an important rôle in the dissemination of tuberculosis.

When States and municipalities undertake to enforce measures for preventing the spread of tuberculosis the cost must be considered, and due regard must be had for personal liberty. Theoretical musings must not be indulged in, for practice has a way of trampling upon finely drawn theories. The measures to be adopted are, in the main, those which apply to other infectious diseases. To interdict matrimony would be useless. A most important measure is to render the expectoration of consumptives harmless. In all public buildings ample provision should be made for rendering inert the sputa of all persons, whether they are known to be consumptive or not; the spittoons should be regularly cleaned and disinfected, so that they may not act as foci of infection. This measure can be carried out in all factories and workshops. The floors should be scrubbed; dry sweeping only transfers the dust from one place to another.

We are powerless in regard to preventing tuberculosis through milk, since we can not, in daily commerce, examine every can of milk microscopically. On the other hand, it can at least be learned from which stables tuberculous animals are sent, and, when the fact is established, the animals should be placed under medical control, and every animal that shows signs of tuberculosis should be slaughtered without delay. The individual stalls should also be supervised. Heller regards tuberculosis as a disease that should be published to the world. Veterinarians say that it is difficult to recognize tuberculosis, but when a suspected stable is under supervision Heller thinks that it would not be difficult to recognize the disease.

To attempt to exclude the meat of all tuberculous animals is, according to Heller, trying to do too much. As a curious fact Heller remarked that animals for slaughter that had received a prize at Paris, were found to be highly tuberculous. Only when tuberculosis has infected the whole organism is it possible to know positively when to exclude

the flesh as food; but when only one or two spots are tuberculous the flesh may be sold, but with the express statement that it is of minor value and should be thoroughly cooked before using.

1. Tuberculosis is the most fatal of all diseases, since it causes the greatest percentage of deaths; it is the most injurious disease to public prosperity, as it unfits its victims for a long period of time for active work. During this long time the patients are constant sources of infection.

2. The fight against tuberculosis is a subject that should engage the most earnest attention of governments; even if the disease can not be entirely extirpated, its destructiveness can at least be lessened.

3. The cause of tuberculosis is Koch's bacillus. Its appearance and development outside of the animal organism has not yet been demonstrated, although it may retain its infectious power for a long time.

4. The bacillus tuberculosis may be acquired: *a*, through inheritance, though this is very rare; *b*, through direct or indirect conveyance from tuberculous subjects; *c*, through direct or indirect conveyance from tuberculous animals, especially through milk and the parts used for food.

5. Regulations against the spread of tuberculosis:

Against 4 *a:* here no certain measure can be adopted.

Against 4 *b*: school hygiene (disinfection of the sputum of teachers and children, regular scrubbing and frequent disinfection of the school rooms.)

Erection of disinfecting institutions by the authorities, and instruction of the people in the technique of disinfection. Repeated disinfection of the dwelling houses and implements of tuberculous subjects, compulsory disdisinfection of dwellings and furniture of persons who have died of consumption.

Supervision of wet nurses, midwives, nurses, in regard to their health.

Supervision of persons who are concerned in the prepara-

tion or sale of food-stuffs; persons with cough should be excluded.

Careful hygiene of hospitals, prisons, orphan asylums, and similar institutions.

Education of the people.

Against 4 *c:* rigid inspection of meat. Tracing every tuberculous animal to its original locality, and close veterinary supervision of suspected stables and localities.

Entire destruction of tuberculous animals (with reimbursement to owners). Supervision of the milk trade.

In the course of the discussion following the reading of the report Dr. Dettweiler, of Falkenstein, said that nine-tenths of the danger to be combated could be averted by the proper use of properly constructed spittoons. The danger of infection by direct inoculation through food, etc., is exceedingly small compared to that by atmospheric inhalation; above all, it is necessary to throw the sputa into receptacles that will keep them in a moist condition until they can be rendered harmless and disposed of. From 170,000 to 200,000 persons die yearly of consumption (in Germany [?]), according to Dettweiler. The average duration of the disease is, from his observations, from six to seven years. About a million and a half patients with lung disease are in Germany, about one-tenth of them bedridden; the rest move about and do not always carry a spittoon in their hands, and they spit upon the floor, or use their pocket handkerchiefs, or else swallow their sputum. These can be avoided by carrying a small pocket spittoon, specially intended for such patients, designed by Dettweiler. He hoped that the society would denounce the non-execution of such a measure as a shameful offense against the body social; that it would recommend that schools, prisons, infirmaries, etc., compel their ambulating patients with coughs to use spit bottles of the type of Dettweiler's, or any other, and that it would instruct the public, and make railroad authorities awake to the fact that

their cars and waiting rooms may become hotbeds for the development of the germs of tuberculosis.

Dr. Cornet, of Reichenhall said that the idea of heredity and predisposition to tuberculosis, was prevalent, in the prebacillary period, and formed a very important part in the doctrines concerning infection; the discovery of the bacillus tuberculosis swept these notions aside. Cornet does not altogether deny the possibility of heredity, but he regards it as an extremely rare means of infection. He has inoculated both the uterus and placenta in females, and the testicles in males, but the offspring of those inoculated was not tuberculous. The tubercle-bacillus always developed where it first entered the body. The non–heredity of consumption is shown in this: that, although it causes about one-seventh of all deaths, the chief changes occur in the lungs, and not in the abdominal cavity, or liver, through which the maternal blood first passes. Direct heredity, therefore, plays a very unimportant part; on the other hand, children born of syphilitic or tuberculous parents perhaps possess a pavement epithelium not endowed with normal resisting power, are not excluded. The infection of two thousand inoculated animals speaks against immunity. Cornet advises that all physicians instruct the public to guard against infection as much as possible. Cornet himself advises all of his consumptive patients to discharge their sputa into a moist spittoon. In hospitals tuberculous patients should be kept apart from the others.

Prof. Wyss, of Zurich, spoke of the close relationship between tuberculosis in animals, and tuberculosis in man. Investigations in Baden and Bavaria showed that where the disease is common among cows it is also common among human beings. It has been shown that tuberculosis exists even among the Alpine cows in the Appenzell. Wyss recommends a careful supervision of the milk-cure resorts.

CRIMINAL ANTHROPOLOGY.

[Translated from the *Revista de Ciencias Medicas*, of Barcelona, by A. McSHANE M. D.]

Dr. Lombroso presented a minute study of the reality of the facts of atavism and hereditary degeneracy, of pathological and criminal atavism. He discusses the rôles of erotic and psychic epilepsy. He distinguishes criminals from passion, or occasional criminals from innate criminals, by proper characteristics, which, according to his views, can be confirmed by Galtonian photographs when a large series of photographs can be obtained for this purpose.

In occasional criminals, the sensibilities are less obtuse than in born criminals, the reflexes less irregular, anomalies less frequent, especially of the cranium. Galtonian photographs of eighteen convicts present two types: the first with the characters of a criminal, and, we may say, of a savage, that is to say, with the frontal sinuses prominent, the zygomatic arches and lower jaw very large, orbits large and wide, features asymmetrical, nasal orifices wide, and the lower jaw having a lemurine appendage. The second type (swindlers and thieves) is less distinct: the asymmetry, the width of the obits, and the prominence of the zygomatic arches are less pronounced, although quite noticeable.

Dr. Lombroso quoted the observations made by various authors relative to the union of the frontal lobes, the capacity of the cerebellar fossæ, enlargement of the midde occipital fossa, the characters of baldness and hairiness, the retardation of development, the presence of certain folds of the skin (especially the nasso-labial fold), and the loss of the type of nationality among criminals. He recalled the disturbances observed in molecular change, the elevated average temperature, the early menstruation in female criminals, the presence in the urine of an increased quantity of phosphoric acid and a decrease of nitrogen. He noted that the color of the eyes of criminals was chiefly blue or chestnut. The sense of smell is less acute, and is sometimes entirely abolished. The sense of

taste is not well developed, especially in congenital criminals. Hearing, on the contrary, seems to remain excellent. The conjunction of all these characters leads Lombroso to affirm the existence of a criminal type, such as he describe in his work, *L'Uomo Delincuente.*

Dr. Manouveier opposes the theories of Lombroso. To him, crime is a sociological matter, and not a physiological. Before classifying the special characteristics of criminals, it is necessary to classify the criminals themselves. He does not feel compelled to believe that ordinary criminals have anything to do with an abnormal physiological condition. Crime, on the other hand, may be determined by certain qualities, and prevented by certain defects; for example, brutality, audacity, muscular strength, a sentimental nature, etc. We know absolutely nothing of the significance of anatomical characters, and no single one of them can be assigned exclusively to any special category of criminals. If certain criminal monsters have been exhibited, this does not prove that criminals are anatomical monstrosities, in the same manner that the epileptic criminals described by Lombroso do not prove that all criminals are epileptic. There can not be *one* criminal type, just as there can not be *one* type of monstrous or pathological man. It is necessary to compare criminals with honest men; that is to say, the *hypotypic* with the *metatypic*, if we wish to obtain any results.

The most intelligent man, according to Manouvrier, may, under certain circumstances, become a criminal. The characteristics mentioned by Lombroso are not possessed exclusively by criminals. Moreover, in trying to define the criminal type, we succeed in constructing a harlequin which does not exist, since no type embraces at once all of the characteristics mentioned (metopic suture, wide arms, prominent ears, etc.) Manouvrier further directs attention to the insufficient theories born of exaggeration and speculative deductions, but which break down when applied to actual facts.

Dr. Lombroso said that the characteristics of criminals of occasion are not very important, and that the crimes of occasion are not frequent, since he found only thirty in 1,400 cases. With Mrs. Arnoffski he examined the prostitutes who are criminals of occasion, and usually they did not present the anatomical characteristics described. About 10 per cent of the prostitutes of Burdeos were under age at the beginning of their public career, and belonged to good families.

But in speaking of the criminal man we refer to the pathological man, for if crime be not an anomaly, it is certainly not a virtue. By combining the anatomical and physiological characteristics we may construct the criminal type, in which certain of the characteristics are of special importance, such as specific anæsthesia and abolition of the sense of smell. The question of atavism is also concerned, as in criminals a large number of hernias and plagiocephalies have been observed, which are ataxic characteristics more or less marked. Finally, ptomaines seemed to play an important part in the psychic epileptics, and these ptomaines can be found in the urine. Acetonuria and peptonuria frequently exist in criminals, as well as in patients affected with cerebral disorders.

Dr. Tarde thinks that crime is an innate function of the predisposed criminal, just as we find a predisposition to genius in painters, sculptors, musicians, etc. Do organic dispositions exist? Yes. Are they revealed by anatomical characteristics? No. If localizations can be demonstrated in criminal anthropology as clearly as Broca demonstrated the center for articulate speech, then a complete system can be built up; but at the present day that is impossible.

Dr. Brouardel fears that the investigations into the distinctive anatomical characters of criminals is an illusion. Some of these characteristics are found in insane subjects; others may be the results of a general pathological process. Epileptics and lunatics excrete ptomaines with the urine. He recalled the case of an epileptic woman in his clinic

whose urine contained a ptomaine, the characters of which resembled those of strychnia, and which produced convulsions in frogs into which it was injected. In two other patients, of a melancholic type, the urine contained ptomaines having soporific power. May not anæsthesia, loss of taste, sensorial abolition, be the effects of a general disturbance caused by the ptomaines which poison the blood of hysterical subjects, and in those in whom these ptomaines are found in abundance in the urine? The phenomena of unlocalized paralysis depend, perhaps, upon an intoxication of this character. These phenomena are identical with those presented by lunatics and criminals.

POLITICAL CRIMES FROM AN ANTHROPOLOGICAL POINT OF VIEW.

Dr. Laschi, a collaborator of Dr. Lombroso, says that the factors, which are chiefly to be considered from this standpoint, are: race, genius, and density of the population in large countries. We must make a distinction between revolutions and revolts; the former are physiological, the latter pathological. Climatic, orographic, and social conditions have great influence. Race is an important factor. Brachicephalic peoples are conservative, and dolichocephalic peoples are turbulent and very revolutionary. Of eighty-nine revolutionists, there are scarcely twenty-nine who are brachicephalic. The genius of a people is manifested in political revolutions. In the most revolutionary cities the quickness of thought is greater. In centers of agglomeration, the tendency to republicanism is most marked.

Dr. Lombroso, in speaking of political crimes, described the skull of Charlotte Corday, which presents virile characters, platicephaly, and the median fossa, which characteristics are those of a criminal woman, or of one excessively virtuous. Dr. Lombroso cited other cases, which he called political epilepsy.

DETERMINATION, BY MEANS OF CRIMINAL ANTHROPOLOGY, OF THE CLASS OF DELINQUENTS, TO WHICH A CRIMINAL BELONGS.

Dr. Garofalo said that the anatomical character of a criminal should correspond to his moral type, which his physic anomaly discloses to us. The criminal is endowed with a monstrous nature, and this once recognized, it becomes necessary to distinguish the congenital assassin, or moral insane, from the lunatic or epileptic. In cases of extreme anomaly the very circumstances of a crime are sufficient to give us a clear notion of the nature of the criminal; but in less evident cases a psychical or anthropological examination of the criminal should be made. The anthropological characteristics are specially important in the diagnosis of juvenile criminals. Frequently anthropology enables us to detect in them signs of moral alienation or innate criminality. The typical face of an assassin can be noted in them; the cold gaze, the fixed eyes, and certain very manifest deformities of the cranium; frequently excessive prolongation of the lower part of the face, prognatism, the forehead narrow and inclined backwards, and other retrogressive signs; or, also, atypic anomalies, such plagiocephaly or scaphocephaly; and, in rapists, bare and thick lips. Analgesia is not rare. In regard to the mind, apathy and selfishness are observed. It is not large to observe a psychopathic form as a consequence. In these cases we have not to deal with true alienation, but with innate criminality, moral epilepsy, or lunacy.

A physical examination will reveal to us the impulsive characteristics which are charged with giving rise to alcoholism, the inheritance of drunken parents, to convulsions, lunacy, and epilepsy. This class of delinquents forms a connecting link between evil-doers from instinct and occasional criminals. In the impulsive type, the regressive type of criminal anomalies is usually wanting; there are only typical anomalies, as for example, facial hemiatrophy.

On the other hand, nervous anomalies are more frequently observed. The impulsive criminals, who may be regarded as semi-patients, are more dangerous than accidental (occasional) criminals, and deserve to be the object of a special treatment. Often those who are charged with slander or cruelty are the victims of hysterical neuroses. Those who are murderous, who attempt rape, etc., are frequently epilepetics or alcoholists. Vagabonds, thieves, and other degredators are frequently characterized by a physical and moral neurasthenia (aversion to work and devotion to pleasure), but a social factor is here added to the congenital. Penal law should, by adequate legislation, take cognizance of the classification of criminals, and not pretend to know nothing of the variety of natural facts.

CONDITIONS DETERMINING CRIME, AND THEIR RELATIVE VALUE.

Dr. Ferri said that the natural genesis of crime recognizes as originating causes the anthropological or personal facts, the physical factor, or the natural surroundings, and the social factor or environment.

What is the relative value of these factors? Crime is not exclusively the product of environment, since, out of 100 individuals that live in poverty, abandonment, and ignorance, sixty do not commit any crimes at all, and of the remaining forty, five prefer suicide to crime; five become insane; five become beggars, and harmeless vagrants, and the other twenty-five—what crimes do they commit? In every category of crimes the influence of the determining conditions varies much, according to the special forms of criminality. Assassinations, rapes, incest, robbery are evidently the result of environment, but this factor is often less potent than the impulse given by the personal constitution (organic or psychic); for example, in robbery with violence, and especially in assassinations with the object of plunder.

The anthropological factors comprise psychological, anatomical, and physiological facts.

In regard to the natural surroundings, Dr. Ferri has already shown from the French criminal statistics the constant increase of crimes against property in winter and during severe weather. Here an indirect effect is concerned, while the increase of bloody crimes and rape during seasons of elevated temperature is a direct effect of the temperature itself upon the individuals in a biological condition of diminished resistance to these influences. The influence of atmospheric electricity, barometric pressure, climate, orography, winds, etc., is great. The climate of the north causes a greater number of crimes against property, while the climate of the south causes a greater number of crimes against the person. If there be no atavistic predispositions the man is secure against committing crime; for this, an atavistic degeneration is necessary. Cause and effect are here closely connected, since each effect is at once a cause, and *vice versa*. It is the Byzatine question of the preëxistence of the egg or the hen. If poverty be the cause of ignorance, then ignorance in its turn causes poverty, etc. The effects of environment are apparent; for example, in the attempts at rape, by the great cohabitation and promiscuousness of the sexes. Certain criminals are affected with a kind of moral daltonism; for example, the assassin will say: "I am not a thief, I am an honest man and a gentleman," and the thief will say, "I am not an assassin, I am a decent man."

The insane criminal should not be excluded from criminal anthropology. Insane criminals are not common lunatics, as they are of an anthropological type similar to that of sane criminals.

The practical conclusions to be deduced are: To improve, on the one hand, social conditions as a preventive of crime, and, on the other, the permanent or temporary removal of criminals, according as the biological conditions exercise an absolute influence more or less marked and more or less curable.

Hospital Reports and Clinical Notes.

CASE OF TRAUMATIC ANEURISM OF THE ULNAR ARTERY.

Service of Prof. Sam'l. Logan, reported by William Elliott Parker, resident student.

Martin Willis, a white boy, aged 12, applied for treatment in the out-clinic, of ward seven, on the 7th of October, 1889, stating that he was cut on the ulnar side of the arm about two months ago, by a friend, who was carelessly using a knife. Hemorrhage was quite extensive at the time, but was controlled by pressure. About three weeks afterwards a small swelling appeared, which has gradually increased, until now, it is almost as large as a hickory nut. On examining the seat of former injury, a cicatrix about three quarters of an inch long was found about an inch and a half above the wrist. A tumor was found which was pulsating, increasing when pressure was made below, and almost disappearing when the blood supply was cut off from above. The diagnosis of traumatic aneurism of the ulnar was made, and as there was no necessity for an operation at the time, it was decided to try compression. This was tried until the 27th of October, when it was decided that it could not be cured by pressure, as the pulsation was still present, and the tumor was not diminished in size. He was put under chloroform and taken to the amphitheatre. The arm was then scrubbed with a 1–2000 solution of the bichloride of mercury, and an incision was made directly over the aneurism, ligatures applied above and below, and the contents of the sack turned out. The wound was then closed with silk sutures, and dressed antiseptically. On the sixth day the sutures were removed, and on the eleventh day patient was discharged cured, there being union along the whole line of incision.

Wistar's Balsam of Wild Cherry.—This is mainly composed of wild cherry, ipecac, squills, opium, tartar emetic, syrup, alcohol, anise and water.

LEADING ARTICLES.

TO REGULATE THE PRODUCTION OF THE SEXES AT WILL.

We have recently received a very small pamphlet from Dr. W. Ellis Bradford, of Dix, Ill., which bears upon its face a very striking title: "Physiological Law Governing the Production of the Human Sex." What woman, especially if newly wed, would not seize upon that pamphlet and devour its contents most greedily? What prospective mother has not spent many hours in wondering whether she shall present her lord and master with a son and heir, or an image of her adorable self? And what mother of many daughters has not yearned for some knowledge that would enable her to break a line of action that tends to an over production of the frailer portion of humanity?

From the time that wives first desired that the first born should be a son and heir—that is, from the beginning of the human race, persons (especially the older ones of the gentler sex) have, from time to time, professed to know what means will enable a future mother to shape the genital organs of her offspring. Some books on magic, the Black Art, the Red Art, etc., that we have seen, contain elaborate directions, prayers, etc., for obtaining the desired result; but the mixed birth rate always went on as serenely as ever. These prescriptions were vagaries of the magicians, quacks, fools, scoundrels, etc., of antiquity and the middle ages. They all partook of the nature of the marvelous, and, of course, anything like logic or reason was entirely out of the question, because of the then existing profound ignorance of anatomy, physiology, and, indeed, all the medical branches.

Now, however, a new combatant enters the lists. He is equipped, it is presumed, with all the weapons that modern science places at his disposal. He invokes not the spirits

of Venus, Jupiter, Saturn, or of any other members of the celestial family-party. He announces that he has discovered a new and hitherto unsuspected physiological law, which furnishes him with a key to the problem, and enables those about to assume parental obligations to regulate the production of the sex of their offspring.

Dr. Bradford insists upon the prevalence of law—Nature's, and, therefore, God's law—throughout the universe. The production of sex is not an accidental result of the operation of arbitrary and unregulatable natural forces, but it is subject to the control of a definite physiological law—discovered by Dr. Bradford. His discovery is not a recent one; he made it many years ago, and he claims that for the last nineteen years he has, by his directions, enabled parents to have children of either sex, as desired. He did not spring an untried discovery upon a defenseless world, but waited until his own experience of many years had shown him that his discovery had a good foundation, and was, indeed, a discovery.

Dr. Bradford's law is as follows: "*First.* If a man has sexual intercourse with a woman at the beginning or during the *first* half of the flow of the catamenia, and she becomes pregnant, the child will be a female. *Second.* If a man has sexual intercourse with a woman at the close or during the *latter half* of her catamenial term, if she becomes pregnant, the *child* will be a *male.*"

The above law of Dr. Bradford is based upon the following discovery of Dr. Bradford: "At the age of from twelve to fourteen in some, and from fourteen to sixteen in others, the catamenia is established. At that time *two* or *more ovules* ripen in the ovary or ovaries, one of which is a *female* egg or ovule; the other a *male* ovule. The menses, or catamenia, occur every twenty-eight days in a healthy female. The *first* one of the eggs, or ovules, that passes is a *female*, the *last* ones are *male.*"

The first and most agreeable impression that we feel upon reading the above, is a profound feeling of respect

for the gallantry displayed by the male ovule in allowing the female ovule to pass on before. Then we feel that Dr. Bradford's claim to having made an important discovery is not altogether unfounded. If, as he says, he has put his discovery to the test during nineteen years, then the matter may almost be regarded as settled; *almost*, we say, for, as every mother is partial to her child and blind to its faults, so an enthusiastic discoverer may be carried by his ardor to lengths that his cool and sober judgment would not permit him to go, and cause him to pass over defects and flaws in his logic which a disinterested spectator would at once detect. But we do not want to pose as obstructionists in the path of progress, though the results of a close observance of Mosaic ordinance speaks strongly against Dr. Bradford's claims.

Anyhow, why have we (no, we mean the ladies) two ovaries? One would do, as far as merely supplying a number of ovules is concerned, for each one contains about 15,000 of them. If they do not alternately produce ovules of opposite sexes, what do they do?

Some years ago we saw an article in an obstetrical journal, written by a clergyman of the church of England, who had seen a good deal of slave life in Africa, and had witnessed the treatment accorded by the heartless Arabs to the unfortunate victims of their cupidity and cruelty. This learned gentleman frequently observed that the first children born of captive negresses, conceived by their Arabian masters, were females. Again he recalled the fact that in civilized communities, the first born of a married pair was a boy. In the former instance, the mothers were oppressed and *inferior* to their masters; this *inferiority* decided the sex of the children conceived in this condition. In the newly married civilized pair the loving husband looks up to the object of his adoration, and is thus, *pro tem.*, in a state of loving *inferiority*. Here again we see the *inferior* sex (*pro tem.*) stamped upon the child conceived in that fleeting state of voluntary subjection.

We were much impressed with the article of the learned divine, and for a long time cherished the determination to remain, when fate would permit us to begin, in a state of permanent subjection, so that the surplus of the female population would, in a measure, be reduced. But a horrid fact has disturbed the serenity of our bachelor thoughts and reveries, namely, that henpecked husbands are usually blessed with a houseful of daughters. It seems better, then, to trust to luck. Now, however, Dr. Bradford consoles us and bids us hope. We hope that his discovery is a real discovery.

INCUBATION OF YELLOW FEVER.

We most earnestly call the attention of our readers to two articles in our present issue: first, the original article of Dr. C. P. Wilkinson, and, second, a translation from the *Centralblatt für Bakteriologie und Parasitenkunde*, on the Germicidal Power of Blood-serum.

Dr. Wilkinson comments upon a statement made in the last issue of the New Orleans Surgical and Medical Journal, that "rational quarantine should be based upon a knowledge of the period of incubation of the disease which it is proposed to exclude." No one, we dare say, will dispute the truth of that statement as a general law and a basis for action; but Dr. Wilkinson finds that in the application of it to yellow fever, a certain amount of indefiniteness or uncertainty in regard to the period of incubation has been productive of misapprehension and hasty conclusions.

In the translation of Dr. Buchner's article it is seen that under favorable conditions the bacilli of typhoid fever are nearly all destroyed by the serum of the blood in twenty-four hours. Dr. Buchner's researches open a new field of work. In the present state of our knowledge of the germ of yellow fever (it has not been isolated, as has been that of typhoid fever), we can not demonstrate experimentally that the germ of our unwelcome visitor lives in the human

organism for only such and such a time, after which the host is neither liable to contract the disease himself, nor carry the infection to others whose systems may be in a more susceptible condition. There is, therefore, but one way left by which we may arrive at a solution of the problem, and that is by clinical observation. This is not new, but the methods of making deductions have evidently not been laid out on the same lines by all observers, else would there not be such great latitude in the periods laid down as those in which the yellow fever germ may remain dormant in the human system. It is precisely in this regard that Dr. Wilkinson's article is of value. *He undertakes to show what may be the maximum length of time which the yellow fever poison may live in the organism.* When that period is set, then quarantine laws may be made perfect in respect to one of the objects of quarantine treatment. According to Dr. Wilkinson, the germ of yellow fever is eliminated from the non-susceptible organism in about forty-eight hours. If a voyage last for more than two days, there is no danger of the introduction of yellow fever *by the organisms of the passengers or crew.* Granting the accuracy of the observation, detention of three days would, therefore, be sufficient to eliminate one great source of danger.

But another danger, and one which the general public, perhaps, does not realize fully, is the carrying of dormant infection by the vessels—cargoes, clothing, etc. When the germs enter the animal organism, they are surrounded by ceaseless vital activity; they can not remain still; they must engage in a struggle for life and death with the vital forces of the host, and either they overcome the latter and give rise to an attack of yellow fever, or else they are completely routed and destroyed. It is quite a different matter when the germs are deposited upon clothing, bedding, coffee bags, etc. Here they quietly repose upon inactive transporters, and when the latter are packed away in the hold, trunks, etc., the unseen foe sleeps until awakened and set free to work mischief.

The danger from the side of the passengers and unacclimated sailors, extinguishes itself in, say, less than three days; but the danger from the cargo and effects *is revived as soon as closed packages are opened.* No accurate observations are at hand to show what may be the extreme of persistence of infection in cargoes, etc. Fortunately, we are in a position not to care a fig how *long* an undisturbed germ may live, because we know from experience that the germs of yellow fever do not live a single minute after being drenched and smoked at the Louisiana quarantine station on the lower Mississippi. The greater, and usually neglected, danger is fully met at all points by our quarantine methods. The clothing, bedding, etc., are treated to a moist heat of 234 deg. Fahr.: the decks, cabins, etc., of the vessel are drenched with a solution of bichloride of mercury, and fumes of sulphurous oxide are forced by a powerful rotary fan into every nook and corner of the hold, passing between the smallest packages of freight.

The unpleasantness of October 4th, 1889, when Mr. de Villa died in this city of yellow fever, can, and will, no doubt, be prevented in the future, by a safe period of detention and observation, as touched upon in Dr. Wilkinson's article.

ANGLO-AMERICAN VIENNA MEDICAL ASSOCIATION.

A meeting of British and American physicians was held the other day at No. 12 Landesgerichtsstrasse to consider the question of establishing an association for the purpose of furnishing all needed information to English-speaking medical men coming to study in Vienna. A large proportion of those now in the city were present.

After a lengthy discussion it was resolved to start such an association, under the title of "The Anglo-American Vienna Medical Association." A committee of management was appointed, with five members, representing dif-

ferent branches of medical study. Their chief duty will be to supply information to newcomers, on their arrival, as to matriculation, medical courses, lodging, etc., and, when necessary, to call meetings of the association. The committee, on the occurrence of vacancies in their number, through members leaving Vienna, will fill these up as soon as possible. The office of the association will be at No. 12 Landesgerichtsstrasse, a few minutes' walk from the General Hospital. It was agreed that membership should be open to any British or American physician or medical student, on payment of an entrance fee of one gulden. The application to the authorities, necessary according to Austrian law, for permission to establish such a society, has been made, and the committee expect that, towards the end of October, the association will be in working order. Meanwhile, letters of enquiry, addressed to the president or secretary, will at once receive attention.

CORRESPONDENCE.

Editors New Orleans Medical and Surgical Journal—Pruritus and eczema being old offenders to human comfort, as well as great enemies to the Lord's prayer and Heidelberg catechism, I will give your many readers a treatment with which I have been quite successful; in fact, if the patient will diligently keep up all the details, and persist in using the remedies a reasonable length of time, the result will be a cure.

Keep the bowels in a soluble condition with senna, sulphur, and cream of tartar, or aloes and strychnia pill. Bathe the parts well with hot or cold water after each action from the bowels, and at night before applying the remedy.

After the parts have been bathed apply the yellow wash of a strength sufficient to meet the case. I have used thirty grains of bichloride of mercury to one ounce of

lime water, though I find ten to twenty grains will frequently meet the case. After having used the yellow wash for eight or ten days, I alternate with Boro-glycerole Co. for about the same length of time—first one, and then the other. To relieve the intense itching that persists in some cases, I use the following: Hydrate of chloral, one drachm, rubed up with one ounce of olive oil and applied freely.

Try this treatment and persist in it, and I am satisfied that you will find it effective. The Boro-glycerole Co. is composed as follows: Borax, one drachm; glycerine, four drachms; rub well together. Salicylic acid, one drachm; glycerine, four drachms; rub well together. Carbolic acid, three drachms; add all together.

Respectfully, A. A. SHUFORD.

Tyler, Texas.

Dr. C. E. Brown-Sequard, Jr., a son of the renowned physiologist, is at present practicing dentistry in New Orleans, where he has been residing for two or three months past. Dr. Brown-Sequard graduated in medicine at the Bellevue Hospital Medical College, but he left the profession of medicine to enter another—and a better, according to the unbiased testimony of dentists.

ABSTRACTS, EXTRACTS AND ANNOTATIONS.

MEDICINE.

THE NATURE OF THE GERMICIDAL SUBSTANCE OF BLOOD-SERUM.

Dr. H. Buchner, of Munich, contributes a highly interesting article on the above subject in *Centralblatt für Bakteriologie und Parasitenkunde*, Nov. 8, 1889. He had shown in a former communication that serum, free from cells, possessed the power of destroying bacteria, and advanced the theory that this property is connected with the albuminous elements of the serum. This theory Dr. Buchner has, in connection with Mr. Orthenberger, lately demonstrated by means of dialysis.

At the outset let it be remarked that neither neutralization of the serum, nor addition to it of pepsin; neither the abstraction of carbonic acid, nor treatment with oxygen, exerts the least influence upon the germicidal action of the serum. All the experiments made in this direction gave negative results. They found only one method of destroying this action of the serum, namely: heating the serum at 55 deg. C. for half an hour, or at 52 deg. C. for six hours. There is, however, one other agent that acts in the same way—dialysis.

When serum was dialyzed with water as the outer fluid, it entirely lost its germicidal power; whilst the undialyzed control tests always showed the existence of that power. It would appear from this that the active ingredient can be removed from the serum by dialysis; but no trace of this activity can be found in the diffusate. It can not be that the active principle evaporates or is lost when it leaves the serum, but it is possible that this principle may exert only an indirect influence.

The only definitely known action of dialysis upon the serum is the abstraction of the mineral salts. In the removal of these we must look for an explanation of the loss of the germicidal power. A positive solution of the question, then, could only be obtained by employing something besides pure water as the diffusing liquid. A solution of common salt was used, containing as great a proportion of the salt as exists in normal serum. The possibility of a diffusion of the organic elements of the serum is not excluded, but the mineral salts are certainly not diffused.

The solution of sodium chloride was alkalinized by the addition of a small amount of carbonate of soda—enough to make it as alkaline as the serum.

When the serum was dialyzed with this liquid *it did not lose any of its germicidal power.* This shows that this power is not exercised by any diffusible organic compound. On the contrary, everything points to the decided importance of the saline constituents. But in order to prove this, further and more direct experiments had to be made.

The serum can be made poor in salts by other means than dialysis, namely: by diluting it considerably with water. The salts present are thereby distributed through a larger volume, and the result is practically the same as abstraction of a part of them. On the other hand, the

proportion of sodium chloride may be increased simply by adding more of them to the serum. The difference in germicidal activity between the two different solutions is a very great one.

Germs of typhoid fever were sown in serum diluted with four volumes of water, nine volumes, and nineteen volumes: also in serum diluted with a solution of sodium chloride, ¾ per cent, four volumes, nine volumes, and nineteen volumes. The tests were placed in a thermostat, and kept at 37 deg. C. A small amount was taken at the end of four hours, and of twenty-four hours, and placed upon culture plates.

The difference in the results of the two sets of experiments was most striking. The serum diluted with four and with nine volumes of water retained the germicidal power, but with diminished intensity; that diluted with nineteen volumes had lost the power entirely. Serum diluted with a solution of sodium chloride possessed an intensified germicidal power.

It has long been known that the salts do not belong to chemical molecules of the albuminoids, but that there is merely a peculiar loose combination. It is not surprising, then, that when solutions of albuminoids are greatly diluted with water, the salts diffuse themselves in the molecules of the water, instead of remaining in combination with the albuminoids. It is a process of diffusion on a small scale, but the effect on the serum is the same as that of dialysis on a large scale.

The loss of the germicidal power of serum in dialysis with water is, undoubtedly, due to the loss of the mineral salts. But the salts alone can not be the cause of the destruction of bacteria; their amount in the serum is much too small. Moreover, Buchner and Orthenberger showed by special experiments that water containing three or four times the proportion of salt in the serum, did not destroy the typhoid bacilli. *The salts act only insofar as their presence is indispensable to the normal action of the albuminoids of the serum.*

The results of experiments compel us to infer that the albuminoids themselves are the substances in the serum that possess the germicidal power. But there is the possibility of an error. By no means can the albuminoids alone be regarded as the active elements. An artificial solution of serum-globulin and serum-albumen would never destroy

bacteria, because it would lack the peculiar "active condition" which resides in serum that is taken from the living body, and which is destroyed by a heat of from 52 to 55 deg. C.

This "active condition" of the albuminoids of the serum seems to be *sui generis*. It is not like that of the unformed ferments, for these can survive a much higher temperature; further, the enzymes do not destroy bacteria, *e. g.*, pancreatin, while many species of bacteria, for example, the cholera-vibrio, produce their own enzymes.

The "active condition" of serum gradually grows less when the serum is removed from the body; and serum that contains colorless corpuscles is more energetic than serum entirely free from them. Contact with the living blood-cells seems also to have a conserving effect. It might appear from this that the "active" serum bears the same relation to inert serum that active, living protoplasm has to protoplasm after death; the chemical organization, according to Pflüger and O. Löw, changes in the dead organism. It is noteworthy that the "active condition" of the serum-albuminoids is suspended at the temperature at which most animal organisms perish, although in serum we have only to deal with an intercellular fluid.

Physiology has heretofore only concerned itself with the inert condition of serum, because no other method of studying it was known. In bacteria we have an agent which discloses to us a new and important property of serum, and one which opens a large field for new investigations.

THE INFLUENCE OF CERTAIN MEDICINAL AGENTS UPON THE BACILLUS OF TUBERCLE IN MAN.

Although the inefficacy of treatment in almost all cases of tuberculosis (pulmonary and laryngeal), and its almost certain fatal issue in most instances, are sad truths, still few of us care to confess to ourselves the fact of its incurability, and fewer are bold enough to record the apparent uselessness of all treatment.

Dr. G. Hunter Mackenzie, in the Edinburgh *Medical Journal* for January, 1889, has stared the truth full in the face. In the beginning he brings forward the fact that the number of tubercle bacilli found in the sputa of any case does not seem to bear any reference to the severity of the case. A case may go on for years with an enormous number of bacilli found at every examination.

This seems very plausible. The fact that the bacilli seem to grow less at each examination may not indicate an improvement; for naturally, when the larynx is the seat of disease, the sputa must swarm with bacilli, while in a lung lesion alone the bacilli laden secretions coming from a greater distance may pass in other directions, as in other parts of the lung, or in the stomach.

As the treatment is directed against this primary cause of the disease, the only way to influence the bacilli is by climate, by general, or by local remedies. He has seen climate cause improvement for a time, but he has never yet witnessed the complete disappearance of tubercle bacilli follow on or be induced by climatic changes. Dry climate, with the minimum variation of temperature, is most favorable; a low temperature diminishing the amount of expectoration and the bacilli. The latter, however, seem almost always to be present, for even when the non-ulcerating tubercular laryngitis can not be distinguished from a simple chronic laryngitis, the presence of the bacilli, as many of us know by experience, will alone make the diagnosis.

It is not difficult to select a host of bacilli destroyers, but an efficient antiseptic must be destructive to the bacillus and innocuous to the host. He has tried all possible antiseptics in spray in as strong a solution as feasible, and all in vain. Dry inhalations are objected to on account of their desiccating and irritating effect upon the laryngeal mucous membrane.

According to the experiments of MM. Filleau and Léon-Petit, the tubercle bacillus is one of the most refractory of all micro-organisms to the action of the most destructive agencies. It maintains its virulence after lying for forty days in putrid sputum, and for 186 days away from contact with air. It can live at a temperature between 86° F. (30° C.) and 104° F. (40° C.). The bacilli may be destroyed, but the spores are so tenacious of life that the most violent means, such as prolonged boiling, steaming, etc., are alone capable of rendering them inactive. *Corrosive sublimate itself is powerless to disinfect the sputum.* Tuberculosis may seem to be cured at times, but the spores are only lying latent. In view of these facts, skepticism as to the cure of pulmonary and laryngeal tuberculosis may be pardoned.—*Maryland Medical Journal.*

"SIMILIA SIMILIBUS."

Under this title the Polish monthly, *Nowiny Lekarskie*, September, 1889, p. 485, relates the following amusing case, lately published by the *Gazette Medicale de Strasbourg* (1889, May 1): A male patient, an habitual drinker, was recently admitted to a Strasburg hospital on account of ascites and œdema of his lower limbs in connection with hepatic cirrhosis. One tapping after another was made, but on each occasion the abdominal fluid speedily reaccumulated. On the fifty-second paracentesis, the man insisted on his having the liquid just withdrawn from his belly, and swallowed it at the spot. No reaccumulation took place since that day. "Provided the facts are correct," remarks the editor of our Polish contemporary, "the question arises, how are they to be explained? Should the cure be attributed to the effects of some 'suggestion'? Or does the ascitic fluid contain some chemical constituents which up to the present time have remained unknown to us?"—*Provincial Medical Journal.*

PILOCARPIN IN GALL STONES.

Lekarskie considers pilocarpin almost a specific in the treatment of gall stones, basing his opinion on the results of treatment in thirty cases. He administers one-eighth grain hypodermatically, once or twice daily. The effect on the pruritus of jaundice is immediate, and adds greatly to the comfort of the patient.—*Bulletin Générale de Thérapeutique.—Medical News.*

TREATMENT OF DIPHTHERIA WITH BICHLORIDE.

Dr. Rondot gives, in the *Gazette des Sciences Médicales de Bordeaux*, the results which he obtained in the treatment of diphtheria with bichloride of mercury, internally and locally.

In making applications to the throat he uses a solution of 1 to 500, acidulated with tartaric acid (5 to 1000).

He endeavors above all to act upon the points covered with exudate, but tries to avoid injuring the mucous membranes, as excoriations favor the passage of the microbes into the blood. He wraps a little wadding (cotton) on the end of a small stick, and, after wetting it, he rubs vigorously so as to detach the false membrane. The wad is then renewed and moistened, and the proceeding repeated until the mucous membrane is cleaned.

Each operation, or sitting, is concluded by sweeping the tampon around the lower part of the fauces, along the base of the tongue, in the glosso-epiglottic groove, which is in direct continuity with the superior regions, generally first attacked, and along which the local process seemed several times to extend to the larynx.

These applications are repeated every two hours, if possible.

Besides, atomizations are made every two hours also, in the mouth and nasal fossæ, with a 1 per cent solution of salicylic acid, with Richardson's apparatus. Finally, following the practice of M. Renou, of Saumur, the patients are put into an atmosphere into which is discharged constantly aqueous vapor containing antiseptic substances, such as salicylic or boracic acid.

For internal treatment, M. Rondot prescribes four or six milligrams of bichloride of mercury during the day; he has employed the same medication in typhoid fever, and he has never observed any unpleasant effects. With this treatment, without counting the cases of simple diphtheria, M. Rondot has obtained ten cures in twenty-five tracheotomized cases, although his patients were in a very unfavorable condition.—*Journal de Médecine et Chirugie Pratiques.*

SURGERY.

AN IMPROVED METHOD OF TREATMENT OF FRACTURE OF THE INFERIOR MAXILLARY, WITH A REPORT OF THREE CASES.

[GEORGE W. CALE, M. D., of St. Louis, in the *International Journal of Surgery.*]

Since the beginning of surgery the treatment of fractures of the inferior maxillary has been a much disputed chapter. This is evident from the numerous appliances which have been devised, and which are to a great degree unsatisfactory. Having lately had an opportunity to treat several bad cases of this injury, in the practice of Prof. A. C. Bernays, a very simple method was hit upon, which I think is the treatment par excellence.

Case I.—G. M., male, æt. 23, single, glass blower. In moving some heavy boxes the patient's face was caught between a falling box and the wall, and badly contused. On examination there was found a compound fracture on the left side of the body of the jaw, near the first premo-

lar. The lower fragment had produced an ugly laceration in the mouth. There was also a simple fracture at the right angle of the jaw.

After washing the mouth with a 1-2000 sublimate solution, ice water was used to check the profuse hemorrhage. Next, a hole was drilled in the lower fragment below the canine tooth, and a silver wire passed through and over the upper fragment, between the second premolar and the first molar. This was twisted, and the fragments brought in apposition. The fracture of the angle was reduced, and the following bandages applied: First, a flannel roller bandage was passed over the top of the head in front of the ears and under the jaw; then at right angles to this a bandage round the head, just above the ears; over this was applied a snugly fitting plaster of Paris bandage.

Case II.—E. S., female, æt. 12. This patient was injured in a very singular manner. In attempting to get out of an ice delivery wagon, she was sliding down the chain which is used to brace the sides, when she slipped, and a large hook at the end of the chain caught under the body of the jaw at the anterior edge of the masseter muscle. She was found hanging in this position when the ice man returned to his wagon. The hook tore through the floor of the mouth, and made an ugly compound fracture about the middle of the left half of the body of the jaw, denuding the bone of its periosteum fully an inch and a half.

The parts were thoroughly cleansed with a 1-2000 sublimate solution, and the fragments brought in apposition by a silver wire passed over the most convenient teeth. The external wound was closed with six silk sutures, and dressed with sublimate gauze and guttapercha tissue; over this the flannel and plaster of Paris bandages were applied, as in case I. About the fourth day a fenestra was cut in the bandage, and gauze and stitches removed. About the third week a new bandage was applied, and at the end of the sixth week a small spicula of bone was discharged, and the patient made a very rapid recovery, without the slightest deformity.

Case III.—W. M. ———, male, æt. 35, married, carpenter. In attempting to transfer a band in a turning shop to a running pulley, the patient's sleeve was caught and he was thrown forward and his head dragged between the band and the pulley. On examination his face was found to be badly wounded, and the following fractures of the

lower jaw: 1. A compound comminuted fracture of the left side of the body near the second premolar. 2. A compound comminuted fracture of the right side of the body about the first molar. 3. A simple fracture of the right angle of the jaw. He also had a laceration of the face, extending from the left upper premolar downwards, and under the chin to the body of the jaw on the right side.

After thoroughly cleansing the parts with a 1-2000 sublimate solution, the external wound was closed with twelve silk sutures, and the fragments brought in apposition; a dressing of sublimate gauze and guttapercha tissue was applied, and over this the usual flannel and plaster of Paris bandages. The temperature rose to 100 deg. F. on the second day, and then became normal. Suppuration was profuse. This bandage and the sutures were removed about the end of the first week, and the same kind of dressing applied. There was no silver wire used in this case. The dressings were changed about five times during the treatment, on account of the discharges saturating them.

A mild solution of permanganate of potassium was used as a mouth wash. The patient made an excellent recovery in about eight weeks with a slight deformity, which is noticeable only by looking at the alveolar arch, where the first molar on the right side is pushed inward about one-fourth of an inch.

These three cases happened within a period of fifteen days, and after treating them I think we can claim for this method the following advantages:

1. The plaster of Paris bandage is a part of every surgeon's paraphernalia, and can be quickly applied.

2. It forms a perfect mould in every case.

3. It is light and unyielding, and makes the disagreeable wire suture in the mouth entirely unnecessary. I will state here that in cases one and two, the wire sutures were found loose and useless when removed, and the parts remained in perfect apposition just as well without them.

4. By applying that part of the bandage which passes over the top of the head a little loosely, the mouth may be opened far enough to allow the patient to be fed without drawing teeth. I have found that the slight motion which is possible in the temporo-maxillary joint does not interfere with bony union.

NOTE.—In looking over the literature of this subject, I find mentioned in *Bryant's Surgery*, the use of plaster of Paris as a mold for the chin in connection with the four tailed bandage. The great objection to the four tailed bandage is the tendency of the horizontal sling to displace the anterior fragments backward, especially in double fractures of the body of the jaw. I also find that Dr. Vanderpool has employed the plaster of Paris as a modification of the maxillary straps of Dr. Hamilton's splint, the rest of the bandage being fitted with straps and buckles as in Dr. Hamilton's original dressing. In no place have I found mention of the plaster of Paris as an exclusive dressing for this injury. I sincerely hope that it may receive the attention of surgeons, and if given a trial I believe it will speedily supplant all other methods.

EFFECT OF THE ENTRANCE OF AIR INTO THE CIRCULATION.

Dr. H. A. Hare, in an elaborate experimental study of this subject (*Therap. Gazette*, Sept. 16, 1889), arrives at the following conclusion:

1. Death never occurs from the entrance of air into the ordinary veins of the body, unless the quantity be enormous—from one to several pints, a quantity which can not enter unless deliberately sent in by the surgeon.

2. The cases on record have been due to other causes than air and have not been proved.

3. The tendency of the vessel to collapse, and the leakage of blood prevent any entrance of air, and it would seem probable that a clot has generally caused death, not the air itself.—*Col. and Clinic Rec.—International Journal of Surgery.*

THE MICRO-ORGANISMS OF MALIGNANT TUMORS.

Dr. Verneuil presents the following conclusions as results of his experiments:

1. The tissues of malignant tumors (sarcoma, carcinoma, etc.) may contain at different times various microbes, the number and kinds of which cannot be demonstrated with certainty.

2. The invading microbes may remain latent, but in other cases may give rise to important tissue lesions, causing a rapid growth of the neoplasm, softening, and ulceration.

3. These organisms are not found in all forms of tumors, nor even in all tumors of the same kind, nor in all parts of the same tumor. They are never present in pure fibromata, or commencing cancers or sarcomata, but regularly in malignant neoplasms in the stage of ulceration and softening.

4. Besides inflaming the tissues of the neoplasm, they probably play an important part in the production of cachexia.

5. During the extirpation of the tumor they may invade and infect the operation wound, and thus lead to a fatal septicæmia.

6. These results are in favor of an early extirpation of malignant tumors, which should be performed under the strictest antiseptic precautions.—*Bullet. de l'Acad. de Médecine de Paris—International Journal of Surgery.*

TREATMENT FOR CHRONIC LEG ULCERS.

Dr. Ivan A. Praxin, of St. Petersburg, warmly recommends a simple method of treatment, successfully practiced by him in atonic crural ulcers with sclerotized edges. The method consists in making multiple radiating incisions, penetrating through the whole thickness of the edge, and situated so that the inner third of each incision divides the granulating bottom of the ulcer, the middle one its edge, and the outer third the adjacent healthy skin. The distance between the incisions should be equal approximately to two or three breadths of the edge. To secure gaping, plugs should be inserted into each wound for a few days. When treated after this plan, callous ulcers, varying in size from a dime to half of the palm, are said to heal as swiftly as any simple ulcer, provided their neighborhood is free from inflammatory œdema and venous congestion.—*Weekly Medical Review, Medical News.*

HYPODERMATIC INJECTIONS OF CARBOLIC ACID IN ERYSIPELAS.

Dr. Paul Samter, of Danzig, in the *Deutsche Medicinische Wochenschrift*, enthusiastically advocates the treatment of erysipelas with injections of carbolic acid, believing that, if used early, it prevents suppuration and other complications. Cases uninfluenced by sufficiently large doses of the acid, he believes, are not instances of true

erysipelas, however much they may resemble that disease. The drug is administered in the following formula, and freshly prepared for each case:

℞.—Acid. carbol. }
Alcohol } . . . aa *M* xxij.
Aq. dist. . . . fʒijss.—M.

Of this, from one-half to one syringeful is injected into the healthy skin about an inch from the border of the erysipelatous area. Without pinching up a fold, the needle is thrust obliquely toward the disease, and the solution deposited in the deeper tissues. If not used upon the face, these injections cause but little pain. The diseased surface should be surrounded with a series of such injections, from one to four inches apart. To prevent carbolic acid poisoning, Samter advises that with the above treatment a tablespoonful of 3 per cent solution of sulphate of sodium should be administered hourly.—*Therapeutische Monatshefte.—Medical News.*

GYNÆCOLOGY.

CAUSE AND TREATMENT OF THE VOMITING OF PREGNANCY.

At a meeting of the Paris academy of medicine, Dr. Guéniot said that the idea of combating the intractable vomiting of pregnancy with a single medicament appeared to him erroneous, as experience has shown. The numerous observations published up to the present time show that the cures obtained with therapeutic agents were obtained after trying various remedies without any particular one having shown a specific action.

Three organs concur in the production of the vomiting of pregnancy: First, the uterus, which is at once the seat of pregnancy and the source of special excitation to other organs; second, the nervous system (spinal and ganglionar), which transmits excitations to distant parts; finally, the stomach, which feels in an exaggerated manner the action of the uterine stimulus.

In order to combat the vomiting, not with a doubtful, accidental result, but with almost constant success, it is necessary to resort to a complex treatment directed simultaneously to the three sources of the disease. The following fundamental indications must be fulfilled:

1. To calm the morbid excitement of the uterus by cor-

recting the abnormal conditions which give rise to it. For this purpose the most valuable agents are belladonna, cocoaine, morphine, vaginal injections, or appropriate topical applications, Gariel's pessary, cauterization, or even artificial dilatation of the neck of the uterus, according to the indications.

2. To diminish or suppress the exaggeration of reflex impressions, either by the use of chloral, or bromide, or refrigeration of the spinal region, moral influences, etc.

3. To combat the intolerance of the stomach, treating the different affections of which it might be the seat, and calming its erethism with the following measures: Almost absolute diet; abstinence from every sour drink, wine, juice of oranges, grapes, etc.; use of alkaline waters and ice in very small quantities; a fly blister with morphine to the epigastrium, and at times laxatives or other purgatives to regulate the functions of the intestines.

In order to insure the success of this medication, it is necessary to spare the stomach as much labor as possible. For the remedies, the intestinal tract should be used in preference to the stomach, and next in order the skin (hypodermically).—*Revista de Ciencias Medicas, of Barcelona.*

THE USE OF CREOLIN IN CYSTITIS OF THE FEMALE.

[By Theophilus Parvin, M. D., Professor of Obstetrics and Diseases of Women and Children in the Jefferson Medical College.]

Cystitis in women, though not a frequent disease, does occur occasionally, often then causing great suffering, and may become chronic, notwithstanding diligent treatment. In some few of the latter cases the affection is so severe and obstinate that the patient's condition is most pitiable.

The great majority of cases of acute cystitis that have come under my observation have been caused by the catheter, either for the reason that the instrument was not made aseptic before its use, or in its introduction septic material from the vulvar secretions, or air was carried into the bladder. These patients have been women in childbed, or those upon whom abdominal section has been made, or an operation upon the external sexual organs, upon the vagina, or upon the neck of the uterus been done.

Prof. Winckel, in his monograph, *Die Krankheiten der weiblichen Harnröhre und Blase*, remarks that simple

hyperæmias, hemorrhages, and catarrhal conditions of the bladder permit a favorable prognosis. "As the entire inner surface of the bladder can be easily irrigated and without special pain, it is generally possible in uncomplicated cases, to effect a cure in eight to fourteen days."

In the cure of cystitis, he regards the local treatment as the most important. He begins by washing out the bladder with warm water; afterward he employs lime water, or mucilaginous decoctions, as flax seed tea, frequently adding salicylic acid (1 : 1000), or employs a 3 per cent solution of boric acid. "The injection is made by a Hegar's funnel, not held too high, to which an elastic catheter is attached by means of a rubber tube; the fluid remains in the bladder a few minutes, and then, by lowering the funnel, is withdrawn. The quantity which can be injected depends upon the age of the person and the size of the bladder, and will vary between one-fourth, one-half, and one litre, the bladder being irrigated one to three times daily. As soon as these injections are not sufficient, I use solutions of nitrate of silver, 1–2–3: 500, or of tannin 0.5–1 : 100, and employ them for weeks in a similar manner."

I have given in full the local treatment advised by Prof. Winckel, and also the method employed by him in washing out the bladder. Hegar's funnel is an instrument that is invaluable—I had almost said essential—in the treatment of cystitis in the female. In using it let the funnel, tube, and catheter be filled with the solution, which should be warm, and the first held so low that no fluid will escape from the catheter before its introduction into the bladder. This precaution is taken to prevent wetting the patient's clothing, while previous filling of the funnel and tube is done to prevent the introduction of air into the bladder.

Having found creolin so valuable as a local application in cervical catarrh, and a mixture so useful in leucorrhœa, and reading the statement made by Chéron in the *Revue Medico-Chirurgicale des Maladies des Femmes*, about a year since, that he had cured a urethritis by injecting into the bladder a two per cent mixture of creolin, I was led to try the remedy in some cases of cystitis. The first patient had been suffering some months with the disease. I used a two per cent mixture, producing no pain, and having a very satisfactory result. The second patient had acute cystitis following the use of the catheter after the removal

of an ovarian tumor; the nurse was an experienced one, and very careful as to the cleanliness of the instrument, but never used an antiseptic solution for washing the catheter. The inflammation of the bladder was severe; frequent removal of the urine was necessary, and it was very offensive and contained a large quantity of purulent matter. Following the example of Chéron, and emboldened by my previous success, I washed out the bladder with a warm mixture of creolin and water, the proportions being the same as before. The irrigation was followed by violent local suffering which lasted for several hours: the urine, however, had no offensive odor for half a day, and contained less pus. Next day I repeated the injection, but with only one and a half per cent of creolin. The injection still caused great suffering, and it was not repeated. Nevertheless a cure rapidly followed, no medicines being used internally; in a week the urine was clear and the cystitis had vanished.

It is quite probable that the strength of the mixture had some effect in causing the rapidity of the cure. Nevertheless I would not again, at the beginning of the treatment of cystitis, employ the creolin in so large a quantity, but rather a half per cent mixture, increasing the strength from day to day as the bladder seemed more tolerant, or the disease more obstinate.

The cases which I have mentioned, and two others in which I have used creolin, lead me to believe that it will prove very useful in the treatment of cystitis in the female. It probably is not necessary to irrigate the bladder with the creolin mixture oftener than once in twenty-four hours.

Those who are in the habit of using a mixture of creolin in water have observed that while the mixture is readily made, the drug rapidly diffusing itself in clouds, until a milk colored compound results, have also noted that after a time a considerable portion of the creolin settles to the bottom of the vessel. I think it is very desirable to find some means which, while not lessening the antiseptic power of the remedy, will render it completely soluble in water, for it is quite possible that the severe suffering which sometimes follows vaginal or vesical injection of the mixture arises from some of the drug being deposited upon a peculiarly sensitive part of the mucous membrane.—*Medical News.*

THE PORRO OPERATION.

[JOSEPH PRICE, Philadelphia, Penn.]

The true Porro operation is, as we know, the Cæsarean section, to which is added the removal of the uterus. At first sight it might be considered that to perform the Porro operation is to add one capital procedure to another, thus enhancing the dangers and the difficulties, and accordingly increasing the mortality. This is not true; for by removing the uterus we take away from the Cæsarean section the most important factor in its dangers; that is, the succulent uterus with its incision. Another way of stating the argument is, that the operation is simply a supra-vaginal hysterectomy, with the complication of pregnancy, instead of that of a fibroid tumor. In a paper on supra-vaginal hysterectomy, I have endeavore dto show that an uncomplicated operation of this sort, with the extra peritoneal treatment of the stump, is an operation, under the improved technique, of comparatively little danger. The later operations in Philadelphia alone, have gone far to make this position tenable. The operations in the hands of other skillful men also confirm the statement. The results of men without the abdominal instinct have no right to be considered.

Now the complications of hysterectomy, when they involve no important viscus, but are limited to simple adhesions, are not to be feared, with intelligent drainage. I wish to call your special attention to these points in detail, because I intend to use them comparatively. In the Cæsarean section, the danger of hæmorrhage as an ever present menace is not to be denied. Of course, it can be controlled; but it is present, nevertheless. In the Porro operation, the uterus is strangulated at once, thus obviating this complication. Now as an operative procedure, as compared with the Cæsarean section, the Porro operation clearly has the advantage in these essential points; first, in the absence of the danger of hæmorrhage; second, in the extra-peritoneal treatment of the cut uterus; third, in the rapidity with which the operation can be completed. It appears, also, that even with the bettered results of hysterectomy, the Porro operation ought to surpass them, for the following reasons: first, there are no complications of adhesions; second, there is no implication, either directly or indirectly, of any important viscus, and accordingly there is less hæmorrhage; third, there is less shock. So

far as the technique of the operation is concerned, it is less complicated than that of the simple Cæsarean section, and in its complications far less formidable than the average hysterectomy. The suturing of the uterus, as necessary in Cæsarean section, prolongs the operation, and imposes a time consideration of vast importance in all abdominal operations. The factors of uncertainty in the healing of the uterine incision contradict, and in great part negative all our established ideas of exact surgery. We have here an incision which it is impossible to put at rest. The tissue within the embrace of the ligature is not at rest. The uterine tissue itself is not stable, but is undergoing metamorphosis and degeneration. A suture such as this in any other part of the body would be unthought of by the intelligent surgeon. It is only tolerated here, because it is the best that circumstances and anatomical surroundings will permit. Under such conditions the danger of leakage and peritonitis are always present in no small degree, and cannot be minimized. This is not true of the extra-peritoneal treatment of the succulent stump. Here the use of the écraseur is the ideal treatment, because it adapts itself to the conditions, in that it can be contracted upon the shrinking stump, and the hæmorrhage absolutely controlled.

The operative side of the question has thus been conclusively dealt with, I think, and the showing is not unfavorable to the Porro operation. There remains to consider the ethical—or, if you please, the sociological—side of the question. First, the interests of society in general: when we remove the uterus we sterilize the woman. Have we a right to do so? To answer this, we must ask: In what light is the pregnant woman to be considered? Is she to be regarded as a propagating organism whose life is in no wise to be considered apart from her procreative power, to which all else must be sacrificed? Are her relations to family and friends of no account compared to this? Is the Cæsarean section, which gives her a possible chance for future child-bearing to the detriment of her present family, to be preferred to the operation which gives her the best chance for future usefulness apart from child bearing? Before we answer these questions, the subject must be looked at from the standpoint of the children who might at some future time be delivered by the Cæsarean section. It must be remembered that the dangers of childbirth are here enhanced,

and the chances of living greatly diminished. If we then choose the Cæsarean section in order to permit future child-bearing, we are doing so with a knowledge that we are subjecting the mother to its perils without reasonable assurance that this can be compensated for by the value of the life of her child. Mathematically we are substituting a variable for a constant. The logical deduction from the last statement is, that with a dangerous operation we are not justified in exposing the mother again to its perils, when the ends attained are in no wise certain to be what is desired.

In other words, the Porro operation, skillfully performed, is safer than the Cæsarean section, and practically leaves the mother, so far as ultimate results are concerned, in the same relative position to the community, as a child-bearing agent.

This answers the first series of questions, for if, with less danger to herself, she is left in the same relative position, it is her right to demand, and the surgeon's duty to perform, the operation which will preserve her usefulness to her family and the community.—*Annals of Gynæcology.*

DEODORIZING INJECTION IN UTERINE CANCER.

In *L'Union Médicale*, Dr. Chéron recommends the following injection as efficient in destroying the fetid odor of uterine cancers:

℞.—Acid. salicylic.....gr. ij.
Sodium salicylate.....gr. xl.
Tinct. eucalyp.....fl. dr. jss.
Vinegar.....fl. oz. jss.—M.

This is to be added to one or two pints of water and used as a douche every few hours.

IODOFORM IN ENDOMETRITIS.

Jacobs uses the following emulsion in the treatment of endometritis:

℞.—Iodoform.....dr. v.
Glycerin.....dr. vj.
Aquæ.....fl. dr. jss.
Tragacanth.....gr. jss.—M.

From one-half to one drachm of this is injected into the cavity of the womb two or three times a week.—*Therapeutische Monatshefte—Medical News.*

PHYSICAL AND MENTAL CHANGES AFTER REMOVAL OF THE OVARIES AND AFTER EXTIRPATION OF THE UTERUS.

The author's paper is based mainly upon the analysis of a mass of data furnished by the experience of a large number of gynæcologists. In cases in which the ovaries are removed, menstruation ceases at once, or after a short time, in 88 per cent of them; in 12 per cent it continues at rare intervals, and in small quantities. This cessation in so large a majority of cases is explained on the theory that the impulse to menstruation proceeds from the ovary, and consequently ceases when the latter is removed. Substitutes for menstruation, or atopomenorrhœa, occurred in very few cases. In about half the cases analyzed, the molimina menstrualia still recurred, probably in obediance to habit, and recurring irritation of the uterus, proceeding from the proper nerve centres—this causing hyperæmia. The customary phenomena of the menopause were present, in most cases—*hot flashes*, dizziness, leucorrhœa, sweating, etc. As a rule, there was also atrophy of the vagina and uterus. If the uterus was enlarged from myomata or chronic inflammation, it usually became contracted to the normal, or less than the normal size. The general nutrition of the body was improved in most cases, and in 42 per cent there was decided stoutness. In most of the cases sexual desire was notably diminished: in some it was altogether extinguished; and in a few it remained unaffected. The mental condition suffered deterioration in almost all cases, and it frequently amounted to melancholia. It would seem, therefore, that removal of the ovaries results in a climacteric which, in all repects, is like that which occurs naturally.

After the removal of the uterus, menstruation ceases in all cases, and atopomenorrhœa, to any extent, never occurs. Molimina menstrualia recur regularly for a short time, with pain and annoyance in the abdomen. This is explained by the continuance of ovarian activity, and the reflected pelvic hyperæmia, which still recurs monthly. The removal of the uterus exercises no particular influence upon the genital organs which remain. The vulva and vagina are changed, and so, in the main, are the ovaries; although, after a few years, these gradually undergo atrophy. Ovulation also continues without itterruption until the climacteric. The influence upon the general nutrition of

the body is usually favorable, although there is not usually that increase of weight which follows removal of the ovaries. Sexual desire is very little influenced as long as the ovaries and the clitoris remain; exceptionally it is diminished or extinguished. As to the mental condition, there was no change in half the cases analyzed; but in about a third of them there was more or less depression, which not infrequently developed into psychoses. In general, the changes after removal of the uterus are less, and of less significance, than after removal of the ovaries. —*Glaevecke, Arch f. Gyn., Bd. xxxv, H. 1., Annals of Gynæcology.*

DERMATOLOGY AND HYGIENE.

TREATMENT OF INFLAMMATORY DISEASES OF THE SKIN.

Dr. Lassar, of Berlin, recently read a very interesting paper upon the treatment of inflammatory diseases of the skin, before the section on dermatology and syphilography of the American medical association. His paper is reported in full in the *Journal of Cutaneous and Genito-Urinary Diseases* for October, 1889.

The salve so well known by his name is again recommended by him as a sample of "a permanent application of emollient and indifferent preparation," and we give it for the benefit of those who are not familiar with its component parts:

℞ Acid, salicyl. 2.0
Vaselin, flav. 50.0
Zinc, oxid. ....
Amyli ..... aa 24.0
Misce leniter torendo f. pasta.

"The advantages of this paste," says the author, "are that it is generally well borne. Be it a child of a few weeks, or an old person, the influence is a benignant one. It produces a slight, soft scaling, and, besides, a constant drying, because it acts like a filter. All lymphatic exudations pass this porous layer, and are drawn out into the bandage, instead of forming a crust upon the wounded skin itself. This is an important advantage for the completion of regeneration, because the neighboring epidermis is not obstructed by masses of adherent crust. The bandages are to be made of thin layers of cotton, and some few turns of muslin, where applicable. This gives the ad-

advantage of preventing the germs in the atmosphere, as well as the dirty nails of the patient, from disturbing the process of healing."

Dr. Lassar speaks of a prescription for *pustular affections of the hairy parts of the head and beard:* "It came into my hands through a shepherd who wished to enlarge his professional knowledge by visiting my clinic. In order to introduce himself he showed a salve which he said had a miraculous effect upon skin diseases. The chemical analysis brought out the following simple formula:

℞ Hydrargyri sulphurati rubri 1.0
Sulphuris sublimati 24.0
Adipis 75.0
Olei bergamottæ ..... gtt. aliquat.

This same prescription had already been used by Dr. Biett, of the Hôpital St. Louis, some fifty years ago, and has thus been recalled to the domain of dermatology. It is very useful, indeed, and perfectly harmless. Especially its effect is to be remarked in all impetiginous affections of the hairy regions.

TUBERCULOSIS IN SLEEPING CARS.

[By J. W. Whittaker, M. D., Cincinnati.]

American Lancet, September:—It would be difficult to conceive of a conjunction of circumstances more directly aiding in the dissemination of this disease than is offered in the palace car. It is always badly ventilated; the vestibule car especially is close and hot, sixteen to thirty persons being crowded into a space which might make a small hall in a house, but never a bed room for a pair of human beings. Somebody is always hurt by a draught, and windows are kept closed to prevent full ventilation, as well as ejection of sputa which is mostly deposited on the floors. Cuspidors never contain water, and are generally used as waste baskets or slop jars, and the temperature is raised to a degree sufficient to rapidly disseminate infectious matter.

With the gathering shades of evening the compartments which contain the bedding are opened to diffuse through it a disagreeable odor. The bacillus is treated to the visible luxury of clean sheets and pillow cases, but the blankets, mattresses, carpets, and, worst of all, the curtains, remain the same till worn out. Consider now that every car curtain is, or has been, recently occupied with a consumptive patient, if only en route for a change of cli-

mate, and that through ignorance, carelessness, or weakness, there comes to be deposited upon bedding, curtains, etc., tuberculous matter! What becomes of it if it be not dried and disseminated through the car, or gradually incorporated into the lungs of the tired traveler?

It is a curious fact that the first note of alarm of this kind should have been sounded by a layman, viz., a barrister in Australia, who published in the *Australasian Medical Gazette*, last November, a protest against admitting consumptive travelers into the same cabins with healthy people. The danger is in one sense far greater in ships, in that people are so closely confined in the cabins, and, as the author states, considerations of humanity prompt the well mau to close the port for the protection of the sick. Then, also, the trip is much longer. Yet on board ship we can escape to the upper deck, where, in fact, many spend most of their time. But on the train there is no such retreat, and on some of our express trains not even do we get out into the fresh air for our meals, or other necessities of life. A ship passenger may mount to the deck, a prisoner is allowed a part of each day to walk in the free, as the Germans say, but a traveler on an express train is, for all the world, in the condition of dogs inclosed in boxes, made to breathe atomized tuberculous matter until even dogs, naturally immune, become infected with the disease.

But it is one thing to find fault, and another to suggest the remedy. The plush, velvet, and silk hangings must go. Seats must be covered with smooth leather that can be washed off; carpets give place to rugs, to be shaken in the open air at the end of every trip—better still, abolished for hardwood floors; the curtain abomination must make way for screens of wood or leather; the blankets of invalid's beds be subjected to steam at a high temperature; mattresses covered with oiled silk, or rubber cloth that may be washed off; and, above all things, invalids provided with separate compartments shut off from the rest of the car, with the same care which is taken to exclude the far less offensive or dangerous smoke of tobacco; cuspidors half filled with water, and consumptive travelers provided with sputum cups which may be emptied from the car. It is not necessary to say here that the sole and only danger lies in the sputum. The destruction of the sputum abolishes the disease. When the patient learns that he

protects himself in this way as much as others—protects himself from the auto-infection, from the infection of the sound part of his own lungs—he will not protest against such measures.—*Epitome.*

"THE FATE OF MICRO-ORGANISMS IN THE DEAD BODY."

[E. VON ESMARCH, in *Zeitschrift fur Hygiene*, Band VII, Heft 1.]

The importance of this subject is manifest, especially in connection with the suspicions which have attached to cemeteries of having been the means of spreading infectious disease. It is, at the same time, the case that instances in support of this suspicion have not been easy to find. That enormous amounts of infectious materials are buried with some bodies, we know well, but as to what becomes of them—whether they multiply or speedily lose their virulence and vitality—we possess very few scientific data. An exception to this statement is found in splenic fever. With regard to other bacteria, Gaffky found that the bacilli of malignant œdema, which, on the death of smaller animals infected with them, occur regularly in the interior of the body only on the serous covering of various organs, multiply after death, and can then penetrate into the organs. Fraenkel and Simmonds established that the bacilli of typhoid, which in the bodies of men are found in small nests in the spleen, probably multiply, if one leaves the organs lying some time after death. Von Galtier could produce rabbies in a second dog with the brain of a dog which had died of that disease, after it had been buried sixteen days. All these observations show that after the death of the host, the parasitic bacteria do not die off very soon; at all events, the subject requires to be more thoroughly investigated, and it is for this purpose that the following experiments have been made.

The author has endeavored to imitate as closely as possible natural conditions, so as to obtain results of as much practical value as possible. For this purpose, animals—consisting exclusively of mice, guinea pigs, and rabbits—were infected with the different pathogenic bacteria, and after death, the cause of death having been established by microscopic examination, the bodies were left partly in the air, partly in earth, and partly in water. As the nature of the experiments required, the experiments stretched over a considerable time (extending from the summer of 1886,

to that of 1888); the influence of temperature on the progress of putrefaction of the bodies could consequently be taken into consideration. Sometimes the cadavers were put into the cultivator so as to produce artificially the most intense putrefaction in a very short time. Since the depth at which bodies are buried may not be a matter of indifference, the circumstances were in this respect varied as much as possible. For this purpose, horizontal cavities were sunk in the wall of a pot well in the court of the Hygienic institute, at a depth of one, two, and three metres, the square area of these being twenty-five cm., and the depth one m. The walls were formed of boards pierced with numerous holes, and the opening towards the well was closed tight with a thick ball of tow, and in addition with an iron plate. In these recesses were placed the bodies, either in small wooden chests, or in earthenware flower pots, which were either empty or filled with earth, and in this way, of course, samples could at all times be taken of the bodies. In order to observe the putrefaction in water, the bodies were sunk in rather large glass vessels, full of pipe water; in special instances care was taken to renew the water by a constant flow. The fate of the pathogenic bacteria in the corpses was investigated thus: After a certain time, small portions were taken from the bodies, and particularly from those organs in which, before the death of the animal, the bacteria had been found in large amount; or, if these organs, on account of advanced putrefaction, could no longer be recognized, from various parts of the abdominal and breast cavities, as well as from the surrounding ground, and first colored streak preparations were made in the usual manner. The mode of examination could lead to positive results only at the commencement of putrefaction; or if, as sometimes happens, the specific bacteria had multiplied to an enormous extent after the death of the animal. In the great majority of cases the most varied kinds of putrefactive organisms established themselves soon after death, rendering it extremely difficult to detect the particular species in the absence of special color tests, such as are present in the case of tubercle bacillus.

The microscopic examination was therefore used chiefly for the purpose of giving a support to the second mode of examination by cultures. In this procedure the cover glass

examination was useful for indicating how much material should be used for the cultures.

However excellent the plate culture method may be in searching for a pathogenic organism, it is excelled by inoculation of animals in the case of those micro-organisms which are pathogenic to animals in the smallest quantities. In no case where it was practicable has the last method been omitted in searching for the continued presence of the pathogenic organism under consideration.

Nine micro-organisms have been subjected to examination. In making the examination by the plate culture method, roll gelatine tubes were employed, partly to save time, but even more, supposing the tubes to remain sterile, to see whether on filling the tubes anäerobic microbes might not proceed to develop. [I shall not in the following experiments transcribe all the particulars—only the main facts.]

BACILLI OF MOUSE SEPTICÆMIA.

Mouse kept in moist chamber, at the temperature of the room. After thirty-four days the body was stinking; contents of breast changed into a brown-grey smeary mass. Of this: (*a*)* Cover glass preparation shows countless bacilli. (*b*) Three rolls; M.S. not recognizable. (*c*) Mouse inoculated; dead after four days of M.S. (*d*) A washing of the organs in sterile water, heated for five minutes up to 75 deg., and from this a mouse inoculated remains sound.

Mouse placed in a wooden box on July 6, 1886, deep in the recess of the well wall; temperature, 14.4 deg. C. After six days: Mouse putrefying, stinking. Mouse inoculated with blood from the heart; dead of M.S. after three days. After ninety-one days: Cadaver smelling mouldy, quite covered with a white mould. Liver still recognizable as a grey-red smeary mass; the gut the same. From both (*a*) Two rolls; no M.S. (*b*) Mouse inoculated; dead of M.S. after five days.

Mouse like the former, but at a depth of three m.; temperature, 11.8 deg. C. After six days: Cadaver as before. From the greenish-black, stinking liver: (*a*) Cover glass preparation showed apparently many bacilli of M.S. (*b*) Two rolls showed several colonies of M.S. (*c*) Mouse inoculated; dead of M.S. in four days. After ninety-

* M.S. = Mouse Septicæmia.

eight days: Cadaver quite like the former. In the rolls no M. S. visible. Mouse inoculated; died of M.S. after four days.

Cadaver of mouse kept in the exsiccator, with exclusion of air; temperature of the room. After fourteen days: Cadaver stinking rather strongly. Internal parts markedly putrefied. Of these (in two rolls), no M.S. discoverable; but in two attenuations, putrefaction and M.S. colonies in about equal numbers.

Mouse cadaver placed in a glass with moist black garden earth in the air at summer temperature, occasional wetting with rain. Dug up after seventy-six days. Earth fairly dry, with somewhat mouldy smell. Mouse partly mummified; individual parts no longer recognizable. The remains rubbed up with bouillon, and from this two rolls made; no M.S. Mouse injected; remained sound.

Five bodies of mice, two of which had died of splenic fever, three of mouse septicæmia, buried in a glass containing sand, and in summer exposed to the air. Dug up after seventy-five days. Sand about the mice somewhat damp; mice smelling little; internal organs no longer recognizable. The mice altogether were reduced to small pieces and rubbed up with sterilized water, and from this: (*a*) Cover glass preparation showed many bacilli threads and cocci. (*b*) Two rolls made; only putrefactive colonies recognizable. (*c*) Two mice having had inoculated under the skin two-tenths ccm., both died after five days of M. S. (The bacilli of splenic fever had therefore perished.)

Body of a mouse buried in moist garden earth in a mouse glass, and placed in the cultivator at 37.5 deg. C. Dug up after eight days. Earth has putrefactive smell only close to the mouse. Mouse completely decomposed, hair and bones lying in a smeary mass. Mouse inoculated with this, apparently ill on the sixth day; recovers completely on the following day.

Body of a mouse treated like the preceding. Dug up after eleven days; condition just as above. Mouse inoculated remains sound.

Body of a mouse covered over and pressed tight with wet clay in a mouse glass, and covered high with clay; from time to time moistened with sterile water, and placed in the cultivator. Dug up after eighteen days. Clay fairly dry. Only hair, bones, and a somewhat brown mass re-

maining; little smell. A washing of the remains made with sterile bouillon. Rolls made from this showed no M.S. Mouse injected with three ccm. of the washings; died after three days of M. S.

Body of a mouse covered in a glass with pipe water. The water not renewed, and kept in summer at the temperature of the room. After two days the water clouded. Mouse somewhat stinking. Organs still red. (*a*) Cover glass preparations from the heart blood show M. S. well stained. (*b*) Rolls; M. S. colonies not recognizable. (*c*) Mouse inoculated dies after three days of M. S. After eight days water very stinking; pellicle on it. Mouse sodden, stinking; heart and liver clear grey. From these (*a*) coverslip preparation shows M. S. apparently greatly increased. (*b*) Mouse inoculated died after five days of M. S. After twenty-one days water very stinking; mouse the same. Skin brittle; internal organs changed into a grey juice, in which the bones lie loose. Of these (*a*) two rolls; speedily liquefied. (*b*) Mouse inoculated died after seven days of M. S. After twenty-seven days water looks quite green. Mouse macerated down to the skin and bones; only traces of the internal organs remaining. From these a mouse inoculated dies after eight days of M. S. The glass was then placed in the open, containing about one litre of water, and the evaporating water not renewed. After ninety-nine days water completely dried off. Mouse lying at the bottom of the glass, covered over with a green slime; smelling little; skin and bones still remaining, and enveloping the interior of the mouse, which consists of a red powder. Remains of the mouse rubbed up with 10 ccm. bouillon. From this a mouse inoculated with 0.3 ccm. remains sound.

Mouse cadaver laid in flowing pipe water at the temperature of the room. After six days water clear, mouse sodden, skin covered with gas bubbles, stinking, body swelled up, organs pale grey red. Mouse inoculated with material from the liver died of M. S. after five days. After thirteen days mouse strongly blown up, stinking, skin macerated, and could easily be torn into shreds; liver grey red. A mouse inoculated from the last died of M. S. after six days. After twenty days water clear; body looks the same as eight days previously. Mouse inoculated remains sound.

Body of a mouse placed in a water glass with a 1 per cent corrosive sublimate solution, and allowed to stand in

the room. After sixteen days water cloudy, stinking; mouse sodden, stinking; hair easily dropping off; muscles already somewhat macerated; bloody serous fluid in the breast cavity. From this roll preparations were made, and in the second attenuated tube two M. S. colonies present, one putrefactive.

The most notable feature of these experiments von Esmarch considers to be the rapidity with which the bacillus of M. S. succumbed in the presence of rapid putrefactive change, such as shows itself in the body of a mouse which has died of M. S. when placed in water, or in the cultivator. This is the more remarkable as this bacillus was discovered by Koch through inoculation of putrefying blood, and is presumably therefore, to be found as a saprophyte in putrefying organic matters; further, it needs very little oxygen for its existence, and grows deep in the tract of the puncture in gelatine. The reaction to inoculation in animals is so delica e that there is no reason to doubt that the bacillus had in reality perished. To prevent any possibility of error portions were taken from different parts of the experimental body, mixed together, and a piece the size of a pea was used for inoculation, an amount which would be sure to contain some of the active micro-organism, supposing such to remain.

BACILLI OF SWINE FEVER.

The behavior of this bacillus is very similar to that of mouse septicæmia.

BACILLUS OF SPLENIC FEVER.

The persistent vitality of the spores of bacillus anthracis is well known. In most cases, however, it does not come to spore formation in the dead body. The explanation of this is that, as we know from cultures in the test tube, spore formation sets in only after a certain exhaustion of the soil, and, in the second place, on the admission of oxygen. The last condition is, however, not present in the cadaver under natural conditions, unless the cavities of the body have been opened freely, and the organs containing the bacillus exposed to putrefaction for some time in the open air. Thus, for example, the author observed in the liver of a guinea pig, which had undergone decomposition for several days in a shallow glass dish, that the spores of anthrax had formed abundantly on the surface of

the organ, whilst on the underside, where the liver had lain against the glass, no trace of virulent anthrax could be found.

Every precaution was taken to prevent the formation of spores in the following experiments, the skin being sewed up at once after material for testing had been taken:

Body of mouse left lying in summer in the open air. After one day: Cover glass preparation and rolled tubes show abundant anthrax; mouse inoculated dies one day after of anthrax. After five days: Cadaver stinking; abdomen fallen in; liver still of good color. Cover slip shows many different kinds of cocci, bacilli, and spores—perhaps some splenic fever; in two rolls, several colonies of splenic fever. Mouse inoculated dies after two days. After seventy-nine days: Mouse tolerably dry. Liver changed into a dark, syrupy mass. From this, cover glass preparation shows only a few bacilli, which stain badly. Spores not discoverable. Two rolls made, and nothing grew for eight days; then the rolled tubes filled up, and numerous colonies made their appearance, with evolution of gas. Two rolls made, the gelatine being exposed first to 70 deg. C. for five minutes; result the same, only fewer colonies. A piece the size of a pea inserted in a mouse, which remains sound.

Mouse cadaver placed in an ice chest; average temperature 4 deg. C. After eighteen days: Cadaver stinking, abdomen green, liver and spleen grey-green, smeary, decomposing. From these cover glass preparation shows no well stained bacilli: two rolls made exhibit a relatively large number of colonies, especially a white and yellow kind: splenic fever, however, not discoverable. Mouse inoculated dies after four days of anthrax. After forty days, mouse inoculated remains healthy. Mouse cadaver in ice chest, as before. After twenty-one days: Cadaver somewhat dried up, internal organs in fairly good preservation, smelling slightly. Mouse inoculated from the spleen remains sound.

Mouse cadaver, in a glass, placed in the cultivator at 37 deg. C. After three days, cadaver stinking, partly decomposed; spleen changed into a large, bluish-black, smeary mass. Mouse inoculated from this remains sound.

Mouse cadaver: Placed on July 13, 1886, in the recess in the well, at a depth of two m.

After seventy-six days: Cadaver overrun with mould,

which has in parts penetrated into the interior. Damp, smelling mouldy; scarcely anything of the organs to be made out, except some remains of the liver. Mouse inoculated remains sound.

With respect to the rest of the experiments, I shall transcribe only the conditions of experiment and the results of inoculation.

Body of guinea pig, placed on July 12, 1886, in the recess at a depth of one m., in a flower pot; temperature, 14.4 deg. C. After two days, guinea pig inoculated died of anthrax in three days.

After eighty-five days, mouse inoculated remained healthy. Mouse inoculated with the stinking material outside the body, remains healthy.

Body of a guinea pig, placed July 12, 1886, in a flower pot, in the recess of depth three m.; temperature, 11.8 deg. C. After ninety-three days, mouse inoculated from the liver remained healthy; mouse inoculated with the black stinking earth from the flower pot, died after seven days of mouse septicæmia: origin not discoverable. After 695 days, mouse inoculated remained healthy.

Body of mouse buried in dry sand, and placed in the open summer air. Dug up after four days; mouse inoculated died after four days of mouse septicæmia: origin not discoverable.

Body of mouse buried in sand frequently wetted and exposed in the open summer air. Dug up after four days; mouse inoculated remained healthy.

Body of mouse buried in wet sand, and placed in the open, July, 1886. Dug up after five days; mouse inoculated remained healthy.

Body of mouse buried July, 1886, in wet black garden earth; temperature, 19 deg. C. Dug up after six days; inoculation from the spleen. Inoculated mouse remained healthy.

Body of mouse buried July 16, 1886, in a flower pot full of sand, and placed in the recess at a depth of two m.; temperature, 13.5 deg. C. Dug up after seventy-six days: mouse inoculated remained sound.

Very large rabbit, in all the organs of which very many bacilli of anthrax were found, buried one m. deep in the earth, March 12, 1887; temperature, 7 deg. C. After twenty-three days, mouse inoculated from the liver, remains healthy.

Body of guinea pig, buried July 17, 1886, in a flower pot full of sand, and placed in the recess of the well, at a depth of one m. Temperature, 14.7 deg. C. After eighty days, mouse inoculated from the liver, remains healthy; mouse inoculated from the stinking sand dies after five days of mouse septicæmia. After 700 days, mouse inoculated remains healthy.

Body of mouse placed in a glass with pipe water, at the temperature of the room. After seven days, mouse inoculated remains healthy.

Body of mouse placed in a glass of water in the summer air. Temperature, 16 deg. C. After one day, mouse inoculated from the liver dies after one day of anthrax. After two days, guinea pig inoculated dies after two days. After five days, mouse inoculated remains healthy. After seven days, mouse inoculated remains healthy.

The outstanding results of these experiments are the rapidity with which the bacillus of anthrax perishes, and the marked influence exerted on it by the rapidity of putrefaction. Of especial interest is the absence of anthrax from the surrounding sand and earth. The result is, of course, quite different when anthrax spores are present in the cadaver.

The following experiments were made with anthrax spores: Spores of anthrax were placed in the middle of a piece of meat of the size of an apple; the meat was then brought together, fastened with threads, and the whole kept in water at the temperature of the cultivator. After seventeen days, water and meat in complete putrefaction; mouse inoculated from the interior of the meat dies after two days of anthrax. In the abdominal cavity of the bodies of two mice, were placed some anthrax spore threads; the cadavers were then buried in a glass with sterile sand, placed in the cultivator, and from time to time moistened with water. After eighteen days, mouse inoculated dies after two days of anthrax.

Since the bacilli of anthrax would have quickly perished under like conditions, we can assume that under such circumstances sprouting of spores does not take place. These results agree with Feser's observations on the bodiet of sheep, goats, cattle, and horses.

CHICKEN CHOLERA.

These experiments may thus be summarized. The bacillus of chicken cholera is still present three to four weeks

after the death of the animal, but soon after this time it perishes and disappears.

TETRAGENUS.

The tetragenus was chosen in order to test the behavior of a coccus. Some other pathogenic cocci-such as staphylococcus of pus, streptococcus erysipelatis, gonococcus, etc., are not suitable for experiment, as having no pathogenic effect on animals. Experiments show that the tetragenus survives its host only by a few days. It was noteworthy that in one instance the body of a mouse was found to be completely sterile.

MALIGNANT ŒDEMA.

The bacillus of malignant œdema is of special interest, because it occurs in nature so widely. Almost every cultivated ground, the common dust of the street, etc., contains it in countless numbers. But how it gets there is not known. We may assume that it cannot multiply in the ground, since it can only grow with complete exclusion of air. It was, therefore, not improbable that it would form spores in the animal body, in which, as has been mentioned, it is known after death to penetrate the organs, and that from there it would find its way into the surrounding ground on the final break up of the cadaver. As a matter of fact, at all events in one case, the bacillus showed itself virulent 163 days after the death of its host, though it had probably not escaped into the surrounding soil, since inoculation with the latter gave a negative result. This, of course, does not exclude the possibility of such an occurrence later on. In the other instances the bacillus died just like all the others in a much shorter period than 163 days, or at all events lost its virulence.

TUBERCULOSIS.

Two pieces about the size of a fist were cut from the lung of an ox which was strongly invaded with tubercle bacilli, and one of these, along with a tuberculous dead guinea pig, placed in the well recess one m. deep, in a flower pot, 28th December, 1886; temperature, 1 deg. C.

After 252 days: Inoculation of a guinea pig gave negative results. Killed eight weeks after inoculation, it showed no sign of tuberculosis. The second piece of lung is placed free in a glass in the back passage of the laboratory.

After 204 days: Some of the lung rubbed down in sterilised water, and a cover glass preparation made. After long search one tubercle bacillus found. A guinea pig has one ccm. injected into the abdominal cavity: killed. After three days it remains completely healthy.

TETANUS.

A mouse, which, having been inoculated with earth, had perished of tetanus, is placed in the air at the temperature of the room. At the seat of infection are found numerous fine, brush shaped tetanus bacilli, and a mouse inoculated therewith dies of tetanus on the following day. After thirty-five days, a particle is taken from the seat of infection and inoculated in a mouse: the mouse remains healthy.

CHOLERA ASIATICA.

A guinea pig, which with the usual precaution had received cholera bouillon and carbonate of soda by the stomach, as well as an injection of tincture of opium in the abdominal cavity, dies the following day. Post mortem examination shows an almost pure culture of cholera bacilli in the small gut and stomach: the body is then placed in a large glass, sunk in pipe water, and kept at the temperature of the room. After two days: The cadavar somewhat stinking. Cover glass preparation shows numerous comma bacilli. After five days: Cadaver and water smelling strongly. Cover glass preparation shows cholera spirilli. In three gelatine rolls the attenuations exhibit several cholera colonies, say one to ten of others. After seven days: Cover glass preparation as before. Six rolls liquify too rapidly to observe cholera spirilli; the fluid gelatine gives, with sulphuric acid, distinct cholera reaction. After eleven days: Bacilli of the cholera form seen in cover glass preparation; but neither as colonies, nor by the cholera reaction is further evidence obtained. After twenty-one days: Neither by cover glass nor culture is the cholera microbe found. After thirty-one days: Same.

From these experiments the author concludes that he has shown that in the great majority of instances, pathogenic bacteria, and probably all similarly organized disease producers, cease to develop after the death of their host, and almost regularly undergo speedy destruction. This occurs more rapidly when the conditions are present for a quick and intense process of putrefaction. The destruction of

the specific bacterium must be regarded as due to its being overgrown by the putrefactive organisms, whether as a result of mechanical pressure, or as the consequence of products poisonous to the micro-organism. But putrefaction is not necessary to the destruction of the microbe. This he proceeds to show experimentally, and assigns, in the first place, to the absence of oxygen, a condition which holds in the case of buried corpses. But there may be also other conditions.

For practical purposes the conclusion may be drawn from these experiments that the burying of animals which have died of infectious diseases, such as anthrax, is a good means of avoiding further infection from the cadaver: they also confirm the views of those who are not disposed to consider that there is any danger of the propagation of disease either in the air or in the drainage of graveyards.—*Medical Chronicle, Manchester, October, 1889.*

THE PROFITS OF A SANITARY INVESTMENT.

"Less than ten years ago Memphis, Tenn., seemed to be a doomed city, says the *Northwestern Builder*. The population had shrunk 20 per cent in a few years, and real estate had decreased in value, all because the city was scourged by disease. The panic stricken people, looking upon the place as doomed, had surrendered the municipal charter. But about 1880 a complete drainage system was constructed, and, with its completion, health and prosperity commenced to return.

"Today the Memphis *Appeal* estimates that in the last twelve months $5,000,000 have been put into public works there by foreign and local investors; a bridge across the Mississippi is under construction: new banks, club buildings, a union depot, etc., are being built: the cotton receipts have about doubled on those of nine years ago, and the population has increased in nearly the same proportion—all because it was finally realized that to prosper, a city must, first of all, use those precautions against epidemics and diseases which sanitary science has placed at its disposal, and render its surroundings as healthful and inviting as they can be made.

"This done, ordinary business energy and push will do the rest, as the present prosperity of Memphis proves. There drainage saved a city."—*The Annals of Hygiene.*

We have quoted the foregoing, because we believe that New Orleans could be benefitted in the same way. The problem of local drainage involves not only the health of our people, but our commercial reputation and our future growth and prosperity.

With the exception of a little longer summer, New Orleans possesses as delightful a climate as Memphis, and in point of location, it has no equal in the southern country. Proper drainage by removing stagnant water from our large, open gutters, harmless in themselves, but injurious, inasmuch as the water is allowed to stand, and by lowering the subsoil water some two or three feet, would lower our death rate and enable our people to boast of immunity from the malarial fevers and such contagious diseases as measles, scarlatina, and diphtheria.

TREATMENT OF ALOPECIA PRÆMATURA.

Dr. Oscar Lassar has contributed to the *Therapeutische Monatshefte*, an interesting paper on the nature and treatment of alopecia (præmatura) furfuracea. This, the commonest form of baldness, is, according to the author, extremely contagious, and can be experimentally communicated from man to the lower animals. No specific organism has as yet been isolated, but a number of cases is given to prove the contagious nature of the disease.

The following treatment is recommended as being efficacious in most cases: The hair is washed daily with tar or other soap for ten or fifteen minutes, after which the soap is carefully removed with abundance of water. It is then rubbed with the following lotions: (1) Hydrargyri perchloridum (½ per cent solution), 150 parts, glycerine and eau de Cologne, of each, fifty parts; (2) B–napthol, one part; absolute alcohol, 200 parts. After carefully drying, the following pommade is to be used: Acid salicylic, two parts; tinct. benzoin, three parts; olive oil to 100 parts. The cure may take six weeks or longer, and careful prophylaxis with regard to brushes and combs must be carried out.

THE REMOVAL OF TATTOO MARKS.

In the *Journal of Cutaneous and Genito-Urinary Diseases*, March, 1889, Dr. Brocq refers to the plan of treatment practiced by Variot for the removal of tattoo marks. The method consists in freely painting the part with a

strong tannin solution, and then immediately pricking the skin with a bunch of needles, in order that the tannin may penetrate deeply. The operated surface is then rubbed vigorously with nitrate of silver. The pricked points in the course of a few moments become black, and the surface is then wiped off. Varying degrees of inflammation ensue, with more or less pain on motion. In about two weeks the eschar becomes spontaneously detached, beneath which is seen a red cicatrix. In due time the redness disappears.

The statement of Dupuy that the natives of the Indian Archipelago remove tattoo marks, without leaving a scar, by making tattooings with the juice of the carica papaya, is also quoted.

Publications Received.

Transactions of the Medical and Chirurgical Faculty, of the State of Maryland, Ninety-First Annual Session.

La Ueretrotomia Interna en la Isla de Cuba es tan inocente como la dilatacion progresiva. Por el Dr. Ignacio G. Plancencia, Habana

A Treatise on Surgery, its Principles and Practice. B. T. Holmes, M. A. Cantab. Lea Brothers & Co., 1889.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair. Lea Brothers & Co., 1889.

A text-book of human physiology including histology and microscopical anatomy. By Dr. L. Landois. P. Blakiston, Son & Co., 1889.

Diseases of Women: a manual of non-surgical gynecology designed for use of students, and general practitioners. By F. H. Davenport, A. B., M. D. Lea Brothers & Co., 1889.

The Story of the Bacteria and Their Relations to Health and Disease. By T. Mitchell Prudden, M. D. G. P. Putnam's Sons, 1889.

Essentials of Pathology and Morbid Anatomy. By Armond Semple, M. D.

Lectures on Obstetric Nursing. By Theophilus Parvin, M. D. P. Blakiston, Son & Co., 1889.

A Manual of Minor Surgery and Bandaging, for the use of house surgeons, dressers, and junior practitioners. By Christopher Heath, F. R. C. S. P. Blakiston, Son & Co., 1889.

The Urine, the Common Poisons, and the Milk. By J. W. Holland, M. D. P. Blakiston, Son & Co., 1889.

Some men try advertising as the Indian tried feathers. He took one feather, laid it on the board and slept on it all night. In the morning he remarked: "White man say feathers heap soft; white man d—— fool."—*Religious (?) Exchange.*

Medical News and Miscellany.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, FOR THE THREE WEEKS ENDING NOVEMBER 9, 1889.

Purviance, George, Surgeon—Granted leave of absence for twenty-one days, Nov. 8, 1889.

Austin, W. H., Surgeon—To inspect unserviceable property at St. Louis marine hospital, Nov. 4, 1889.

Gassaway, J. M., Surgeon—Relieved from duty at New Orleans, La., to rejoin station at Cairo, Ill., Oct. 23, 1889.

Banks, C. E., P. A. Surgeon—Granted leave of absence for thirty days, Oct. 28, 1889.

Stoner, J. B., Assistant Surgeon—Ordered to Vineyard Haven, Mass., for temporary duty, Nov. 6, 1889.

Condict, A. W., Assistant Surgeon—Ordered to Cairo, Ill., for temporary duty, Nov. 4, 1889.

Guiteras, G. M., Assistant Surgeon—Ordered to Washington, D. C., for temporary duty, Nov. 8, 1889.

Groenevelt, J. F., Assistant Surgeon—Ordered to New York, N. Y., for temporary duty, Nov. 5, 1889.

FOR WHOOPING COUGH.

℞. Ext. Cannabis Ind. ..... gr. xviij.
Ext. Belladonnæ ..... gr. x.
Alcohol (absolute) ..... aa ..... gr. lxxv.
Glycerine .....

M.—Sig.: For children of from eight to twelve months, four or five drops of the mixture; from one to two years, five to eight drops; from two to four years, eight to ten drops; from four to eight years, ten to thirteen drops; from eight to twelve years, twelve to fifteen drops; above twelve years, fifteen to twenty drops. The medicine may be given either at night only, or night and morning.—*Union Med. Gaz. Méd. de Montreal.*

COLLODION FOR FISSURE OF THE NIPPLE.

℞. Salol ..... aa 3 grams.
Ether .....
Collodion ..... 20 grams.
Muriate of Cocaine ..... 20 centigms.

Mix. *Gazette Médicale de Liége.*

FOR PRURITUS ANI AND PRURITUS VULVÆ.

℞. Hypophosphite of soda ..... 15 grams.
Carbolic acid ..... 2½ "
Pure glycerine ..... 8 "
Distilled water ..... 120 "

Mix.—Sig.: Use as a lotion. *Gazette Méd. de Liége.*

MORTUARY REPORT OF NEW ORLEANS

For October, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	1	.....	1	.....	1	.....	1
" Malarial	8	4	5	7	9	3	12
" Congestive	11	3	10	4	11	3	14
" Continued,	.....	...	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....
" Remittent	.....	1	1	.....	1	.....	1
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	2	.....	1	1	2	.....	2
" Puerperal	2	.....	.....	2	2	.....	2
" Typho-Malarial	1	1	2	.....	1	1	2
Scarlatina	1	.....	.....	1	.....	1	1
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	11	4	11	4	.....	15	15
Whooping-cough	1	.....	1	.....	.....	1	1
Meningitis	5	1	3	3	.....	6	6
Pneumonia	12	5	7	10	11	6	17
Bronchitis	4	1	.....	5	.....	5	5
Consumption	39	35	42	32	68	6	74
Congestion of brain	5	2	4	3	7	.....	7
Diarrhœa	4	7	7	4	7	4	11
Cholera infantum	4	3	4	3	.....	7	7
Dysentery	6	3	3	6	8	1	9
Debility, General	3	1	4	.....	4	.....	4
" Senile	15	14	12	17	29	.....	29
" Infantile	7	3	6	4	.....	10	10
All other causes	169	76	140	105	174	71	245
Total	311	164	264	211	335	140	475

Stillborn children—White, 28; colored, 16; total, 44.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for month—White, 20.23; colored, 28.32; total, 22.44.

DIPHTHERIA RECORD FOR OCTOBER, 1889.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	10	1	11	4	.....	4
2	.....	.....	.....	.....	.....	.....
3	2	.....	2	2	.....	2
4	9	3	12	3	.....	3
5	3	4	7	2	4	6
6	3	.....	3	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	27	8	35	11	4	15

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—OCTOBER.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Precip. in inches and hund.
1	78.0	85.0	72.0	.....
2	80.0	85.0	74.0	.....
3	77.0	86.0	68.0	.....
4	77.0	85.0	69.0	.....
	76.0	84.0	67.0	.....
	76.0	84.0	67.0	.....
7	60.0	68.0	51.0	.....
8	60.0	69.0	51.0	.....
9	66.0	76.0	56.0	.....
10	71.0	81.0	61.0	.....
11	72.0	83.0	62 0	*T
12	74.0	87.0	62.0	*T
13	77.0	89.0	65.0	.....
14	78.0	90.0	67.0	.....
15	62.0	73.0	51.0	.....
16	63.0	74.0	52.0	.....
17	65.0	74.0	56.0	.....
18	68.0	76.0	60.0	.01
19	68.0	74.0	61.0	T
20	72.0	81.0	63.0	.25
21	72.0	82.0	62.0	‡T
22	72.0	84.0	61.0	.....
23	74.0	84.0	65.0	.....
24	73.0	87.0	59.0	.....
25	74.0	85.0	63.0	T
26	62.0	68.0	55.0	.....
27	58.0	67.0	50.0	.....
28	63.0	73.0	53.0	.....
29	68.0	77.0	58.0	.....
30	74.0	86.0	61.0	T
31	73.0	82.0	64.0	.....
Sums . .	....	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.099.
Highest barometer, 30.284, 8th.
Lowest barometer, 29.921, 25th.
Mean temperature, 70.4.
Highest temp., 90.0, 14th; lowest, 50.0, 27th.
Greatest daily range of temp., 28.0, 24th.
Least daily range of temperature, 11.0, 2d.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..70.7	1876..67.4	1881..75.2	1886..69.5
1872..68.2	1877..69.9	1882..73.3	1887..68.1
1873..67.9	1878..70.9	1883..75.4	1888..68.0
1874..70.2	1879..72.2	1884..74.4	1889.. —
1875..66.9	1880..67.9	1885..65.7	1890.. —

Total excess in temperature during month, 2.
Total deficiency in temp. since Jan. 1, 3.29.
Prevailing direction of wind, N.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 30 miles, N., on 26th.
Total precipitation, 0.26 inches.
Number of days on which .01 inch or more of precipitation fell, 2.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1874.....	1879. ... 1.36	1884.... 5.60
1875..... 2.09	1880..... 1.88	1885.... 0.56
1876..... 0.24	1881..... 4.84	1886.... 0.22
1877..... 9.15	1882..... 2.16	1887.... 4.71
1878..... 5.07	1883..... 3.43	1888.... 7.36

Total deficiency in precip'n for month, 2.91.
Total deficiency in precip'n since Jan. 1, 7.72.
No. of clear days, 26. No. of partly cloudy days, 4. No. of cloudy days, 1.
Thunder storm on ——. Excessive rainfalls. ——; Mean Max. Temp., 79.9; Mean Min. Temp., 60.8.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable. * Dew. ‡ Fog.

R. E. KERKAM, *Signal Corps Observer.*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

JANUARY, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

On the Neglected Advantages of Caustics in the Treatment of Malignant Diseases in Certain Localities.*

By Rudolph Matas, M. D.†

One of the aphoristic dicta of the school of Cos, which has became celebrated, reads: "*Quæ medicamenta non sanant, ea ferrum sanat; quæ ferrum non sanat, ea ignis sanat; quæ vero ignis non sanat, ea insanabilia reputare oportet.*"

This aphorism is of a value as marking the first phase in the history of cauterization in surgical practice.

Of *easy access*, *prompt* and *effective*, it was natural that the actual cautery should have become by natural right the primitive caustic agent.

Like most good things therapeutic, it is well known how it was praised, indiscriminately generalized, and abused. With the Arab, the fanatic, and over zealous followers of the Greek Hippocratic and Galenical schools, we see the barbarous abuse of this valuable destructive agent illustrated. It is reported that "they cauterized for empyema, they plunged the red hot iron into hepatic abscesses, into the abdomen for dropsical effusions; they opened the urinary

* A lecture delivered in the New Orleans Polyclinic, session of 1889.

†Visiting Surgeon to Charity Hospital; Instructor in Operative and Clinical Surgery in New Orleans Polyclinic, etc.

bladder for stone with a scalpel at a red heat; they opened the sac in hydrocele with the actual cautery and burned rectal ulcers with it; they consumed by fire polypoid growths of the nares; they burned the skin over hernias with it; they treated fistula in ano and prolapsus recti by the same means; they likewise burned fungous growths of the rectum; varices, the tubercles and eroding ulcers of the genitals; they corrected with the red hot iron the congenital occlusion of the nares, webbing of the fingers, atresia of the mouth of the vagina; they burned away the overgrown frœnulum linguæ etc.; it was used as the hemostatic in amputation and other wounds, and in most cases, especially those of a vascular character, was constantly associated with the knife."

The hot iron remained *facile princeps*, a true master of the field until the end of the mediæval period, when, with the advent of alchemy, the resources of true chemistry began to glimmer in the general darkness and the potential caustic gradually assumed the proportions of a rival. With the progress of chemistry the potential caustics began to rise in the ascendency and the second period in the history of cauterization was established, that of the chemical caustics.

With the great "renaissance" of the sixteenth century, and extending impetus given to medical investigation and progress by Harvey's discovery of the circulation of the blood (1628), Paré's discovery of the arrest of hemorrhage by the ligature, and the further progress of anatomy and chemistry, the actual cautery continued to fall into disuse.

With the general awakening of the sixteenth century, which signalized the modern period and the advent of the three great medical reformers, Paré, Vesalius and Harvey, there was a steady downfall in the value of the actual cautery. Louis, the distinguished secretary of the French academy, in a memoir contributed in 1755 (Prix de l'Académie de Chirurgie, T. III, p. 284, edit. 1819),

wrote: "Since the discovery of the circulation of the blood, the fundamental doctrines of the healing art have changed aspect completely. Surgeons have cultivated anatomy, operations have been perfected, because the masters of the art have better understood the human body and the maladies which attack it; they have invented new instruments; fire has inspired aversion and the potential has taken the place of the actual cautery whenever it has been impossible to bring cutting instruments into play. The progress of chemistry which has multiplied the number and varieties of caustic substances, has very probably contributed to the progressive abandonment of the actual cautery," and he recorded with regret that the cautery was being abandoned entirely, its use being reserved for few special occasions, such as a hemostatic in hemorrhage occurring during sequestrotomy.

Another author who wrote about the early part of this century chronicles the fact: "That the actual cautery has ceased to be mentioned in the texts. It has been entirely proscribed in surgical practice, and it is with difficulty that any cautery irons are to be found in any surgical case."

It was also doubtless at the instigation of Louis that the French academy in 1754 proposed as a subject for a prize essay the question: "Had not the actual cautery been too much abused by the ancients and too greatly abandoned by modern surgeons?" This question had a salutary effect, and from that time, steady and good work was done with the view of establishing the actual cautery on a sound, experimental and clinical basis. The labors of Rust (Vienna, 1817), of Hoppe (1847) in Germany, of Estor (Montpellier, 1840), of Bonnet, 1850 (?), (Lyons), etc., all summarized in the classical treatise of Phillipeaux (Traité pratique de la cauterization, d'apres l'enseignment, clinique, etc., 1856, Paris), and various other good works attest the seriousness of the reactionary feeling.

The potential or chemical caustics were studied with equal care and fervor. The researches of Mialhe, Fer-

rand and Phillipeaux on the different caustics caused this mode of securing the destruction of the living tissues to enter into a truly scientific path.

The clinical application of the galvano-cautery by Middledorpf, of Breslau, in 1854, and the discovery of electro-chemical or electrolytic cauterization by Cineselli, of Cremona, in 1860; also the more elegant, ingenious and easily applied thermo-cautery of Paquelin, reacted very largely in favor of the modified actual cautery as against the chemical caustics, liquids, pastes, etc., which so occupied the attention of the older surgeons and pharmacologists.*

It must be noted that the continued and extraordinary advances of surgery, which culminated in the establishment of the Listerian principle and more or less general adoption of the antiseptic method of treating wounds has been the greatest factor in eliminating from surgical practice the use of the potential or chemical caustics. Under the protecting ægis of this method, the surgeon has largely increased the domain of his conquests and has caused to disregard largely the dangers of the most severe and mutilating traumatisms when *surgically* inflicted. Under its protecting influence the surgeon has felt encouraged to try anew his attack on malignant disease, because by bolder surgery larger areas can be extirpated and that great desideratum, *extirpation beyond the invaded territory*, can be more readily secured. The more modern operations of Gross and Banks for the extirpation of mammary cancer, the enormous operations of Kocher and others on the cranial vault and dura mater for malignant disease of these parts; the operations of Kocher, Billroth and the Reverdins for cancerous goitre; the operation of Kraske for the complete extirpation of the rectum; Pean's operation for hysterectomy, etc., indicate the latest phases of our aggressive modern surgery in its warfare against malignant disease,

* For a very complete list of references on the subject of cauterization and able summary of its historical features, see U. Trelat's and Charles Monod's article in Dechambre's dictionary.

and especially in the greater technical advances of this period. Furthermore, it is natural that whilst our generation is possessed of the intensely surgical spirit which dominates it, that all such apparently tame and apothecary's treatment as the treatment by the chemical caustics will necessarily stand a poor chance, and perhaps rightly.

On the other hand it may be safely said in regard to the actual cautery that it has resurrected from the tomb in which it had been buried only to appear as the ally of the knife and in a new and handsomer guise, whilst the chemical caustics, which at one time had almost completely susperseded it, are now in their turn buried as thoroughly underground as the actual cautery was when Louis lamented its forgotten virtues before the French academy in 1755.

In fact it may be also said that the use of chemical caustics, with some notable exceptions, has now completely fallen into disuse in the hands of the profession, and the skillful application of these agents, especially in that field in which they are most indicated, viz.: the treatment of maligant disease, has fallen into the hands of charlatans and empirics, who, nothwithstanding their very reckless handling of them—sometimes as recklessly as the Arabs used the actual cautery—often succeed in obtaining results which surprise if not mortify us.

* * *

Up to a very recent date there lived a man in this city whose name was doubtless more familiar to the mass of this population than that, I dare say, of the most accomplished local practitioner. He was a so.called "cancer-curer." He was one of many quacks who professed to cure this disease in this city, but he was the prince of them all; he alone was regarded by the populace as the sole possessor of the secret of the true cure of this direful and dreaded malady. He was certainly a most illiterate, ignorant man, knowing nothing of the first elements of a medical education, absolutely a blank in all that concerned learn-

ing in medicine or anything like it; still it was a fact he did cure *some* cases of cancer, and a great many more that were not cancer, for, of course, he could not know the difference between benign and malignant growths.

As an illustration of the way in which this "cancer curer" obtained fame and lucre, the case which was related to me by my friend, Dr. A. McShane, Assistant Pathologist of the Hospital, is very instructive: A young mulatress, who had attended a ball, danced too much and had chafed the skin over the inner side of the left metatarso-phalangeal joint of the big toe. She neglected it and it developed into an irritable ulcer, with thickened edges. She consulted the "cancer curer," who told her that the sore was a cancer of the worst sort. But before consenting to cure the formidable disease, he told her to go to the Charity Hospital and get the doctors there to pronounce the disease cancerous. She did go to the Charity Hospital, and the physician of the ward told her that it was a simple ulcer. After a few days of appropriate treatment the ulcer was entirely healed and the "cancer curer" robbed of some glory and gain. Still, in the large number of cases that he treated, he did "cure" the cancer that had been diagnosticated as such by accomplished physicians; cases, many of them, which had been abandoned and forsaken as incurable. And this man used only a caustic paste; he was the ideal type of the cancer-curer, fighting all the tumors that were brought to him with the same compound, the quasi archaic, but vigorous formula, discovered perhaps in some ancient and forgotten text, or transmitted to him as a family heirloom, but still the recipe for concocting a mixture which had at least one virtue, *i. e.*, that of destruction.

The history of one or two cases, which I knew to have been instances of true carcinoma and who submitted themselves to the treatment of this charlatan rather than undergo a surgical treatment—one of them treated by him with complete success and the other partially so; the first (the successful case), a scirrhus of the breast, and

the other (partial success) an epithelioma of the uterus—impressed me deeply, and made me think considerably at the time of the possible advantages with which caustic agents might be employed by a judicious and discriminating surgeon; and how it was possible that this worthy old method of cure might be rescued from the apparent oblivion with which it was threatened and the discredit which the blind, indiscriminating empiricism of charlatans was throwing upon it, by limiting its application to suitable cases and thereby bringing it back to its truly limited but legitimate field of usefulness.

* * *

Notwithstanding my emphatic belief in the superiority of the knife for the extirpation of malignant growths, whenever it is possible to get well beyond the infiltrated area and to remove likewise any secondarily invaded foci, I soon had an early opportunity to test the virtues of caustic agents. It was a case totally unfit for true surgical intervention and which, had I limited my resources to cutting measures, I should unquestionably have dismissed as incurable from the moment that he first sought my advice.

The case was one of true rodent ulcer of the face (squamous celled epithelioma), and as you will see by the photograph taken by myself at the time he was first placed under my care, it is worth recording, if only for the extent of the lesion and its long standing:

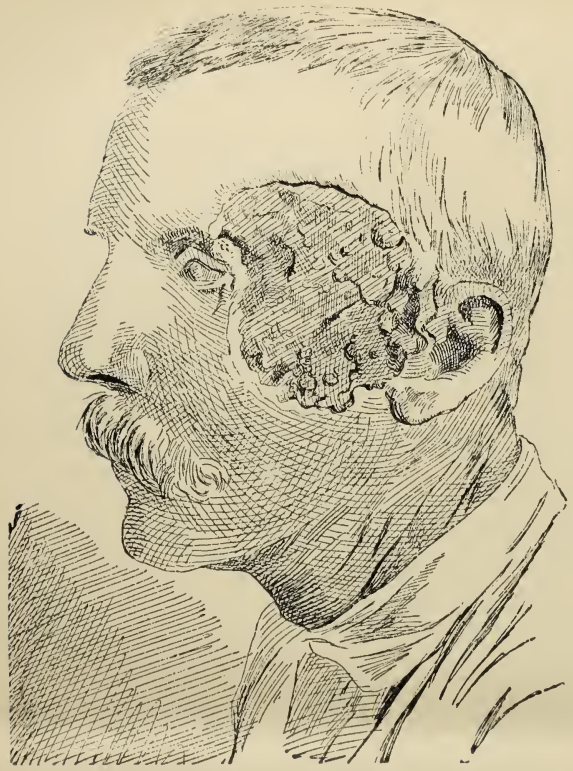
"The patient, Victor L., a white creole, *æt.* 57, farmer, was admitted in ward 8, Charity Hospital, Aug. 21, 1887. He is of healthy parentage, and has enjoyed good health until quite recently, when the aggravation in his present trouble has given him much worry and pain. He has never had venereal disease. He states that about ten years from date he noticed a slight 'pimple' on the side of his face. This 'pimple' gradually grew larger, and finally ulcerated. It was originally situated at the back of the cheek, but it gradually spread, though very slowly ndeed, till it reached its present dimensions. The growth

and spread of the ulcer was so slow that it took eight years for it to reach its present dimensions. As shown in the photograph, there existed at the time of admission a large ulcerated surface, irregularly circular in outline, which extended laterally from the angle of the left eye and angular process of the left frontal to the tragus of the ear, and vertically from the temple at a point corresponding to the level of the angular process of the frontal to about one-half inch from the angle of the lower jaw. The ulcer presented a slightly granular and red appearance; the edges were slightly but distinctly infiltrated, and a certain amount of sanious pus moistened its surface. There were NO enlarged lymphatics.

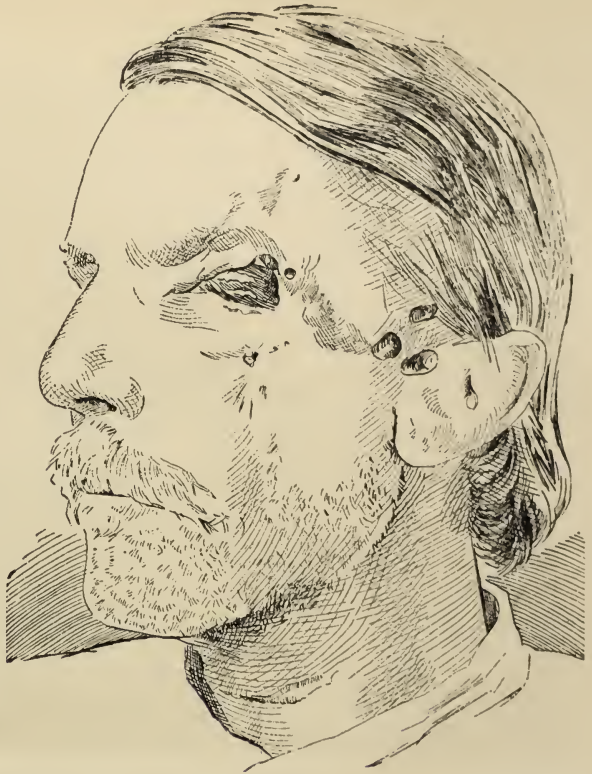
The diagnosis was plainly: Rodent ulcer (squamous celled epithelioma) of the face.

The patient, furthermore, informed me that during the last eight years, during which his attention had been seriously attracted to the ulcer, he had consulted several physicians, several of whom advised soothing salves, others cauterized the ulcer and gave him internal medicine, but no one cured him or even relieved him. He was very much discouraged; his resources were exhausted, and he finally believed that he had come to the hospital to die slowly but surely of his disease, which he had been told was incurable.

The history of the patient was certainly not very encouraging as far as radical cure was concerned, for it was evident that the ulcer had received very considerable attention, it had been treated in many ways, and it had been cauterized, but had it been cauterized sufficiently? It was plain that in this case the disease was most unfavorably situated for extirpation by the knife, in fact this was practically impossible in view of the great likelihood of the preriosteum covering the bone being involved. It was, therefore, an excellent case for either curetting or caustics, or both combined. While debating in my mind as to the best procedure to adopt for the treatment



I. Cancer before the application of the paste.



II. Showing extent of destruction caused by the paste.

of the case, I received Mr. Butlin's admirable work, "The Operative Surgery of Malignant Disease," which had just been issued, in which I was pleased to observe that this most earnest and learned student of cancerous disease took an unusually favorable view of the treatment of malignant growths—in appropriate localities and under proper conditions, of course—with caustic agents. In regard to rodent ulcers, he says: "Caustics have been largely employed in the treatment of the earlier stages of rodent ulcers, more largely probably than by any other means. But they have been employed in such a half hearted fashion and apparently with so little confidence on the part of the operator of really ridding the patient of the disease, that they have almost come to be regarded by the profession as an almost useless means of cure. There is not the slightest reason, however, why even extensive rodent cancers should not be treated by means of caustics with as thorough success as if the knife had been employed. Faint hearted applications of nitric acid, the acid nitrate of mercury, Vienna paste, and chloride of lime, which are so used that they only destroy the surface of the disease and leave the base behind, do more harm than good. It is of little consequence which of several caustics is selected, caustic potash, Vienna paste, or another, provided the main object of the applications be kept in view —not merely destruction of the disease, but its prompt and complete destruction." Butlin here refers to a caustic paste,* which is employed by Dr. Bougard, of

*Bougard's paste, wich Butlin has tried with excellent results in cases mostly of cancer of the breast, consists of:

Wheat flour	60 grammes.
Starch	60 grammes.
Arsenic	1 gramme.
Cinnabar	5 grammes.
Scl. ammoniac	5 grammes.
Corrosive sublimate	0.50 centigrms.
Sol. zinc chloride at 52 deg	8 and 5 grammes.

The six first ingredients are separately ground and reduced to fine powder; they are then mixed in a mortar of glass or china, and the solution of chloride of zinc is slowly poured in while the contents are kept rapidly moving with a pestle, so that no lumps shall be formed.

Brusseis, Belgium, who appears to have devoted himself specially to the cure of cancer by caustics, vide, "*Études sur le Cancer*," par le Dr. Bougard, Bruxelles, 1882.

Thus encouraged by this eminent authority I was about to apply the Bougard paste, when I received about the same time a copy of the London *Lancet* for Aug. 6, 1887, which contained a therapeutic memorandum referring to a paste recently introduced by Dr. Jules Felix, another cancer specialist of Brussels, who having found existing caustics unsatisfactory from the great pain which is caused by their application (Bougard's is admittedly painful), from the difficulty of limiting their action precisely to the parts desired, from their deliquescence, and from various other causes, has devised a form of paste which he has been using for some time past with the best results. It does not cause severe pain or set up any general reaction; the eschar is well defined, so as to be easily detached. It is also a powerful antiseptic and hemostatic. It is not deliquescent, but keeps its consistence, which is that of putty well, and so lends itself easily to manipulation. The hands should be wetted when applying it. They are not in danger of being acted on. The paste is allowed to remain from six to twenty-four hours, according to the amounts of eschar which it is desired to form.

The formula for the paste is as follows. Mix in a mortar the following substances in powder:

R. Starch ..... 37 grammes.
Wheat flour ..... 112 grammes.
Mercury bichloride ..... 1 gramme.
Granular zinc chloride ..... 110 grammes.
Iodol pure ..... 10 grammes.
Croton chloral ..... 10 grammes.
Camphor bromide ..... 10 grammes.
Carbolic acid (cryst.) ..... 10 grammes.

Add gradually a sufficient quantity of distilled water to form a homogenous mass without lumps, of the consistence of putty. This paste will keep an indefinite length of time.

This paste certainly appeared to possess distinct advantages over those usually employed for caustic purposes, and I immediately had it prepared and applied it myself as

directed. The ulcerated surface being very extensive, I applied the caustic, in two sittings, over the whole ulcer. After each application, which lasted over twelve and twenty hours, a large, thick, whitish eschar was found which fell off usually in a week, leaving behind it a granulating surface which had a tendency to glaze over readily. The first application was made directly along the upper margin of the ulcer, and when the eschar fell, it was noticed that the external angular process of the frontal was denuded under it. Not understanding the full penetrating power of the paste, I thought that the bone would soon be covered again with granulations; but not so, for about a week afterward, while examining the patient, I found the piece movable, and by dint of slight traction the external wall of the orbit came away. Shortly after, the osseous zygomatic arch, which had been completely divested of soft parts by the paste, also came away with the forceps, and the face lost its normal outline completely on that side. This vigorous action of the caustic made me very careful in future, especially in dealing with the disease when it showed a tendency to spread into the temporal fossa. Here I do not doubt that an injudicious application of the paste would have ended in an exfoliation of the squamous portion of the temporal, which is very thin, and that a fatal penetration of the cranial cavity would have ensued.

The case did very well for quite a while after the first cauterization. It had almost completely healed over in the deceptive way which is quite peculiar to rodent ulcer, when the border which touched on the ear showed a disposition to a return of ulceration; the paste was immediately applied and the falling of the eschar was synchronous with the loss of half of the external ear (pinna); the ulcer now healed up completely at this point and has never since, over a year, given trouble; but the worst complication that nearly compromised the patient's life for a time was the diffuse panophthalmitis which followed the effects of the

caustic as it was applied to the external canthus and lids to root out the epithelioma at these points. The ophthalmia gave the patient a terrible amount of pain, and at one time I despaired of his life, but he finally recovered after a month of confinement in bed and considerable distress in recovering his general health, though his left eye was lost irreparably, a result which would have certainly followed the advance of the ulcer itself. Anyway, after one year of treatment, not always for the rodent ulcer, but more particularly for the opthalmia, he is almost well. The originally cauterized portions have *not* broken open again, and there remained only one small spot which looked to me suspicious near the eyebrow, and I have only recently applied the paste to this with the effect that you can see in the photograph. Certainly, thus far, the condition of the patient is encouraging, and it appears to me that if it continues this way any further tendency to spread which the disease may show will be easily restrained by the vigilant and timely application of the caustic. An inspection once every two months would suffice, it appears to me, to notice any threatened complication.

The present case, therefore, illustrates the beneficent as well as the dangerous effects of caustics if vigorously applied. Of course, I dare not say that a cure has been effected for a sufficient time has not yet elapsed since the complete closure of the ulcer; but certainly the patient has been made more comfortable—he is not bothered by a foul smelling suppuration and no pain. In addition, though disfigured, he does not present that repugnant appearance which the large raw surface first gave to his countenance. Certainly, the ulcer was never near so well since its existence.

While observing this case I have had occasion to treat in a similar manner and with the same agent, both in hospital and private practice, a number of cases, and all with excellent results in all the cases thus far tried. The cases

are, all adults and old subjects in addition to the one reported:

1. Epithelioma of skin over sternum, one year since operation.

2. Epithelioma of temple and chin (curetted and cauterized), eight months since operation.

3. Round celled sarcoma of forearm, relieved after two operations with knife; has not returned six months after cauterization.

4. Epithelioma of right temple; six months since cauterization and no sign of return.

5. Epithelioma of right ala nosi; ten months since caustic applied; thus far no recurrence.

6. A naevus, capillary, on cheek of young female age 16, complete removal with hardly perceptible scar.

In all the malignant cases no positive assertion as to radical cure can be made; still the length of time which has elapsed is encouraging, especially when dealing with localities in which even the most disfiguring operations with the knife are liable to be followed by recurrence. Certainly, I must state in regard to this paste that, like all powerful caustics, it appears to attack with special vigor the diseased tissue in preference to the healthy, simply, of course, because of the lessened resistence of the former. Of course, its diffusive and penetrative power can be regulated to a great extent by the length of its stay in the affected parts, the time being in direct ratio to the intensity, provided other circumstances are equal. One of the features of greatest importance in preventing the action of the caustic is the skin; if this cover the mass that it is desired to remove, it must be destroyed. To destroy the skin it is necessary to employ Vienna paste or some similar caustic; Bougard uses the Vienna paste, and, I believe, Felix also. During the action of the paste, which produces in most persons a good deal of pain, perhaps the only pain experienced during the whole of the treatment, (certainly the most acute pain), the

patient may be kept partly under the influence of an anæsthetic or may be given opium or morphine.

It is well to remember the technical directions for applying the caustic paste. Bougard has laid down a method which is intended for his own caustic, but it will do with slight modification for Felix's paste; I shall repeat it here.

"Suppose that a tumor of the size of an egg (a cancerous tumor) has to be destroyed, and there are no complications. The patient is laid in a horizontal position, a little inclined towards the sound side, the portion of skin to be cauterized is exactly defined with a pen and ink, and the Vienna paste, which has just been made into a paste, is rapidly applied within the limit which has been traced. In eight or ten minutes the whole thickness of the skin is cauterized; the caustic is then removed, the surface dried with pads of lint, and any sanguineous or serous oozing is arrested by touching the point from which it takes place with nitrate of silver. Then a layer of a special paste, about three millimetres thick, is applied with care not to pass beyond the line of limitation. The paste is kept within the limit by surrounding and covering it with lint, over which is a compress, the whole kept in place by a bandage. The caustic is left on about five hours, is then removed and replaced by a linseed meal poultice, which is applied fresh two or three times between its first application and the next day. As a rule, the pain subsides under the influence of the poultice; if not, the surface is sprinkled with laudanum, and the patient takes some more soothing (opium or morphia) mixture.

The next morning the eschar is incised all round at a distance of a quarter of an inch or less from the sound skin, and the dead tissue is raised and removed. When the surface has been cleansed, a layer of caustic seven or eight millimetres thick is immediately applied, and is surrounded as before by a thick layer of lint to protect the surrounding skin. The caustic is left on for six hours, then again replaced by a poultice.

"The next day the same manœuvres; the eschar is removed, but not in its entire thickness, for two or three millimetres of it are left over the whole surface. The reason for leaving this thin layer of eschar is to avoid hemorrhage and to diminish the pain of the application, nor does the thin layers prevent the thorough action of the caustic. The caustic is applied anew, and, after five or six hours, the poultice.

"Again, on the following day, the same measures. The applications are continued day by day until the tumor has been completely destroyed—a fact which is determined partly by a careful examination of the depth to which the tumor extended before the treatment was com menced, partly by the different character of the eschar. The eschar of a scirrhous tumor is hard and dull white; that of the connective tissue whitish yellow, in which little masses of fat are scattered, and very much softer. Poultices are now applied continuously until the separation of the eschar, which commonly takes place on the sixth or seventh day, when the surface of the granulating wound is examined with the utmost care to discover whether any of the disease remains behind. If there is the least suspicion that that is the case, the caustic must be reapplied without hesitation, care being taken to protect the surrounding surface of the wound by means of lint pads.

"Finally, the opposed surfaces of the healthy wound are brought into apposition, or as nearly so as possible, by drawing them together by means of strips of fine linen, several of which are fastened by collodion on each side, and the free ends are tied in knots. This manœuvre may require to be practised many days in succession, and in those cases in which there has been a considerable destruction of the integument it may be impossible to bring them close together. When they have been brought into apposition, healing by the union of granulations usually occurs." Farney's plaster suture, which causes no pain in its application, is particularly well adapted to these cases.

In cases in which the patient is old, or delicate, or nervous, the applications of the caustic are only made at intervals of two or three days. The frequency with which they should be made, and the quantity of skin and the area of the surrounding tissues which ought to be destroyed, depend largely on the condition of the patient, the character and rapidity of growth of the disease, and on the action which the caustic has upon it. Medullary cancers, for example, are not so easily destroyed by the caustic as the harder forms, and a larger proportion of chloride of zinc will be required. As in all similar matters, the author declares that experience of the method will guide the surgeon as to the best manner of using the paste, and he who is most experienced and skillful wil obtain the best results.

Finally a few words of caution: I would again emphasize the fact that in the course of these remarks I have not advocated the use of caustics in preference to the knife; on the contrary, in equality of circumstances I would always prefer the knife; but there are certain types of malignant disease, certain localities in which it presents itself, and certain classes of patients which call for some other means of eradicating the disease than that afforded by cutting instruments.

It may be said in a general way that the use of caustics should be restricted almost entirely to the more exposed parts of the body, and as far as I am concerned I would limit their application to those parts in which the knife cannot thoroughly and readily circumscribe the disease and leave a healthy area beyond it, especially about the face, or on those parts where the knife has already failed once or twice to prevent recurrence though a rather unfortunate (as regards recurrence) and considerable experience with certain forms of malignant disease of the breast would almost induce me to give it a trial in this affection, which would otherwise appear to be so favorable to the surgical treatment. There is no doubt, as

Butlin remarks, "that there is so much prejudice against the use of caustics, on account of the hands in which they have been chiefly held, that they have not been employed as frequently as they might reasonably be." There can be no doubt that the cancer curers employ them too frequently, and often foolishly and wrongly; but on the other hand, I feel that we do not employ them with sufficient frequency. "In selected cases, for the destruction of cancers of limited extent, in easily accessible situations in old or very feeble persons, when it is of the highest importance to avoid shock and hemorrhage, good results may be obtained with far less danger to the patients than can be afforded by operative surgery. The treatment is certainly painful, in some instances very painful, but there are many old and feeble persons, especially women, who will rather submit to great and long lasting pain than brace themselves up to undergo what is to them far more horrible—the trial of a surgical operation." *

SELECTED ARTICLES.

INJECTIONS OF QUININE INTO THE BRONCHO-PULMONARY MUCOUS MEMBRANE.

By TOMAS DE ECHEVARRIA, M. D.

Translated from the *Gaceta Medica Catalana*, of Barcelona, by A. MCSHANE, M. D.

I have acquired the conviction that, whatever be the stage of a paludic disease in which quinine is administered, the remedy will certainly act with all the more energy the greater the amount of the drug absorbed. The malarial poison should be neutralized in the blood with a rapidity corresponding to the intensity of the pathological processes; thus, in pernicious attacks, we should endeavor

* Since writing the above, I have been much pleased to see that similar opinions have have been expressed in regard to the value of caustics in various recent papers, notably in an excellent paper by Dr. John C. Munro, "Escharotics in the Treatment of Malignant Disease," Boston Medical and Surgical Journal, Sept. 19, 1889, and in a short but vigorous editorial in the *International Journal of Surgery*, Nov. 1889.

quickly to saturate the blood with quinine to counteract the evil influence of the malarial poison.

The stomach, the rectum, the skin, and the subcutaneous cellar tissue, are the channels through which medicine is commonly introduced into the blood. It is a well substantiated fact that if, even during a paroxysm of intermittent fever, we can succeed in causing the absorption of quinine, the violence of the paroxysm at once begins to diminish in proportion to the amount of quinine absorbed. Bearing this fact in mind, and recalling the experiments of Segalas, Claude Bernard, and others, in which absorption through the broncho-pulmonary mucous membrane was shown to be extremely rapid, and, further, knowing the results obtained by Jousset de Bellesne with injections of quinine into the respiratory mucosa in cases of malaria, I have long awaited an opportunity to try this method of combating congestive forms of the disease.

Not long ago, a case of pernicious intermittent fever of the cerebral form, in its third paroxysm, made me resolve to administer five grams of quinine in solution into the respiratory tree; and it was my good fortune to be able to keep the paroxysm within bounds and enable the patient to bridge over a crisis which would certainly have ended fatally if the quinine had not been administered promptly. After the congestive paroxysm, the patient could take the remedy by the mouth, and a repetition of the dangerous access was prevented.

The patient was a man of 70, and he had contracted an intermittent fever, of the tertian form, from a marshy place close to his house. In spite of his many years and the fever, he continued to perform his customary labor which, however, was light. One night, just as a chill was passing off and the second stage of the access was beginning, symptoms of cerebral congestion appeared, but they disappeared with the final sweat of the paroxysm; the patient's wife was not alarmed, and did not send for a physician; she had no idea of the gravity of the attack.

On the following night the same symptoms were repeated, and on the following morning he had a third attack, which, it was evident, would soon end fatally unless prompt and vigorous measures were taken.

Seeing the condition of intense cerebral congestion, and regarding the patient as doomed, I proposed to his relatives to make use of intratracheal injections of quinine as a a remedy *in extremis*, as I thought that through this channel the remedy could be most rapidly introduced into the blood. The relatives consented. I proceeded as follows: A Pravaz-syringe was filled with a solution of five grams of sulphate of quinine in four grams of distilled water. Fixing the trachea with the left hand, I passed the needle of the syringe through one of the spaces between the rings of the trachea, selecting the one about an inch below the larynx. I injected the solution into the trachea drop by drop, at intervals of fifteen seconds, until the syringe was emptied; I removed the syringe from the canula (or needle), which was left in position, and filled it again with the solution of quinine, which was again injected into the trachea. This was repeated until the whole amount of quinine was injected (five grams).

The larynx should be avoided in this operation on account of its extreme sensibility; the entrance of the solution into the larynx would give rise to a convulsive, suffocative cough. In spite of all our care to avoid this danger, which is the only one likely to arise, the cough is sometimes provoked. It is necessary to inject the liquid very slowly, drop by drop, and at intervals of even more than fifteen seconds, if necessary.

In our own case, the injection of the quinine solution gave rise to a violent bronchitis, which, however, soon yielded to treatment.

Our case shows us that there is ground for hope even in the most desperate cases, and that quinine is the true specific. The physician should never despair of curing malarial affections when he has at his disposal arms of such precision

as are the cinchona salts in these conditioas. The difficulty, if any exist, consists in seizing the favorable opportunity and grading the dose according to the severity of the attack, and selecting the route by which the antiperiodic can be brought to the place where the invader is doing his destructive work.

I regard the cinchona preparations given through the bronchial mucous membrane as giving great practical results in the treatment of pernicious malarial fever; and I think this method is preferable to that of Burdel, which consists in giving hypodermic injections of ethereal or alcoholic solutions of quinine during the malignant paroxysm. Although this method is not bad, still it is slow when compared with the intrabronchial method.

The case above described authorizes us to use the pulmonary mucous membrane as a customary channel whenever pernicious symptoms indicate imminent danger and when prompt absorption of the drug is absolutely essential to the safety of the patient.

Proceedings of Societies.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Special Meeting, Nov. 19, 1889, W. E. Knox, M. D., President, in the Chair.

CASE OF AMPUTATION AT HIP JOINT.

Dr. Murdoch: This case of amputation at hip joint I did at the West Penn Hospital, on the 28th of August—twelve weeks ago. Recovery from an amputation at the hip joint is a very rare occurrence in an adult. The operation has been done a good many times. I have performed it several times myself, and this is the first case of recovery I have had. The case is also interesting because of the disease. I have in my hand the femur of the patient who suffered this amputation. It is from a girl 18 years of age, from Beaver county, a native of Pennsylvania. When, last

February, she suffered some pains in the upper part of the thigh, she applied to Dr. Simpson, of New Brighton, who recognized an osteo-sarcoma, and brought the girl to me at the West Penn Hospital, on the 23d of August. The tumor was then very much enlarged, and I amputated at the hip joint. The disease is, as you see, osteo-sarcoma; it involves chiefly the periosteum, and that is said to be the most malignant type of that disease, more likely to recur than when it attacks the centre of the bone. It has been twelve weeks since the amputation, and the girl is now in perfect health. At the time of the operation she was emaciated, could not sleep without large doses of morphia, and since the amputation she has been in comparatively good health, her pain has left, and there has been no return of the disease in the stump. Amputation at the hip joint possesses an exceedingly great mortality. So great is the mortality following primary amputation of the hip joint, that of the twelve amputations made in the Crimean war—primary amputations—all died. Previous to our own war, of thirty cases of primary amputations, owing to gun shot injuries, not one survived. The history of primary amputation at the hip joint, in our war, is a little more favorable, but not much; there were nineteen primary amputations, and of these, eleven died from the shock of the operation within a few hours after amputation; five died within forty-eight hours from other causes, and there were only three who recovered, and only one that was known to be alive two years after the amputation, and that one case I feel particular interest in, as I was the surgeon who controlled the artery at the time of the amputation. This is known in the history of the war as the Shippens case, and was performed on a Pennsylvania private, a young man by the name of John Kelly, who is now living at Black Lick, in this state, in excellent health. This is the only case on record, I believe, that has lived over two years after primary amputation at the hip joint. Amputations for disease are a little more favorable than for injury, and there are a

great many cases of recovery, but still even then it is a very fatal operation. Mr. Lister's abdominal tourniquet has been a great assistance to surgeons in this operation. In the case I report, I was able to control the hemorrhage very effectively by the reliable assistants who assisted at the operation. I will not go into a description of the operation. The girl is now well. I pass this specimen (the tumor and the femur) around among you; it is a beautiful specimen of osteo-sarcoma, one of the finest of which I know.

TWO CASES OF TREPANATION.

Dr. Murdoch: I desire to report, also, two very remarkable cases at the West Penn Hospital. One I have here; the other is not here. A boy was injured in an explosion at the West Point boiler works on the fourteenth day of March, at noon, and brought to the West Penn Hospital in the afternoon. When he arrived there, there was a small scalp wound on the left side of his head, and on the right side of the head the hair was burned off and the scalp severely burned. It was dressed as a burn; the boy was intelligent, answered questions, and seemed to be not very much hurt. In the course of three or four days, this burn on the right side of the head sloughed; the burn had been so severe as to destroy the scalp circularly, two inches in diameter. In the centre the bone was exposed about the size of a silver half dollar. The boy became stupid, irritable, and disposed to sleep, and began to draw his knees up to his chin; in three or four days he had lost the use of his left arm and leg; he had neither motion nor sensation. It was thought by some of my colleagues that an abscess had developed in the brain under this burn. I trephined through what appeared to be the dead bone, made search for an abscess, and found about a tablespoonful of pus which welled up through the wound. Two days after, the boy was able to move his foot and hand; he made a rapid recovery and left the hospital with the use of his arm and leg.

The other case is that of a hod carrier, a young colored man, who fell thirty-eight feet. Those who saw him fall say he struck with his back against a barrel. He was entirely unconscious, and remained so for about an hour; then he recovered his senses, but he had no use of his right arm or leg. That is the history of the case. This accident occurred on the fifth day of December, 1888, nearly a year ago. He remained in that condition until brought to the West Penn Hospital, in May. His pupils were normal, his tongue straight, and he answered questions rationally. His functions were all properly performed, except that he had no use of his right arm and leg; sensation and motion were destroyed. Search was made for evidence of a fracture, but none could be found; search was made for lesions of the scalp, but none could be found, except that a little over the right eye there was the cicatrix of a wound. This was all. He was treated, as the records show, with mercurials, with iodide of potash, under the supposition that possibly syphilis had something to do with it, but without improvement.

With Dr. McKennan's assistance, I trephined before the class on the 28th of September. The man was brought into the operating room and examined before the students, and it was found he could move no part of his right arm. His right leg was examined with the same result. Not the smallest motion. No sensation could be felt in the arm until the breast was reached in front, and the scapula behind, and no sensation could be felt in the leg and thigh until we came up on the lumbar region. This paralysis of sensation and motion of the right arm and leg pointed to a lesion of the motor area about the fissure of Rolando. The head was shaved, the position of the fissure of Rolando was determined, and with the assistance of Dr. McKennan, an opening was made with a large trephine, one and one-half inches in diameter over the upper third of the fissure of Rolando, which is the guide to the centres of motion of the arm and leg. This paralysis having come on within

an hour after the fall, I expected to find a depression of the inner table of the skull. I had no guide to trephine by excepting the symptoms; there was no injury to the external part of the skull, no injury to the scalp. I removed this large button of bone, and found no lesion of the inner table of the skull. Neither was there any evidence of an abscess between the skull and the dura, but this latter was tense, and when the finger was put upon it, gave a sense of fluctuation below. I cut through the dura and there was an escape of quite a quantity or dark blood; the dura adherent to the arachnoid below and the membranes all glued together. There was only this escape of bloody fluid at the upper third of the fissure. The hemorrhage was easily stopped, and then it was found that the substance of the brain was in an almost fluid condition; it was soft; so much so that putting my finger into the aperture to feel, a little of the brain substance escaped through the wound. That was all I found. I confess that I was greatly disappointed. The dura was stitched with cat gut, a drainage tube was inserted at the upper part of the wound, and it was dressed antiseptically. The patient almost expired on the table. He was taken to bed suffering greatly from exhaustion, but under the use of stimulants he revived, and on the next day, within twenty-four hours after the operation, he pulled up his right leg and kicked vigorously, the leg that had been dead for ten months. From that time he went on gradually improving, sensation was at once restored in the leg and in the right arm, but in the latter there was no motion. In three weeks from that time the man walked into the operating room and showed himself to the class; I have him here tonight and want to show him to you. Sensation has been restored to the right arm, but motion of the hand is not quite perfect yet. The wound healed entirely without suppuration. I should say there were some manifestations of nervous force exhibited during his convalescence; a short time after the operation he was seized with a convulsion of the

whole body. He was talking to his companion in the adjoining bed, and all at once the power of speech left him, and for half an hour he could not articulate a syllable. These are facts in the case. I do not know why he is better. I can only say that probably some pressure was relieved, some pressure on a portion of the brain relieved by removing this large circle of bone. Why it is so, I am not able to say. Like the man born blind in the Scripture, who only knew that whereas he was blind, now he could see, so I only know that though this man had the use of neither his right leg nor his right arm, now he can use both.

Dr. Buchanan: I saw this case on the third day, when the patient was at his worst. I believe he had a convulsion that day, and was inclined to be comatose when I saw him. It seemed to me at the time that it would have been the best thing to reopen that wound and discover whether there was not fluid beneath which was giving rise to the symptoms of compression. It may have been fortunate for the man that nothing of the kind was done, as whatever was giving rise to the trouble was absorbed. However, I think it would have been a perfectly safe procedure, with proper precautions, to have reopened the wound and made a slight exploration to discover whether there was any clot or product of inflammation which might give rise to these symptoms of compression. I think the case a very remarkable one, and hardly anything can be added to what Dr. Murdoch has said.

Dr. McKennan: When the man received the injury, according to the spectators, he fell upon his back across a barrel. We know that there might have been injury to the spinal cord, but there were no such symptoms. During the time the man was under the anæsthetic there was a peculiarity that I noticed which Dr. Murdoch did not speak of, and that was during the latter stage of the excitement due to the anæsthetic, there was contraction of the right arm and leg. I have never read of anything of the kind, and the case is certainly remarkable.

Dr. McCann: I have been to some extent familiar with the case, as I saw the man frequently. The result of the operation has been exceedingly gratifying. Pressure was taken off the brain by the removal of this large button or bone, a quantity of blood, perhaps a drop of pus, was allowed to escape, and in addition to this a portion of the disintegrated brain tissue. Then drainage was provided, although the discharge was not great.

It is an example of what can be accomplished in apparently hopeless cases. It is only five years since any deliberate and well defined steps have been taken with regard to surgery of the brain. Before that time everything that was done was groping in the dark. Macewen did the first operation in Glasgow nearly a dozen years ago. This case, I think, was not reported, or at least not reported for a considerable time afterward. Now, within the past few years, dealing with the brain has been entirely revolutionized. There is danger, of course, that there may be too much brain surgery, just as there is danger of too much surgery in other portions of the body; nevertheless the fact remains that operations on the brain today can be done with great safety and are attended by beneficial results. Two other cases have also been operated on in the hospital recently. One, a Scotchman, who had received a fracture of the frontal bone, and who, as a result, was affected by movements of his head. His head was violently drawn to one side, so that you would suppose that he would break his neck in the convulsive movements. This seemed to result from the accident he had met with. There was a small cicatrix upon the frontal bone on the left side, which was trephined by Dr. King, one of my colleagues. Nothing was found underneath except an adherent dura, and underneath it a cyst, rather small, probably the result of a hemorrhage which had occurred at the time of the accident. In this instance, it seemed that little had been accomplished, as if the operation had done no good. However, the result of the operation was that the man was

cured entirely and left the hospital well. In the other instance, a boy was struck on the head several months before with a missile. There were no well marked symptoms, no distinct paralysis. His condition, however, was gradually becoming worse and with the consent and advice of my colleagues, I trephined him over what seemed to be the seat of the injury. After cutting out the button of bone, just as in Dr. King's case, little was found, nothing but an adherent dura.

Following this operation, which apparently was unproductive at the time, the boy regained his reason and so far as I know, has continued well ever since. He remained in the hospital for a month afterward and felt able to resume his vocation. I think Dr. Murdoch's case was an interesting and instructive one, likely to lead to beneficial results. I am aware that there is danger of carrying this too far, that there is danger of transforming the man from a paralytic to an idiot by carrying the incisions too far, or by attempting too much with these very delicate structures, nevertheless I believe that within certain limits, surgery of the brain is very efficacious, and that it is destined to accomplish a great deal of good for the human race.

Dr. Munn: Dr. McCann has referred to the history of cerebral surgery and to some of the first operations as having been done while the operators were groping in the dark. In order that we may give honor to whom honor is due, it may be as well to definitely state the first operation. In the year 1876, Dr. William Macewen, of Glasgow, was called to attend a boy who had been struck on the head and in whose case there developed some months later symptoms which indicated a lesion of the brain. He proposed an operation not at the seat of the injury but over the fissure of Rolando. Consent was refused, the boy died twenty-four hours later and he was given permission to operate as he would have done prior to death. Removing the button of bone, nothing was seen on the surface,

but plunging the scalpel into the brain substance an abscess was opened.

In 1883, Dr. Macewen performed the first operation of the kind that is on record. I might mention the history of it, although it is something similar to Dr. Murdoch's case, with this exception, that the woman on whom the operation was performed was no doubt syphilitic. Mercury and iodide had failed to relieve her and paralysis of one of the lower limbs had set in. He trephined over the upper portion of the ascending parietal convolution and from that locality evacuated a quantity of serous fluid. The woman made a recovery and had perfect health for some years. This case was reported in the early part of 1884 before the Glasgow Pathological Society, and a note of the case was published in the Glasgow *Medical Journal*. In 1885, Dr. Ferrier, of London, heard what had been done, and went north to see what Macewen was doing in brain surgery. He returned to London and six weeks later assisted Messrs. Bennett and Godlee to perform their first operation. No doubt the credit of the first operation in surgery of the brain belongs to that Scotchman in the city of Glasgow.

TINCTURE OF IODINE IN MIDDLE EAR DISEASES.

Dr. Allyn: I would like to call attention to the use of tincture of iodine in the treatment of a species of chronic middle ear disease. To arrest discharge from an ear suffering for any length of time, I have many times been unable, with the use of all applications usually made, powdered iodoform, bichloride, and all the others I could bring into use. Many times the cause of this is the presence in the ear of a substance, whitish, tough, of an aspergillous nature. It has the faculty of reproducing in one night all that you can remove during the previous day's work. It adheres to the skin and grows very rapidly. I have been embarrassed with several of these cases, trying nitrate of silver up to the 10th per cent and 20th per cent, applying it to the ear after I had tested the power to bear

such strong applications. Under a two dram solution this seemed to thrive. I know the danger of using iodine in the middle ear. A case came to me that had been treated before, and all the applications of bichloride and of nitrate of silver in the strongest degrees failed to make any impression. I mopped the ear in the inner part with vaseline, protecting it as thoroughly as possible. Then I made a solution of glycerine and tincture of iodine and worked upon the parts exposed, touching only the parts visible.

I succeeded in clearing that ear perfectly, leaving not the slighest particle of pus. I did that in two weeks, seeing the patient each day. Another case which had been running through childhood I succeeded a few weeks ago in stopping the discharge for about a month only. After trying all the other applications which I felt were safe, I resorted to the iodine treatment. After mopping with vaseline first introduced glycerine into the ear, with no bad results. I then added about a tenth part of the tincture of iodine to it without bad results.

After the operation was made, I filled the ear thoroughly with clear water, followed it with iodoform, and it was the last application I needed to make.

NASAL DIPHTHERIA.

Dr. Green: About four weeks ago I was called to see two cases of diphtheria. The family had lost two children, one of them just one week previous. The child had nasal diphtheria; the membranes had grown down so as to be distinctly perceptible. Small membranes on both tonsils. I gave large doses of calomel frequently administered, and made a tampon of absorbent cotton, wet with a solution of bichloride of mercury one to a thousand, and plugged the nose as completely as I could. I allowed it to remain twenty minutes. Before doing this, I syringed the nose thoroughly with a solution of borax. I left some of the mercury solution, and told the mother to place the cotton every two hours until my return. The same evening I applied iodoform, reduced with calcined magnesia.

On my visit the next day at 10 o'clock, the membranes had entirely disappeared from the nose. Hemorrhages occurred infrequently, but there was no reappearance of the membranes. About one week from that time I saw a similar case in a little girl about five and a half years of age. I subjected the patient to the same treatment, and the case rapidly recovered.

Dr. Huselton: Did the membranes from the throat disappear at the same time with the membranes of the nose?

Dr. Green: They disappeared fully within forty-eight hours. I gave large doses of calomel, ten grains per hour.

Dr. Davis: I would like to ask Dr. Green for how many hours he kept that up.

Dr. Green: I used mild chloride of mercury in large doses frequently administered. I administered to the first patient, I think, about 120 grains in the first twenty-four hours. The membranes from the throat disappeared not as rapidly as the membranes from the nose.

Dr. Lange: I desire to say that I think Dr. Green's treatment very judicious, especially the ten grains of calomel per hour. I myself gave infants five grains of calomel every hour for three or four hours without salivation, without purgation. This has been so universally my experience, that calomel does not purge in diphtheria, that I sometimes take this as a criterion as to whether I have a case of diphtheria or an aggravated case of follicular tonsillitis. In such cases where the calomel has purged the patient I have concluded that I had not to do with diphtheria, because of my universal experience that in diphtheria calomel in ten grain doses does not purge nor salivate as a rule. I remember one boy who had nasal diphtheria who received at my hands one ounce and a scruple of calomel during ten days and was not purged, not ptyalized, and who recovered.

Dr. Thomas: I would like to state my experience of

the calomel treatment of diphtheria. Every case that was malignant and that was at all aggravated died without exception. That is the history of what I saw of this practice with the large doses of calomel.

Dr. Kœnig: For my part I desire to commend Dr. Green for the other treatment, perhaps also for the calomel treatment. I think at the present day no one denies the value of antiseptics in diphtheria, and everyone will admit that all of the remedies, with the exception perhaps of some that are recognized at the present time as of no virtue in diphtheria, are antiseptics. Calomel itself, I imagine, is beneficial, because of its antiseptic properties. No doubt, when these large doses of calomel are administered, more or less of it becomes entangled in the meshes of the membrane. I see no reason why it should not exert its antiseptic properties.

Dr. McCann: I want to say a little about calomel treatment in diphtheria. I have seen it, have been using it for twenty-five years. I have administered five grains per hour to a child eight months old, and I have done this, not once, but repeatedly, and I have certainly seen most marvellous results follow this treatment. As malignant cases as I have ever seen recoved under the treatment, Now, I have not seen bad results follow the administration of calomel. In fact, the plan of treatment which, in my experience, has been successful has been the calomel treatment. I have seen it in my own family, have tried it among my own children when they were in a condition where death seemed to be impending. I have seen it tried in other families where, under other plans of treatment, the children died; and what is the plan of treatment today outside of the mercurial treatment? The treatment which was advocated thirty years ago—iron and chlorate of potash. This is the remedy which the profession has to offer against the mercurial treatment,

Dr. Huselton: I today use bichloride of mercury. This can be put up in such shape that it is very pleasant to take.

BERLIN MEDICAL SOCIETY.

Meeting of Dec. 4, 1889.

COMPLETE NECROSIS OF THE PANCREAS, WITH SEQUESTRATION.

Dr. H. Langerhans reported the following case: A man, aged 45 years, a worker in metals, who had had typhoid fever twenty years before, lost his right arm seventeen years ago in an accident. He remained healthy until some time ago, when one morning he was suddenly seized with vomiting, headache, and vertigo. Great depression and loss of energy; in the course of the following night, great swelling of the abdomen, with anxiety and dyspnœa. After the use of cold compresses the swelling subsided somewhat, but soon returned, and with it great tenderness in the left hypochondrium. On Oct. 3 he entered the hospital.

Status: Slight fever, feeble pulse, an oblique depression of the abdomen above the umbilicus; the skin over this area was covered with spots, which disappeared on pressure. No noticeable change occurred during the next six weeks. On Oct. 21 he vomited lumps which has a putrid odor. On Oct. 26 condition grew worse; the patient became unconscious, passed his urine and feces involuntarily in bed, and died on Nov. 27. At the autopsy, performed the day after his death, complete necrosis of the pancreas was found. The pancreas lay in a cavity bounded in front by the much contracted posterior wall of the stomach, below by the root of the mesentery, on the right by the duodenum, gall-bladder, and kidney, and on the left by the left kidney and part of the descending colon. On the inner surface of the cavity could be seen nodules and shelvings with intervening depressions, in which was found a fluid mass containing fragments of tissue of a grayish white color. The larger shelvings corresponded to the large blood-vessels, while the recesses led into the fatty tissue. The pancreas lay at the bottom of the cavity; the head of the organ was stained with bile, while the

body was of a dark brown color, and the tail, which was completely detached, had an opaque, grayish white appearance. All parts were completely sequestered, and not connected with the surrounding structures. Several perforations led from the cavity to the stomach and intestines. In the fatty tissue were found fragments as large as poppy seeds, and stained yellow; the coils of intestine, which were glued together by fibrinous exudate, had a dark slaty color. Vascular peritonitic bands were also seen. The results of the examination indicated primary fatty degeneration and subsequent necrosis. Microscopically, the pancreas were seen to be divided into shreds, composed of flakes stained with coloring matter, containing only cells fattily degenerated, but no living cells. The fat in these places appeared by transmitted light as completely homogeneous dark masses. The prominences and deep ulcerations in the fatty tissue indicate an acute inflammatory process.

Prof. Fitz, of Boston, who has collected and described in his book on Acute Pancreatitis all the cases that have appeared in literature, divides these cases into three groups: hemorrhagic, suppurative, and gangrenous pancreatitis. According to his table, which, beginning with the year 1843, embraces seventy cases, the disease affects alike all ages and both sexes. Infancy alone seems to be exempt. Fitz states that in acute hemorrhagic pancreatitis, which sometimes leads to apoplectic attacks, fatty necrosis is very rarely seen though it is quite often found in the gangrenous forms. Most cases of acute pancreatitis run their course in a few days, though cases sometimes occur which do not present a truly acute course. In one case observed by Fitz, the disease lasted sixty-one days. With the aid of Fitz's monograph, it is possible to make a diagnosis of pancreatitis during life. As almost constant symptoms it may be stated that as a rule strong and corpulent persons, who work hard and enjoy the best of health, are suddenly seized with bilious

vomiting, with vertigo, anxiety, and great prostration. The abdomen begins to swell, then comes as a sure sign of pancreatitis a burning pain in the left hypochondrium.

Dr. S. Rosenberg asked concerning the behavior of the urine during the disease. It is known that after complete extirpation of the pancreas, diabetes regularly appears.

Dr. Altmann has performed autopsies on three cases, all men. The first was very similar to the one described by Langerhans, only the inflammation was more hemorrhagic; the mesentery was filled with nodules of fatty necrosis. The second case, caused by a traumatism received in travelling, showed a similar condition. In the third case, the pancreas was chiefly necrotic. In this last case there was no sugar in the urine.

Dr. Langerhans: In the case demonstrated there was no sugar in the urine. Also, in Fitz's collection, no data are given concerning diabetes.

Dr. Ewald has recently held autopsies on two cases of complete destruction of the pancreas by carcinoma. During life, the urine was carefully examined for sugar; but no sugar was found throughout the whole course of the disease.

ELEPHANTIASIS PALPEBRARUM.

Dr. Liebrecht: the eyelids are converted into tumors, which end sharply at the edges of the eyelids. They have a firm œdematous consistence, so that the pitting upon pressure remains for some time. The skin is not very tense, the subjacent bones seemed not to be thickened. In regard to etiology, Liebrecht supposed that there was a leukemia of the eyelids (Leber), though the investigations instituted for this purpose showed that there was no such condition. Further, as an etiological factor, it was to be borne in mind that the patient had in the last year suffered six or seven times from erysipelas, especially of the nasal cavity. Against this origin of the swelling must be considered the exacerbation of the same in the interval between attacks, and further, the definite

limitation and confinement to both the lids, while after erysipelas both the forehead and nose remained swollen. Histological examination of the swelling has only shown that it consists mainly of fibrillar connective tissue with numerous round cells. Liebrecht is inclined to regard the affection as a chronic inflammatory process.

Dr. G. Behrend: Such thickenings of the eyelids are sometimes described as occurring regularly from recurrent inflammations, quite similar to the way in which elephantiasis is produced in the tropics.

CORRESPONDENCE.

VIENNA LETTER.

[Our Regular Correspondent.]

SARCOMA OF BOTH THE OVARIES.

At a recent meeting of the Vienna "Obstetrico-Gynæcological Society," Prof. Weinlechner brought forward an interesting case of sarcoma of both the ovaries, which he had successfully operated upon by laparatomy. The patient, a woman 21 years old, had previously always enjoyed perfect health. Menstruation occurred for the first time at the age of 15 years, and was always regular. The woman was never pregnant. For more than a year she felt ill; she suffered from pains in the abdomen, the periods became scantier and less frequent, and, at length, in February, 1888, an abdominal tumor was found to exist by the attending physician. On the 15th of April, 1889, the patient was admitted into the clinic of Prof. Weinlechner, in the General Hospital, for the purpose of having her tumor operated upon. On examination, Prof. Weinlechner found in the median line of the abdomen on palpation, a solid tumor which reached from the symphisis to the umbilicus. On both sides the swelling reached as far as the mammillary line; on the left side it also presented knobby prominences. On vaginal examination, a solid

elastic and smooth tumor of the size of an orange was detected in Douglas's pouch; downwards it went as far as the level of the uterine orifice, it could also be felt through the rectum. On the 24th of April, laparatomy was performed; the incision was carried as high as the umbilicus and almost reached as far down as the symphisis.

The upper part of the tumor, which was solid and knobby, could be easily detached. After two long adhesions to the epiploön had been destroyed by means of the actual cautery, the broad pedicle of the tumor, which contained the oviducts and a plexus of veins, was ligatured and removed by means of scissors. This tumor had sprung from the right ovary. The removal of the second tumor from Douglas's pouch was a little more difficult. The left end of the oviduct was attached to it. The tumor thus belonged to the left ovary. Its pedicle was first ligatured with silk, and then removed by means of the knife.

The ovarian sarcomata, which Prof. Weinlechner had hitherto operated upon, always had some adhesions to the pelvis and various organs of the abdominal cavity; their removal was for this reason very difficult and their prognosis unfavorable. The lapses occurred very frequently, and, at length, death supervened. In the case under consideration, however, the tumors were almost free, and it was thus to be hoped that the cure was a radical and permanent one, provided that metastases were not yet present.

Prof. Charles Braun confirmed the statements of Prof. Weinlechner as to the bad prognosis of the above mentioned cases, and said that he knew of only one certain case of ovarian sarcoma which had hitherto remained without relapses for ten to eleven years.

THE IMPORTANCE OF THE GONOCOCCI IN DIAGNOSIS AND TREATMENT.

At the Congress of the German and Austrian Dermatologists, held at Prague, Prof. Neisser, of Breslau, delivered a lecture on the importance of the gonococci for

diagnosis and therapy. The lecturer wished to answer the following three questions:

1. Is the gonococcus the virus of gonorrhœa? The constant occurrence of the gonococci in all diseases with the clinical symptoms of gonorrhœa is an evidence of this supposition, Prof. Neisser neither denied the existence of the urethritis as being due to mechanical or chemical irritation, nor the existence of those forms of gonorrhœa, which were produced by other bacteria (Bockhart); but all these affections had a different clinical course, and, owing to their rarity, they were of no practical importance. The fact that gonococci had been found in all cases of colpitis and those of blenorrhœa of the conjunctive, which corresponded to the clinical symptoms of gonorrhœa, nay, that gonococci could even be detected in blenorrhœa of the rectum, was a proof for the ætiological importance of the gonococci. The question, however, arose whether only gonococci were present in the cases of blenorrhœa?

In the case of the acute gonorrhœa in men this was the rule, but occasionally only gonococci were found in urethritis in women, and in blenorrhœa of the conjunctivæ, from which the conclusion might perhaps be drawn that the growth of the gonococci was favorably influenced in the pus of gonorrhœa.

In complications of gonorrhœa, however, the presence of other microörganisms was also proved, but the particular clinical character of this "mixed infection" was an evidence of the specific character of the gonococci.

On the other hand, Drs. Lustgarten and Mannaberg had detected diplococci in the healthy male urethra which bore an external resemblance to gonococci, but differed from these by the fact that they grew on the usual culture-soil, whereas, the gonococci only thrived on blood-serum. This difference was of great importance in differential diagnosis, but only in the acute cases. In the chronic cases, however, the gonococci were only scanty, so that

the differential diagnosis could be made only with difficulty.

2. The second question was as to why the number of the gonococci, which was found in the microscopical specimen, occasionally did not correspond to the intensity of the suppuration. It had to be borne in mind that the suppuration represented the reaction of the mucous membrane to ward the gonococci, and that this reaction was not always the same. We knew that the second and third infections, in spite of the numerous gonococci, were attended with a much less diminished flow from the urethra than the first one.

Finally, the question was as to whether the gonococci were not equally observed in other affections. It had also to be emphasized that the diagnosis of the gonococci could only be made by such physicians as had sufficient experience in this subject, as various characteristic signs, such as the size, form, properties of coloring, intracellular position, and the cultures had to be taken into account in such cases. As to the intracellular position, Prof. Neisser had injected various kinds of diplococci into the urethra of gonorrhoic patients, and though the immigration of the gonococci into the cells took place only on the surface of the mucous membrane, he found but few diplococci in the cells of the pus, but he never could see that complex which was characteristic of the gonococci.

Is, then, the gonococcus of importance in differential diagnosis?

It is of importance in some cases of balanitis and from a forensic point of view; also, in those cases in which, after gonorrhœa is cured, but returns on account of some irritation, and suppuration recurs after some weeks; it is evidence of importance in the case of urethritis and catarrh of the cervical canal in women in all chronic cases of urethritis, and in the examination of prostitutes. If the necessary examinations were made carefully and for a long time, and perhaps also by the aid

of artificial irritation, the differential diagnosis could be made in each of the above mentioned cases.

The presence of the gonococci, however, was also a reason for another method of treatment. We must remove infections, and, at the same time, spare the mucous membrane quite rigorously. We must act rapidly and immediately, but with such remedies as kill the gonococci without injuring the mucous membrane to a high degree. We must interfere as early as possible in order to prevent the gonococci from immigrating into the deeper parts of the epithelium, and this so much the more that the gonorrhœa could the more easily be cured in the acute stage. We should not discontinue treatment at too early a date, and in this respect the search for gonococci indicates to us the right moment for doing so.

ON THE KNOWLEDGE AND THE HISTORY OF THE SOCALLED WEIL'S DISEASE.

At a recent meeting of the Society of German Physicians, of Prague, Dr. M. Weiss read a paper on the subject under consideration. It was already in 1881 that Dr. Weiss had directed attention to our epidemic of pyretic fever observed by him some years before, which, owing to its peculiar course and the simultaneous affection of the kidney and spleen, he pronounced an infectious one. In 1883 and 1886 Landouzy and Mathieu, respectively, had observed a case which, from a clinical standpoint, bore a great resemblance to typhoid fever, and was, moreover, characterized by the presence of icterus, nephritis, and pains in the calves. They gave it the name of "typhus hépatique bénin." It was not, however, until the work of Weil appeared that the affection under consideration became generally known, it has since been introduced into literature under the name of "Weil's disease."

The type of Weil's disease hitherto comprised only a purely clinical notion, and, in a few words, could be defined as an acute febrile infectious disease, which came on suddenly without any certain ætiology, and was accom-

panied by icterus, swelling of the spleen, and cerebral, renal, and intestinal symptoms. The duration of the affection was short and the course favorable.

Only those cases could be considered as representing Weil's disease in which the above mentioned complex of symptoms was present, but in which a simple catarrhal icterus, acute atrophy of the liver, intoxication, septicæmia, and all other infectious diseases were excluded with certainty. Starting from this point, a great number of cases published under the name of Weil's disease had to be eliminated.

ON THE LOCALIZATION OF MERCURY IN THE ANIMAL ORGANISM AFTER THE INTOXICATION WITH SUBLIMATE.

At a recent meeting of the Imperial Royal Society of Physicians, of Vienna, Prof. E. Ludwig read an interesting paper on this subject. The reason for which the respective examinations had not hitherto been carefully carried out lay in the fact that we had no reliable method for a quantitative determination of mercury in fluids. The principle on which Prof. Ludwig based his experiments was that copper or zinc, etc., when added to a fluid containing mercury, formed an amalgam with the latter. A thorough intermixture of both the substances was, however, necessary. For this purpose the substances were pulverized and thoroughly mixed with the fluid. In this way even very small quantities of mercury could be determined.

These experiments were carried out on the organs of the cadaver in such a way that they were boiled with a 2 per cent solution of hydrochloric acid. During the boiling process mercury became combined with a part of the sulphur contained in the albuminoids, which combination was swimming in the fluid in the form of small particles. When the chlorate of potassium was added, the sulphide of mercury became decomposed; the filtered mass was mixed with pulverized zinc, and in the amalgam which was thus obtained, the metallic mercury could be exactly determined as to its quantity.

The lecturer furthermore said that the result of the administration of sublimate depended very much on the manner in which it was administered. When it was administered to the animals in a fluid form, death occurred in twenty-four hours; while, when sublimate was enclosed in a sausage and thus administered, several grammes of sublimate, owing to its being enclosed in fat, left the digestive tract without being absorbed.

As to the localization of the mercury, the kidney presented itself as the place of the greatest predilection. A hundred grammes of the substance of the kidney contained 225 milligrammes; the liver, 87; the spleen, 38; the diptheric membranes of the large intestine, 53 milligrammes; and the brain contained the hundredth part of a milligramme.

Prof. Reder said that several years ago he had carried out experiments on the resorption of mercury, in conjunction with Dr. Schneider. Half a gramme of sublimate a day was administered to a patient for ten days, and during that period all the secretions and excreta—saliva, urine, fæces—were examined for mercury. The result was that out of the five grammes of sublimate more than four grammes passed with the stool in the space of four weeks; a large portion of the rest was contained in the urine; in the saliva there was absolutely no mercury. Experiments with calomel were also made. More of it was resorbed than of the sublimate. The largest quantity again passed with the stool, a rather large quantity with the urine. In the case of a patient who had died from endocarditis, a short time after he had undergone an antisyphilitic treatment with mercury, the presence of mercury could be proved in no organ except the kidney.

Prof. Billroth asked if the assertions that mercury could be obtained from the macerated bones of such cadavers were not true.

Prof. Reder and Prof. Kaposi said that this, if it was really found, was derived from the injections of the lymphatic vessels with mercury by anatomists.

Prof. Ludwig remarked that it was quite impossible to prove the existence of mercury in the bones. The quantities absorbed were too small. If we examined all the organs of those poisoned with sublimate, the result is that the chief quantity is to be found in the stool, whereas the greatest quantity passed through the intestine without being absorbed.

Prof. Billroth: It would be interesting to know why certain organs absorb a certain substance, while others do not. The question of the specific effect of the medicaments was probably dependent on the localization of a certain substance in one organ or another. It was, however, an open question whether we had to deal in these cases with chemical affinities or with mechanical processes.

Dr. Gärtner mentioned the respective experiments of Heidenhain. When a solution of the indio-sulphate of sodium was injected into the venous system of an animal, the coloring substance was detected in some organs in large quantities in a few hours, whereas other organs were quite free from it. The epithelia of the uriniferous tubules had a dark blue color, and contained much of the coloring substance; no trace, however, of it was to be found in the glomeruli.

The property of the liver, viz., to attract certain chemical compounds, particularly poisonous substances, had recently been proved by experiments. At the last International Physiological Congress held at Basel, Dr. Roger delivered a lecture on the "Protecting Property of the Liver," in which he showed that this organ withdrew from the circulatory system mercury, iron, and phosphorous compounds as well as some vegetable poisons, whereas, other substances were permitted to pass unchanged. As crystalloid bodies—if they were conveyed to the intestinal tract—were chiefly absorbed by the venous system, they had to pass with the blood of the portal vein through the liver and could be kept back there. It was, indeed, very strange that the mercury, as a remedy, should be more

efficacious if it was conveyed to the organism, not through the intestinal tract, but through the skin. Dr. A. Paltauf pointed out that the potassium in the case of poisoning with metals had an analogous behavior. Also in these cases, the uriniferous tubules, and not the glomeruli, presented the most severe changes. The various metals which produced nephritis also had an analogous effect. It was particularly in the case of poisoning with chromium that they had an opportunity of pursuing the course of the symptoms in a quite typical way. Dr. Paltauf, from this, drew the conclusion that it was rather the physiological property of the tissue than the sort of poison which determined the localization.

BICARBONATE SODA FOR POISONOUS BITES.

New Orleans Medical and Surgical Journal—I read with pleasure the correspondence of Dr. S. C. Harvy, of Alabama, on the use of bicarbonate of soda for the bites of snakes and insects. I never used the soda in snake bites, but have for many years used it in the bites of insects and the stings of bees, and it has always proved a sure remedy in those cases.

I have never used any other treatment for snake bite than olive oil. It has given in all cases prompt relief; always a sure and perfect cure. My first case was on July 27, 1850, in Elk county, Penn. A boy about 10 years old was bitten by a rattlesnake while out with his father picking huckleberries. The father carried the boy home on his back, and sent for me. Remembering what Gibson said as to the use of olive oil in snake bites, I placed a large bottle of pure virgin olive oil in my satchel and visited the boy, and found his entire body, head, face, and limbs, terribly swollen, and the tongue protruding from the mouth; could not swallow. I at once filled a tablespoon with olive oil, and placing the spoon in the mouth with much tronble and effort, pressed it back to the back part of the tongue, and the patient swallowed the oil. I then

scarified the wound, and packed it with olive oil, and then gave more oil by the mouth, which he swallowed more easily. I thus gave the oil in tablespoonful doses till I had given six spoonfuls, when my patient became quiet, breathed easily. and could swallow without any trouble. The patient was soon discharged perfectly well, and lives at this time a healthy farmer. I never used any other treatment for the bite of snakes than olive oil, externally and internally. Since that time my practice has been very extensive in the counties of Elk, Clinton, Cameron, Clearfield, along the creeks and rivers; also skirts of the Alleghenies.

I have treated many cases and have a record of twenty-five very bad cases, all of which were treated by the free use of olive oil internally and externally. I have never used or directed any other treatment. The inhabitants of locations where rattlesnakes and copperheads are found always keep a good supply of olive oil in their houses, and when bitten never call a doctor, but use olive oil freely, which in every case gives full and complete relief. Therefore, my experience for the past thirty-nine years has fully proven the correctness of the treatment with olive oil of Dr. Miller, of South Carolina.

I will here quote from William Gibson, M. D., late Professor of Surgery in the University of Pennsylvania. (See Gibson's Surgery, vol. 1, p. 88): "The use of olive oil has been highly extolled by many writers as a remedy for the bites of poisonous serpents."

Dr. Miller, of South Carolina, relates the case of a man who was bitten in the sole of the foot by a very large rattlesnake. Although very little time elapsed before he reached the patient, "his head and face were prodigiously swelled, and the latter black. His tongue was enlarged and out of his mouth; his eyes as if starting from their sockets; his senses gone and every appearance of immediate suffocation. Two tablespoonfuls of olive oil were immediately given and gotten down, but with great difficulty.

The effect was almost instantaneous; in thirty minutes it operated freely by the mouth and bowels, and in two hours the patient could articulate, and soon after recovered. The quantity of oil taken internally and applied to the wound did not exceed eight spoonfuls." In the course of twelve years Dr. Miller has met with several similar cases in which the oil has proved equally successful. Olive oil has been used for various medicinal purposes in all ages. It was mentioned by Monsieur Pomit, chief druggist to the late French king, Louis XIV, to which he adds his father's observation, fourth edition, 1748. He says: "It is a natural balsam for the cure of wounds, being beat up with wine. It is of wine and this oil that the Samaritan balsam, with which the Good Samaritan in the Gospel healed the wounds of the traveler, was made, and it is a medicine in use at this day." It was and is now freely used internally in many cases with marked success. I also use it with marked success in catarrh of the stomach and bowels; also in gall stones, and find it of great use in diseases of the rectum, etc.

C. R. Earley, M. D.

Ridgway, Pa., Dec. 7, 1889.

Leading Articles.

MEDICAL SCHOOL FOR COLORED YOUTHS IN NEW ORLEANS.

The New Orleans *Picayune* of Dec. 8, 1889, contained the following interesting item: "Summit, (Miss.) *Sentinel*: Dr. I. E. Mullen, a worthy colored physician of Holmesville, was in town last week en route to New Orleans, where he goes to attend to his duties as acting dean of the Colored Medical College there. He will remain in New Orleans for several months. We wish him much success in his chosen profession."

It had been rumored for some time that a colored medi-

cal school was going to be established in New Orleans, but this was the first direct information that we received concerning the actual existence of the school. In order to learn something about the new school, we called upon the Rev. L. G. Adkinson, President of the New Orleans University, who courteously imparted the desired information.

There are at present four universities in New Orleans devoted to the education of persons of color—New Orleans, Leland, Southern, and Straight. Both sexes are allowed to avail themselves of the advantages offered. The New Orleans University is, we believe, the one most thoroughly organized and advanced, and its officers, or administrators, in adding a medical department, are but carrying a progressive policy.

The faculty of the new school, as set forth in the *annual catalogue for the sixteenth year of the New Orleans University* 1888–89, is composed as follows: Rev. L. G. Adkinson, A. M., D. D., President; G. W. Hubbard, M. D., Acting Dean and Lecturer on Hygiene; J. E. Mullon, M.D., Professor of Anatomy and Physiology; Harvey Clements, B. S., Professor of Chemistry; T. A. Walker, M. D., Lecturer on Gynæcology. Dr. Mullen is the only colored member of the faculty.

As is stated in the announcement, the first annual session of the medical department opened on Nov. 4, 1889, to continue for twenty weeks. "A graded course of study of three years has been established, and the instruction will be thorough and practical. Additions will be made to the faculty as the number of students increases, and as circumstances may demand. A set of anatomical and physiological models has been ordered from Germany, and suitable chemical apparatus will be provided for practical laboratory work."

The following are the requirements for admission: "Applicants must be at least eighteen years of age, of good moral character, and pass a satisfactory examination in arithmetic, geography, grammar, reading, writing,

spelling, and the elements of physics. The right is reserved to refuse admissions to all persons who have assumed the title of M. D., without having received a diploma from some respectable medical college, or who have been guilty of any unprofessional conduct. Graduates of other recognized colleges and normal schools will, on presenting their diplomas, be admitted without examination. Some knowledge of Latin and natural scienee will prove to be of great advantage, and students are earnestly advised, if possible, to take an academic or collegiate course before commencing the study of medicine."

COURSE OF STUDY.

FIRST YEAR.

During the first year's attendance students will be required to recite daily in anatomy, chemistry, and physiology, and work two hours a day in the chemical laboratory for ten weeks.

SECOND YEAR.

Daily recitations in anatomy, materia medica, theory of medicine; analytical and medical chemistry, with two hours' work a day for ten weeks in the laboratory; prescription writing, elements of pharmacy, toxicology and histology and microscopy.

THIRD YEAR.

Surgery, gynæcology, theory and practice of medicine, medical jurisprudence, hygiene, obstetrics, ophthalmology, otology, laryngology, dermatology and electro-therapeutics.

REQUIREMENTS FOR GRADUATION.

1. To graduate, the candidate must be at least 21 years of age.

2. He must have attended some regular medical school, at least three sessions of not less than twenty weeks each, the last of which must have been in this institution.

3. He must pass a satisfactory written examination in all the branches laid down in this course, including the outline of Bible history and doctrine, and present an acceptable thesis on some medical subject.

4. He must have paid all college dues, including the graduating fee.

FEES.

Tuition, per session, in advance.....$25.00
Tuition for entire course..... 75.00
Graduating fee..... 10.00
Chemicals used in the laboratory at cost.

NURSE-TRAINING COURSES.

NON-PROFESSIONAL—FIRST YEAR.

FALL TERM.—Study as to care of the sick-room—Ventilation, temperature, furnishings. Disinfectants in infectious and contagious diseases. Philosophy of hot and cold water baths, and how to administer them in all diseases.

WINTER TERM.—Study of applications—Cupping, Enemata, suppositories, poultices, counter-irritants, lotions to relieve pain. (Massage and Swedish movements).

SPRING TERM.—Instruction in fever nursing—Typhoid, malarial, scarlet, etc.; smallpox, measles, mumps, diphtheria.

SECOND YEAR.

FALL TERM.—Method of ascertaining and noting pulse, temperature, and respiration. Complete analysis of the urine. Administration of anæsthetics. Surgical nursing. Application of bandages and splints.

WINTER TERM.—Preparation and method of serving food. Preventing and dressing of bed sores and arranging positions. Method of stopping hemorrhages. What to do in emergencies—drowning, sun-stroke, stroke by lightning, burns, bites, bleeding.

SPRING TERM.—Monthly nursing. Conduct of nurse during the three stages of parturition. Duties of nurse during the entire puerperal state. Care of infant. Necessary qualifications of a wet nurse. Family hygiene.

PROFESSIONAL.

THIRD YEAR.—To complete a course preparatory to professional nursing, the following additional year of study is required:

Special anatomy and a thorough course in midwifery. Chemistry.

Materia Medica, therapeutics, toxicology, theory of poisons.

Mr. Adkinson informed us that the University had secured $10,000 for the Medical Department, and that in a short time other funds would be obtained, which would bring the total to about $50,000.

Institutions of learning, like many others, require a certain amount of financial strength in order to enable them to thrive. How much does a modern Medical School require in order to fulfill all the scientific requirements of the age? In an annual address delivered by Prof. S. E. Chaillé, Dean of the Medical Department of Tulane University of Louisiana, at a recent annual commencement of the department, he said that the time had long passed when fifty or sixty thousand dollars could fit out a first class Medical College; the branches of medical science had advanced so much, and had so increased in number, and laboratory work had become so prominent a feature in medical teaching that a modern college would require an initial capital of not less than one hundred and fifty or two hundred thousand dollars in order to equip it fully.

The new department of the New Orleans University began with a class of about ten students. This is an humble beginning, but, in 1844, the first class of the medical school which afterwards became incorporated with the University of Louisiana, contained only ten students. From that small beginning see to what great proportions it has since grown.

The new school has no dissecting room as yet, and there is no dissecting. As a thorough knowledge of anatomy is the foundation of all medicine, we can hardly see how the officers of the New Orleans University can compensate for the lack of the best way of teaching this all important branch, namely, by practical dissecting.

There is no clinical teaching. No hospital is attached to the institution, or under its control. This defect is well nigh vital, for it is manifestly impossible for a newly fledged *medico* to recognize a disease when he has not had the practical training that would enable him to form independent opinions of his own.

Medicine has become so much specialized that nearly every medical college contains a number of professors who devote to special branches which were formerly parts of general medicine. We see no provision for specialties in the new faculty. The college has, as yet, no anatomical museum.

While we respect the efforts of the gentleman who honors the New Orleans University by being its president, to advance the interests of his institution, we feel compelled to say that, at present, the organization of the faculty is imperfect, and the equipment greatly deficient.

It is not a great many years since the colored race in this part of the world was plunged in deep slavery; in less than a generation the descendants of former slaves have advanced so far in all directions that it is contemplated to establish a school for the instruction of one of the highest branches of education, medicine.

In New Orleans people of color enjoy a degree of freedom not found in many other localities, and nowhere north of the Ohio river. They are carpenters, bricklayers, mechanics, and anything else that they choose to become, and they work side by side with white workingmen, and get the same pay for the same work. It is not for us to dwell upon certain political issues kept alive by persons who have nothing else to live on, and who are interested in keeping other parts of the country in ignorance of the actual condition of the negro in our locality. We are concerned only with the medical aspect of movements looking to the amelioration of the colored race.

We welcome any steps taken to raise the standard of education among all people. It has been truly said that ignorance is better taught than fought. A regiment of school teachers will do more toward solving the perennial negro question than a whole army of soldiers.

When it comes to introducing a school for the education of youths in medicine, we have a right to challenge it, not on grounds of race prejudice, for that should not influence

the opinions of members of a liberal profession, but as good citizens. There are at present several colored physicians practising medicine in New Orleans, one of whom received a thorough training in the schools of Paris, and enjoys the respect of all of his white confreres. Does the new department fulfill all, most, of the requirements of a good medical school? An examination of the present standing of the school will not allow us to answer the question in the affirmative.

AN INTERNATIONAL SYSTEM OF SANITATION.

The Pan-American Congress, now holding its sessions at Washington, D. C., will mark an important era in the history of the relations of the Three Americas. Its great object is to increase the trade relations of our own republic with the republics to the south of us. With that, as medical men, we have nothing to do. At a meeting of the Congress held on Nov. 30, 1889, Dr. John B. Hamilton, Surgeon General of the Marine Hospital Service, submitted a paper on quarantines and the sanitation of ships.

His paper deals with the most effectual means of limiting and eradicating epidemic diseases. "It is essential," he says, "that certain international refuge quarantines shall be established and maintained as near as practicable to the definite routes of travel, and be completely equipped. To these stations all infected vessels should be obliged to repair before final entry into the country of destination. The certificate of disinfection and cleanliness of the officer in command of such station should entitle the vessel to enter in free pratique, and at all ports sanitary authorities should have the right to send any suspected vessels to the nearest international refuge station."

Dr. Hamilton suggests the following places as locations for the proposed refuge stations:

On the coast of the United States—one at Tortugas Keys, one at the Chandeleur Islands.

On the Central American coast—one near Colon (Aspinwall).

On the Caribbean coast—one near La Guayra.

For the Antilles—one near Port au Prince.

For the Brazilian coast—one at the mouth of the Amazon, near Para.

For Uruguay and the Argentine Republic—one at the mouth of the Rio de la Plata.

For the Chilian coast—one near Valparaiso.

For the Peruvian coast—one near Callao.

For the United States of Colombia—one near Panama.

For the western coast of Mexico—one near Acapulco, one near San Diego, California.

For the western coast of the United States, in addition to the one at San Diego before mentioned—one at San Francisco, one at Port Townsend.

This proposition of Hamilton is an outcome of the spirit of the age. In former times, when men's minds could not overstep geographical boundaries, there was no such thing as international law. No country had any rights that other countries were bound to respect. Increasing commercial intercourse and rapid interchange of thought softened men's natures, and made them feel that there were obligations and duties among nations as among individuals. The recognition of the rights and duties of nations forms a most interesting chapter in the history of the moral evolution of men. Where small affairs were concerned, it did not require a great amount of mental effort to distinguish between right and wrong. The recognition of the rights of one's neighbor soon gave rise to a moral code. In great affairs, where the limited or untried intelligence of men could not clearly see where one's nation's rights ended and another's began, there was a certain margin in which it was pardonable to err. Increasing knowledge constantly makes this margin narrower, so that at the present time it is a sin against the

human race for a nation to permit a pestilence constantly to maintain a foothold in its midst.

At the last meeting of the American Public Health Association, a very wise suggestion was put forth by one of the delegates. In speaking of yellow fever he said that it would be a good thing to call the attention of the Spanish government to the fact that the sanitary condition of Cuban ports was a constant menace to the Gulf States; and further, to request that government to do its very plain duty by cleaning Havana and the other ports.

At this distance, it is difficult to say just where the blame for the insanitary condition of these ports belongs. It certainly can not be that the government is unable to obtain enlightenment upon the scientific aspect of the question, for the members of the medical profession in Cuba are the peers of those in any other part of the world.

If we might venture an opinion, we would say that the civil officials are entirely responsible for the persistence of yellow fever in Cuba.

Dr. Hamilton's proposition is, so far as we know, the most comprehensive system of international sanitation that has yet been proposed. It is indeed most fortunate that the plan was ripened just at the time that it could gain an audience such as no other combination of circumstances could bring together. The Pan-American Congress is composed of some of the brightest men of the western hemisphere, sent by the countries most directly interested; and as the interchange of views is very rapid, it may be assumed that the Spanish American republics will soon have Dr. Hamilton's plan presented for action at as early a date as the cumbersome workings of law-making will allow.

In case these refuge stations should be located at points selected according to the judgment of the governments interested, we would like to see a *thorough system of sanitation uniformly applied*. Such a system can be found only at the Louisiana quarantine station, on the lower Mississippi river. We are not prompted to speak thus by vanity

or State pride, but experience has shown and competent witnesses have testified that our system, known as the Holt system, is the most thorough and efficacious system of maritime sanitation ever devised.

We earnestly hope that Hamilton's idea will meet with a favorable reception at the hands of the interested nations. In adopting the plan, our neighbors and ourselves will be taking the advanced step, counseled by an intelligent conception of international duties, and thus show to the world that our movements are prompted by a sense of duty to our neighbor, and not by a blind impulse of self-interest.

A VENERABLE MEDICAL SOCIETY.

The man with a past is always an object of interest. History, traditions, lend to an individual or a community a charm which sways all people. The old scientific bodies of Europe inspire us with a feeling of respect for their weight of years and the things that they have done. Our own young country can not rival countries on the other side of the water in this respect, but we can point to some organizations which for us are very old, and have, in their time, done good work and are still doing it.

On December 9, 1889, the South Carolina Medical Society celebrated its centennial. A century of useful existence is something to be proud of. This society is, according to the *Charleston News and Courier*, one of the oldest organizations of the State. Its history is succinctly given in the words of Gen. Edward McCrady, Jr., who, in an address to the graduating class of the Charleston Medical College a few years ago, said:

"A Medical Society for the advancement of the healing art was formed in 1789, and consisted of the following members; Peter Fayssoux, Alexander Barron, Tucker Harris, David Ramsay, Andrew Turnbull, Isaac Chanler, George Logan, George Carter, Robert Wilson, Elisha Poinsett, James Lynch, George Hahbaum, John Budd,

and Thomas Tuder Tucker. This society was incorporated in 1794, and from it three institutions emanated of great public utility: the Humane Society, for the purpose of resuscitating persons nearly drowned: the dispensary for the medical relief of the poor in their own homes, who were attended by the young physicians when admitted members of the Medical Society, and the Botanical Garden, which ultimately developed into the Botanic Society, incorporated in 1805.

"Dr. Ramsay tells us that prior to the time at which he wrote, 1808, three attempts had been made to regulate the admission of candidates for practising medicine, but all had failed. But a few years later, in 1817, an act was passed by the legislature prohibiting any person to practise medicine without a license, and constituting the medical faculty of South Carolina a board to grant licenses in Charleston, and establishing a special board for the purpose in Columbia, of which Dr. Edward Fisher was the chairman.

"In the year 1822 Dr. Cooper, the eminent president of the South Carolina College, read to the medical board at Columbia an address in which he pointed out most forcibly the advantages of an immediate attempt to establish a medical college in this state. The address was enclosed in a communication from the Columbia board to the Medical Society in Charleston, which was formed here as corresponding board for the examining and licensing to practise under the act of 1817. The Medical Society, struck with the view of the matter taken by President Cooper, but differing with him as to the locality, sent up a petition to the legislature praying for the incorporation of a medical society in the city of Charleston, and for a sufficient appropriation for building and transient salaries of professors. The memorial was unsucessful, doubtless because of the material assistance asked for.

"Drs. Frost, Ramsay, and Dickson, as early as 1821, had recommended the establishment of a medical college. At Dr. Dickson's suggestion the Medical Society in 1828 attempted to induce the trustees of the Charleston College to join in the establishment of a school, to be connected with that institution, as Dr. Cooper's plan had been to connect the school with the South Carolina College, but the trustees of the Charleston College declined the alliance.

"The committee having the matter in charge now peti-

tioned the legislature to grant them the power of granting diplomas, and leaving out all mention of appropriations for money.

"The legislature, showing their appreciation of science and learning that would cost the state nothing, promptly passed the necessary act in December, 1823.

"The Medical Society, in whose name the memorial had been presented, and which was thus authorized to organize a medical school, could scarcely have criticized the terms of their grant, for the society itself was alike chary of aiding the advancement of society 'at its own expense.' The society in its turn would only organize the college on the 'fair understanding that the professors elect will take upon themselves the burden of the expense of the establishment.'

"The faculty, which consisted of Dr. J. E. Holbrook, professor of anatomy; Dr. Jas. Ramsay, professor of surgery; Dr. S. H. Dickson, professor of practice of medicine; Dr. T. G. Prioleau, obstetrics; Dr. Ravenel, chemistry and pharmacy; Dr. H. R. Frost, materia medica, and Dr. J. M. Holbrook, anatomy, were elected by the Medical Society."

The college thus established by the Medical Society, which will soon celebrate its centennial, prospered beyond the most sanguine expectations, and since its organization has given the world some of her great physicians, and is today in an excellent and prosperous condition.

The celebration which took place on Dec, 9 comprised all the ceremonies usually observed on such an occasion, including a feast of speeches and a flow of wine.

Among the names of the worthy founders of the Medical College we find that of Dr. S. H. Dickson. He has long been gathered to his fathers, but his name and virtues are preserved in his grandson, our esteemed confrère, Dr. Henry Dickson Bruns. We congratulate South Carolina on the possession of so compact and well organized body of medical men. We sincerely hope that the profession in our own State will strive to emulate that of South Carolina, and that the present State Society will give the future historian materials for eulogy.

THE CITY EYE, EAR, NOSE, AND THROAT FREE HOSPITAL.

Another monument to the benevolence of the people of New Orleans is the new charitable institution which has recently been opened to the public. The new institution began to take shape in July, 1889, when a number of wealthy men met for the purpose of organizing a free special hospital, where only the diseases of the eye, ear, nose, and throat would receive attention. The temporary organization, adopted at an informal meeting, gave way to a board of trustees, with the following officers: Mr. Wm. B. Schmidt, president; Col. W. G. Vincent, first vice president; Mr. Henry Gardes, second vice president; Mr. W. R. Stauffer, treasurer; Mr. Jos. A. Hincks, secretary.

The new hospital is located at No. 23 South Rampart street. The medical officers are Dr. A. W. de Roaldes and Dr. S. D. Kennedy; the former has charge of the cases of ear, nose, and throat disease, and the latter of eye diseases.

The bulk of the work of planning and adapting the building to the needs of a hospital has, of course, fallen upon the medical officers, and the manner in which it has been done reflects credit both upon their zeal and intelligence. The work was substantially completed when the hospital was opened on Dec. 4, 1889. As in all large institutions, a few minor matters had not been disposed of, but since the opening everything, large and small, has been provided for.

At present, the hospital has only an out-clinic, but the trustees contemplate furnishing some rooms, of which there is more than a sufficiency, so as to treat in-door patients.

The vital part of an institution of this character is its surgical ormamentarium. The outfit in the City Eye, Ear, Nose, and Throat Free Hospital is complete. No similar institution, we make bold to say, can surpass it in modern appliances. To enumerate the instruments is unnecessary.

They comprise all the appliances that modern advances in the medical sciences have placed at the disposal of the specialist.

The necessity for such an institution is best shown by the way in which the people have appreciated it. The day after the formal opening there were sixteen patients; in a few days the number reached seventy or eighty.

The first article of the charter contains a short but important sentence. It closes with the words: "And also to afford facilities for the studying of these diseases and obtaining special instruction therein." It requires no arguing to prove the value of practical work in a course of medical training. The Charity Hospital of New Orleans has played a great part in the instruction of the medical men of the southwest. That grand old institution is regarded by our physicians with tender respect and gratitude. The course of time and the increase of knowledge in special lines of medical work made the Charity Hospital somewhat cramped, although several wings have been added to the buildings. The new hospital will relieve the great pressure upon the Charity Hospital to a great extent, but the material thus obtained will not be lost for purposes of clinical instruction. It is indeed a source of congratulation that the Board of Trustees were moved by so wise and liberal a spirit.

The Board of Trustees is composed as follows: Jos. A. Shakespeare, Mayor of New Orleans; James G. Clark, A. H. Hanemann, Albert Baldwin, Joseph Bayle, E. F. Del Bondio, Dr. A. W. de Roaldes, Henry Gardes, John T. Hardie, E. J. Hart, James T. Hayden, Isidore Hernsheim, Jos. A. Hincks, Frank Howard, W. W. Howe, A. C. Hutchinson, Dr. S. D. Kennedy, G. A. Lanaux, Peter Labouisse, Adolphe Meyer, John A. Morris, Bernard McCloskey, G. W. Nott, George Pandelly, George R. Preston, Henry Rice, John Rocchi, W. B. Schmidt, C. M. Soria, Walter R. Stauffer, W. G. Vincent, R. M. Walmsley, Charles M. Whitney.

Abstracts, Extracts and Annotations.

MEDICINE.

ON THE VALUE OF LAVERAN'S ORGANISMS IN THE DIAGNOSIS OF MALARIA.

By Prof. William Osler, M. D.

The attitude of the profession on the question of micro-organisms of malaria is one of judicious skepticism. Between the bacillus malariæ of Klebs and Tomassi-Crudelli, and the protozoa described by Laveran, the average doctor can not be expected to decide; but even among workers and teachers there is by no means unanimity. So far as I know there has been no confirmation of the observations of the first named authors on a specific bacillus in the disease. It is far otherwise with the organisms described by Laveran, whose work has now been confirmed by competent observers in Italy, America, and India. I do not know of a single clinician or pathologist, living in a suitable region, who has really worked at the subject, who has not been convinced of the truth of Laveran's statements. Doubtless many have had my experience. In 1886, at the meeting of the "Association of American Physicians," when Dr. Councilman presented a summary of Laveran's views, I (speaking out of the fulness of my ignorance) was extremely skeptical. When I had the opportunity of giving to the question the study which its importance demanded, I was soon convinced, and I had the satisfaction of confirming, in almost every particular, the observations which Laveran had made, and discussed the whole subject in a paper published in the *British Medical Journal* March 12, 1887. For the past two years, at the Philadelphia and University Hospitals, I have had abundant opportunities of studying cases of malaria, with an ever deepening conviction that the organisms of Laveran are peculiar to the disease.

The experience of Dr. Vandyke Carter, Principal of the Grant Medical College, Bombay, one of the most distinguished pathologists in India, appears to have been very similar to my own. He, too, had been rather repelled by the apparently extraordinary statements of Laveran, and

had not given careful study to the subject until the appearance of my paper in the *British Medical Journal*. His elaborate contribution to the subject, one of the most important which has been made, confirms in almost every detail the statements of the French observer. To the impartial student this remarkable unanimity in observations made by Laveran in Algiers, by Marchiafava and Celli and Golgi in Italy, by Councilman, James, and myself in this country, and by Vandyke Carter in India, should, to say the least, carry conviction as to the importance and constancy of these bodies in malaria.

While it may be a little early to ask acceptance of the view that these organisms constitute the specific germ of the disease, the work already done warrants positively the statement that they are peculiar to and diagnostic of the presence of the malarial poison. It is not surprising that certain observers, who have perhaps seen but few cases, have been inclined to regard the changes in the red corpuscles as degenerative rather than as the manifestations of an intracellular parasite; but the study of the remarkable serial development of the segmenting forms described by Golgi cannot possibly be explained by any other view, than that we are dealing here with an independent organism. The crescentic bodies, too, are so peculiar, so characteristic, so unlike anything which we meet with in the blood in other conditions, that I have usually found it an easy matter to convert the most hardened unbeliever by a demonstration of their presence in a few cases. Still more remarkable are the flagellate organisms.

Putting aside, for the time, until the complete life history of these organisms shall be worked out, the question of their etiological relation to the disease, I would briefly refer to their diagnostic importance. In my former paper I gave in this connection several interesting illustrations. Since that date I have, in an increased experience, become even more convinced of the really great value in doubtful cases of these blood examinations. In ordinary intermittent fever of recent origin there is hardly ever any question in the diagnosis, and any doubts which may exist, quinine readily clears up. The value of the blood examination lies particularly in the chronic cases and in anomalous forms. Here one has to be constantly on guard and it may be impossible for days to determine definitely the nature of the affection. We have since the opening of

the hospital admitted twenty-four cases of malaria to the wards, of which, in seven instances, the diagnosis was definitely determined by blood examination, and could have been determined in no other manner. So important do we consider it, that we now, as a matter of routine, examine the blood of all cases of fever, and indeed all cases of low temperature, which seem so peculiar in certain forms of chronic malarial poisoning.

We had a salutary lesson in the early part of the summer, in the case of an old man, aged 81, admitted July 25, with a temperature of 104 degrees. He had on the ninth a heat stroke, while picking berries, was better the next day and kept about until his admission. There were signs of bronchitis at the bases of the lungs, and in the right interscapular region, the note was higher pitched and the breathing tubular. The temperature rose to 105 degrees, and throughout the twenty-sixth, twenty-seventh, and twenty-eighth, kept between 101 and 103 degrees; on the twenty-eighth, between the hours of 6 and 12 A. M., the temperature was subnormal, but he had no chills. He was extremely feeble, not cachetic or sallow; the pulse was very irregular. Neither I nor Dr. Adkinson, who saw the case for me during an absence of three days, had any other idea than that the case was one of low pneumonia in an elderly man. The patient died on the eighth day of his admission, and to my surprise and chagrin the post mortem examination of the blood and spleen showed the case to be one of malarial fever. Had a thorough blood examination been made and full doses of quinine administered, the man's life might have been saved. In five or six cases of irregular fever, the presence of the organisms in the blood has determined the nature of the disease.

The routine examination is really not tedious, and we have adopted it now in the dispensary, as well as in the wards. Unfortunately for the general practitioner, the determination of the intra-cellular forms requires a tolerably high power with good illumination. We use the one-twelfth immersion, but with care a good eighth is sufficient, and in the chronic cases, with the crescents in the blood, a sixth suffices. It is important to have the finger tip, from which the blood is drawn, thoroughly cleansed, and it is best to take a very small drop of blood, so as to have the layer uniformly and thinly spread out with the corpuscles isolated, not in rouleaux.

Briefly to summarize for the information of those who may not have access to monographs on the subject, the following are the important facts relating to these organisms:

1. In the acute forms of malaria there exists, within certain of the red corpuscles, amoeboid bodies, usually pigmented, which undergo a definite evolution, increasing in size, gradually filling the entire corpuscles, and which prior to and during the chill, undergo a remarkable segmentation. There are also, in some cases, free pigmented bodies. To the form within the corpuscles, which undergoes changes, the term *plasmodium* has been applied. Occasionally in acute forms, flagellate bodies are seen free in the blood, presenting from three to eight long, active moving cilia. According to Councilman, these are much more common in blood withdrawn from the spleen.

2. In more chronic cases, particularly in the forms of remittent fever, which are so apt to be taken for typhoid, the corpuscles do not so often present the intercellular forms, but there are remarkable ovoid, rounded, and crescentic bodies deeply pigmented. These are, in all probability, related to and developed from intercellular forms. From certain of these, particularly the ovoid and rounded forms, the flagellate bodies may be seen to develop. Dr. Ghriskey has recently been studying the evolution of these forms in the Clinical laboratory, and has been able to demonstrate on many occasions the development of the flagellate bodies from ovoid rounded forms.

I hope, in an early number of the forthcoming *Hospital Reports*, to review fully the present status of the malaria question, and to report our experience, particularly in the anomalous forms of fever in which the blood examination is so important. It is particularly to be desired that those who have ample opportunities for the study shall approach the problem with unbiased minds. It requires a little patience in order to become thoroughly familiar with the various phases of development of the organism. Additional works are needed. We have yet to determine fully the relation of the forms to each other, and the complete life history of the parasite in the body; and, what is much more important, to ascertain its existence outside and to learn the conditions of its development and the way in which it gains access to the body.

A ready method of separating malarial from other forms of fever will prove a great boon to southern physicians.

Dr. Carter's paper contains many illustrations of the value of Laveran's observations in this respect, and workers in sub-tropical and tropical regions can not longer afford to neglect so valuable an aid in diagnosis.—*Johns Hopkins Hospital Bulletin.*

[Dr. Bruns, pathologist of Charity Hospital, informs us that he has in vain endeavored to secure the coöperation of the visiting staff of our hospital in the making of these examinations. The examination must, of course, be made before any quinine is administered. It is to be hoped that his future efforts to enlist the sympathies of his confrères will be more successful.—Eds.]

TREATMENT OF BALDNESS.

Dr. E. Besnïer, in the *Journal de Médecine de Paris*, states that the falling out of the hair may be checked and a new growth started by the following treatment. The hair should be cut short and a mild sinapism or rubefacient applied to the scalp; then every five days the following lotion is to be applied:

Acidi acetici.....
Chloroformi .. ..aa q. s. M.

The above should be used cautiously, as it is an irritant, and stimulates the hair powerfully. In connection with the above, the following pomade should be used:

Acidi Salicylici.....gr. xv.
Sulphur. Præcip.....dr. iss
Vaselini.....dr. v M.

This pomade should be applied fresh every morning, the scalp having been previously washed. Fatty substances retard the growth of the hair, and should not be used.—*Journ. of Cutaneous and Genito-urinary Diseases.—Med. and Surg. Reporter.*

EFFECT OF MENTAL IMPRESSION.

A curious case of traumatic hysteria was recently reported by Dr. Wm. C. Thompson. The patient, a man 50 years old, had seen an Italian killed by a shock from an electric wire. Two weeks later he was struck on the head by a cut wire; he at once grasped it in his hand and

fell down, only recovering his senses several hours later after having been taken to a hospital. He was then found to have right hemiplegia and hemianæsthesia and all the symptoms of typical hysteria. The wire that had struck was a "dead" one, that is, no current was passing through it at the time of the accident; the blow had also been but slight, causing no contusion.—*Med. and Surg. Reporter.*

WHY THE STOMACH DOES NOT DIGEST ITSELF.

Dr. E. Sehrwald, docent in Jena, comes to the following important conclusions:

1. The balance between the alkali of the blood and the acid of the gastric juice does not follow, during life, the law of diffusion, but moves in narrower limits.

2. The self-digestion of the stomach is only partly prevented by the alkalinity of the blood and partly by cell-action.

3. The living epithelium interposed between the blood and the gastric juice prevents their mutual neutralization and preserves the alkalinity of the blood and the acidity of gastric juice.

4. By this protection, the stomach is spared a great deal of work of secretion and resorption.

5. The protection furnished by the flowing blood is partly due to its alkalinity and partly to its properties as a nutritive liquid.

6. All influences which arrest the nutrition of the cells of the walls of the stomach, may lead to self-digestion and ulceration; and the conditions which may be mentioned in this connection are, first, disturbances in the circulation; second, direct injury to the epithelium, and third, injuries of the trophic nerves.—*Munchener Med. Wochenschrift.* —*Deutsche Medizinal Zeitung.*

SURGERY.

FLOATING CARTILAGE IN THE KNEE-JOINT—LIPOMA—INGUINAL HERNIA—VARICOCELE.

[By Charles McBurney, M. D., Professor of Surgery, College of Physicians and Surgeons.]

Case I.—This young man I present to you today was operated upon by me last week. He gave the clinical history of a floating cartilage in the knee-joint, and a movable body could be very distinctly felt in the region

of the joint. When I cut down upon it I found a most interesting state of things present. There was a hypertrophied fold of synovial fringes in the process of formation of a floating body. If this had been suffered to go on it would have unquestionably separated itself in time from its attachments, and then we would have formed a true floating body in the joint. It was about one and a quarter inches long and an inch wide, and as it was situated between the joints it caused a great deal of pain, with a synovitis that lasted a couple of weeks at a time.

After the operation the patient had a rise of temperature to 102 3-5 deg., but it fell to 100 deg. the next night. This was probably due to the absorption of extravasated fluid. He has had no pain whatever, and there is no reason to apprehend any danger from the operation.

I applied in this case no drainage tubes, but am disposed to keep the joint at rest for another ten days, and then permit the patient to walk about as usual.

Case II.—This lady is 65 years of age, and came here with a large lipoma of the shoulder that weighed about nine pounds. There is an interesting fact in connection with this case, and that is, the behavior of the patient after the operation.

On the evening of the second day she had a temperature of 103 degrees, and this rise of temperature I attribute to the same cause as in the case of the young man I have just shown you, viz., the absorption of extravasated fluid. Within thirty-six hours afterward, without any medication whatever, the temperature fell to normal and has remained so ever since.

The wound was dressed the day before yesterday, and the drainage tubes taken out. She has, as you see, made a good recovery, notwithstanding the fact that a very large cavity existed.

Case III.—This patient was operated upon last Friday for a left inguinal hernia. The hernia was reducible, but very painful from the fact that its contents were omentum. On the evening of the second day he had a temperature of 101 degrees, but since that time it has become normal and has remained so ever since. His appetite is good, and his bowels are regular, and everything is progressing very favorably in his case.

This is the only dressing that has been applied since the operation, and if you look into the wound you will see

that it is absolutely free from œdema, and that healthy granulations are springing up everywhere.

These cases of operation for hernia all behave in the same way. We get one or two bad cases of drunkards, and I might add in this connection that I made up my mind never to operate for hernia in such cases. In any ordinary case I feel perfectly justified in telling the patient that there is absolutely no danger connected with the operation for hernia, with this one exception.

This patient will, I have no doubt, have a radical cure of his hernia. This brings to my mind a possible source of danger in the operation, when you have omentum, viz.: secondary hemorrhage into the peritoneal cavity after reduction. The only way to avoid this complication is to leave a sufficiently large stump. As a rule it is a great deal better to tie a single ligature, tight enough to shut off the circulation, when you cut off a piece of omentum, and hemorrhage from the stump is then not likely to occur.

Case IV.—This young man has a very well marked varicocele on the left side, which has been increasing rapidly for the past six years. It causes him considerable pain and discomfort, and the testis has suffered greatly in its nutrition. It is, as you can see, very much smaller than the right testis and is sore and tender to the touch. If permitted to go on, the disease cannot fail in time to do serious damage to the affected testicle.

In the course of a few weeks after an operation in these cases of varicocele, you will at once notice a marked improvement in the condition of the testicle. The operation I propose to do in this man's case is what is technically called the "open" operation—taking out as much as an inch and a half or two inches of the enlarged veins; and I consider this procedure somewhat more satisfactory in this case than subcutaneous ligature. When you perform the subcutaneous ligature in such a case as this, where a large amount of tissue is involved, you are apt to leave behind a portion of the redundant mass and thereby invite a return of the trouble. I will sew up the wound without drainage, and under antiseptic precaution.—*International Journal of Surgery.*

SYPHILIS CONVEYED BY DIRTY INSTRUMENTS.

At a meeting of the Paris Academy of Medicine, Oct. 15, 1889, Dr. Lancereaux stated that he was treating a

man, aged 53, who consulted him on account of a pustulo-papular eruption of the whole body, which had last invaded the hairy scalp. The case was one of secondary syphilis of an acneous form. His wife showed no symptoms of syphilis, and there were no signs of syphilis on the patient's genital organs and inguinal glands. But, on the other hand, a gland as large as a chestnut could be felt under the right jaw bone, and a smaller one close by. Certainly the man was suffering from syphilitic adenitis. The patient's right eustachian tube had been catheterized on Sept. 13, 1888. At a second operation in November, a dirty, bloody liquid escaped, and it is from this time that his syphilis must be dated. The secondary symptoms, which should appear six or eight weeks after the infection, showed themselves about Dec. 16. The second case was that of a woman, who had some teeth extracted, and got a set of false teeth. Some time after, she had pains in the upper gums, followed by a swelling and an enlargement of the submaxillary gland. On Jan. 8, a papular copper colored eruption appeared over the whole body. The isolated, non-suppurating papules had the obvious characters of syphilitic cutaneous eruptions. Besides, some of the inguinal glands were indurated, and multiple specific adenitis appeared in the neck. The treatment, consisting of mercurials and iodide of potassium, confirmed the diagnosis. Inasmuch as the cases of syphilitic infection through barbers and dentists are not the only ones, it is desirable that all instruments should be rendered thoroughly aseptic before being used.– *Deutsche Medizinal-Zeitung.*

THE TREATMENT OF EMPYEMA OF THE PLEURA.

[By Prof. E. Kuster, Berlin.]

In 1877 Prof. Küster formulated the following rules for the treatment of empyema: 1. In cases of recent empyema, in which expansion of the lung takes places rapidly, double incision, with drainage by short tubes, is indicated. 2. In cases of old empyema, besides the anterior incision, a rib should be exsected in the lowest part of the back. 3. In cases of thoracic fistulæ, where there is little chance of the lung expanding, one or two ribs should be resected on the anterior and posterior portion of the chest, selecting anteriorly the rib just above and below the fistula. These rules are still enforced by Küster, with the modifi-

cation that he regards resection of a rib as also indicated in cases of recent empyema.

His method of operation is as follows: After exploratory puncture, an incision is made on the front of the chest, usually in the fourth or fifth intercostal space, and along the upper margin of the rib, so as to avoid hemorrhage. When the pus escapes, a silver sound is introduced into the chest and carried to the deepest part of the cavity behind. The knob of the sound is now pressed firmly against the chest wall, so that it can be felt in the intercostal space, and the rib above is resected. If any space is left between diaphragm and chest wall that is not sufficiently drained, the incision is enlarged outwards and downwards, until the sloping surface of the diaphragm passes directly into the opening. The thoracic cavity is then washed out with salicylated water under slight pressure and adherent fibrinous coagula are carefully sponged away. Finally, a long drainage tube is passed transversely across the chest from before backwards, and the ends secured externally. The wound is tamponed with loose pledgets of iodoform gauze, over which is placed a moss cushion.

In cases of encapsulated empyema in the posterior part of the chest, which can not be made out anteriorly, a rib is resected near the deepest point; but if the cavity is large, a second incision is made higher up, and the cavity drained, as above described.

DRY OPERATIONS.

By Dr. Landerer, Leipzig.

The author recommends the following treatment of operation wounds which he has employed successfully in 90 cases. It consists essentially in keeping all fluids from the wound. The instruments are boiled and preserved in boiled water to which some carbolic acid has been added; the hands are cleansed after Furbringer's method. From the commencement of the operation, the incision and the surrounding parts are kept dry by pledgets of sublimate gauze, and the bleeding thus reduced to a minimum. After the operation has been completed the wound is firmly tamponed for a few minutes with gauze, and on removal of this the wound is found perfectly dry, and in the most favorable condition for primary union. The wound is then sutured and covered with a moderately firm compress.

The advantages of this method are that all wetting and cooling of the patient is avoided, the hemorrhage is slight, and the duration of the operation is shortened. In the author's cases healing was rapid, and was unattended with inflammation and retention of the wound secretions.—Proceedings of the Congress of the German Surgical Association, April 24, 1889, in *Weiner Medizinische Wochenschrift.—International Journal of Surgery.*

INTRA-PLEURAL INJECTIONS OF NAPHTHOL IN PURULENT PLEURISY.

Prof. Bouchard has successfully treated two cases of empyema without operation by injecting twice daily two to four cubic centimeters of the following solution:

℞.	Naphthol.....	5 grams.	
	Alcohol.....	33 grams.	
	Distilled water, q. s. ad...	100 grams.	M.

The injected quantity of naphthol therefore varies from ten to twenty centigrams per day. As soon as the injection reaches the pleural cavity, the naphthol is deposited, but is gradually taken up by the exudation and sterilizes the contents of the pleural sac. No danger attends this procedure.—*Wiener Med. Presse.—International Journal of Surgery.*

TRANSPLANTATION OF THE CORNEA.

Dr. Gradenigo, Professor of Ophthalmic Surgery in the University of Padua, has just succeeded in transplanting the cornea of a barn fowl into the eye of a patient in his care. On the eighth day after the operation the transplanted cornea presented a quite pellucid and convex appearance. Such a result has not yet been recorded in the annals of continental surgery.—*Lancet, International Journal of Surgery.*

Surgeon-Major I. P. H. Boileau (*British Medical Journal*) opens buboes by a mere puncture with a narrow bladed bistoury, a few days after the presence of pus has been detected. He regards this method as greatly superior to the free incision, and has employed it with success for twenty-four years. It is less painful than the free incision, leaves a small mark, and shortens the duration of the case. —*International Journal of Surgery.*

PSEUDO ORCHITIS FROM STRAIN.

This much maligned malady is the subject of a paper by Dr. Guelliot, in *l' Union Medicale de Nord-Est.* Though denied by many authors, it is becoming to be recognized as legitimately belonging to the category of traumatic affections of the testicle, by eminent surgeons.

The author holds that contusion of the testicle may be due to the brusk contracture of the cremaster, as during an effort, or even to a strong contraction of that muscle; and the result is a veritable traumatic orchitis, with all its consequences. But he thinks that in the majority of cases, the effort is not the true cause of the inflammation, that it is but the determining cause, sometimes the occasion of an exaggeration simply of pain that has been latent up to that time. Such inflammation is nothing but an evidence of inflammation of the deeper seminal channels.

But Dr. Guelliot thinks it necessary to limit still further the number of cases of true orchitis from effort, and calls attention to a traumatic affection little known, which is probably frequently mistaken for disease of the testicular apparatus. It occurs in persons the subject of varicocele of the epididymis, of so light a development that it is unrecognized by them; under the influence of a violent effort, a venule ruptures and blood effuses, the swelling and pain therefrom simulate traumatic epididymitis; but the rapid progress of the affection shows that it is nothing but a circumscribed sanguinolent effusion.

We may then conclude—and Guelliot has collected many observations going far to prove it—that under the influence of an effort, it is possible to spermadic veins, healthy or degenerated. If the effusion is limited to the lower part of the cord, it may envelop the epididymis.—*Weekly Medical Review.*

HYGIENE.

THE INFLUENCE OF VENTILATION UPON THE NUMBER OF ORGANISMS FLOATING IN THE ATMOSPHERE.

At the first meeting of the "Hospital Journal Club" under the section for Hygiene, reference was made to an important series of experiments upon ventilation in its relation to the number of bacteria present in the air of rooms.

These experiments, a full account of which appears in the *Zeitschrift für Hygiene*, Band 7, Heft I, were made by R. Stern in the Hygienic Institute of the University at Breslau.

The author reviews the normal relation of the germs to the atmosphere. These conditions may be summarized as follows:

(1). Except by very strong winds bacteria are never driven off from moist surfaces.

(2). For this reason, only the organisms which are not killed by being dried are found in a living condition suspended in the air.

(3). In general, it is uncommon to find isolated or single organisms in the air. They are usually present in numbers or colonies clustered together upon coarser dust particles.

(4). In still air, because of their higher specific gravity, they quickly gravitate to the surface.

(5). A multiplication of bacteria does not occur in the atmosphere because of the absence of the necessary amount of moisture.

(6). In harmony with the last two facts are the observations of Hesse, Frankland, and Petri, namely—that in general, the number of organisms present in the air is small. This is specially the case over moist surfaces and in sheltered spaces where the air has been but little agitated.

Bearing in mind these facts, Stern endeavored to arrange his experiments so as to have as nearly normal conditions as possible, but for purposes of accuracy he increased the number of organisms upon which to work to a degree rarely or never found in the air.

A room with four ventilators was selected, two of which brought air to the room and two carried it away. In each case one ventilator for incoming and one for outgoing air were under the ceiling, on opposite walls, the remaining two being just above the floor. By this arrangement diagonal currents from floor to ceiling (summer ventilation) or from ceiling to floor (winter ventilation) could be produced at will.

He then closed all registers, cracks and openings by which air could enter; thoroughly disinfected walls, floor, and ceiling with sublimate solution and analyzed the air for bacteria. None were found.

His next step was, by aid of an atomizer, to completely fill the air with a mixture of dust and bacteria and determine what effect would be produced upon the number of organisms present in the air by—

(1). Allowing the air to be perfectly quiet for a given period of time.

(2). Moderate ventilation (renewal of the whole volume of air one to three times an hour).

(3). High degree of ventilation (renewal of air six to seven times an hour).

(4). Saturation of the air in the room with aqueous vapor.

His conclusions were as follows:

(*a*) When the air of the room was perfectly still the dust and bacteria sank quickly to the floor.

Where ordinary dust (as from library or school shelves) was employed, the air was almost entirely free from bacteria after an interval of one and a half hours.

(*b*) With ordinary ventilation, that is, a renewal of the air one to three times an hour, the disappearance of organisms from the atmosphere took place hardly more quickly than when the air was allowed to remain still. When "winter ventilation" was employed, the diminution in the number of organisms was slightly hastened.

(*c*) An increase in the degree of ventilation increased gradually the rate of disappearance.

The lowest limit of ventilation which caused an appreciable acceleration in the rate of disappearance of the germs from the air was an exchange of from six to seven times an hour of the whole volume of air in the room.

(*d*) The rapid and complete removal of the germs from the air of a room can be accomplished only by the employment of very strong draughts.

(*e*) No degree of ventilation, however high, was sufficient to cause germs to rise from carpets, furniture, clothing, etc., into the air.

(*f*) Saturation of the air with aqueous vapor is not to be relied upon as a means of depriving the atmosphere of the germs suspended in it. It does, however, to a limited extent, accelerate their disappearance.

In consideration of these conclusions Stern feels justified in recommending as a means of disinfecting rooms which have been occupied by persons suffering from infectious diseases, that as soon as the patient has been removed, the room be closed and allowed to remain so for at least

twenty-four hours, after which it is to be quietly entered and floors, wall surfaces, and furniture mopped with cloths saturated in corrosive sublimate 1 :1000. Under no consideration is dusting to be countenanced.—*Johns Hopkins Hospital Bulletin.*

Book Notices.

Annual of the Universal Medical Sciences. A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajons, M. D., Lecturer on Laryngology and Rhinology in Jefferson Medical College, etc., and seventy associate editors, assisted by over two hundred corresponding editors, collaborators, and correspondents. Illustrated with chromo-lithographs, engravings, and maps. F. A. Davis, publisher, 1889.

The present issue of 1889 is, like its valuable predecessor, composed of five volumes.

To one acquainted with the merits of this colossal work, it is indeed, gratifying to learn that the first issue did not fall flat, but received a most warm and appreciative welcome at the hands of the medical profession in our country. The prompt success of the new venture clearly showed that a hiatus existed in our medical literature, viz., a well digested summary of progress in all the medical branches during the year. As we remarked in connection with the first issue, in German literature that hiatus did not exist, as Virchow's *Jahresbericht* supplied the want; but English speaking medical men were not all conversant with the German tongue, and they lacked an equivalent for the *Jaresbericht*. The *Annual* very fully supplies the want. We augured a favorable reception for the first issue, basing our hopes upon the merits of the work. That these have been generally appreciated is abundantly testified by the success of the issue of 1888.

The second issue not only equals the first in literary and scientific merit, but in one or two points of convenience and reference it surpasses the first. The experience gathered in issuing the first five volumes led the editor to introduce into the second two changes which will materially enhance the value of the *Annual* as a work of reference.

Only those who have had occasion to use this exhaustive work as a book of reference can fully appreciate its value. The small army of over 400 collaborators allow nothing of importance to pass by unnoticed, and the practitioner who desires to inform himself concerning the genuine advances made in any of the medical sciences can confidently consult this thorough and comprehensive digest.

We look forward to a long lease of prosperity and appreciated life on the part of the *Annual*.—A. McS.

The Physician's Visiting List (Lindsay & Blakiston) for 1890. Thirty-ninth year of its publication. Philadelphia: P. Blakiston, Son & Co.

This handy book is conveniently arranged for the purpose set forth by its title. It has long been known to the profession, and needs no further notice than to say that it maintains the standard of excellence acquired by its predecessors.

Drs. R. B. S. Hargis and C. R. Oglesby ,of Pensacola, and J. P. Holden, of Marianna, have been appointed by Governor Fleming to be members of the Board of Medical Examiners of the 1st Judicial Circuit of Florida.—*Pensacola Commercial, Dec. 12, 1889.*

Rembrant's celebrated picture entitled, "A Lesson in Anatomy," a full size copy of which hangs at present in the hall of the College of Physicians, of Philadelphia, has, we understand, been purchased by Mr. Ellesworth, for the Institute of Art, of Chicago. It formerly belonged to the Princess de Sagan, and until recently has been in the art gallery in The Hague.—*Medical News.*

To expel mosquitoes, take of gum camphor a piece about one-third the size of a hen's egg and evaporate it by placing it in a tin vessel and holding it over a lamp, taking care that it does not ignite. The smoke will soon fill the room and expel the mosquitoes, and they will not return, even though the windows should be left open all night.—*Scientific American.—Medical and Surgical Reporter.*

Publications Received.

Medical Communications of the Massachusetts Medical Society.

Physicians' Visiting List, 1890. P. Blakiston & Sons.

On Empyema Pleuræ. By S. Laache. Supplement to the *Norsk Magazin for Lægevidenskaben.*

A Handbook of Dermatology, for the Use of Students. By A. H. Ohmann-Dumesnil, A. M., M. D.

Essay on Medical Pneumatology: A Physiological, Clinical, and Therapeutic Investigation of the Gases. By J. N. Démarquay. F. A. Davis, Publisher.

A Treatise on Materia Medica, Pharmacology, and Therapeutics. By John V. Shoemaker, M. D., and John Aulde, M. D. F. A. Davis, Publisher.

The Cure of Crooked and Otherwise Deformed Noses. By John B. Roberts, A. M., M. D.

Concealed Pregnancy: Its Relations to Abdominal Surgery. By Albert Vander Veer, M. D. Reprint from *Am. Journ. of Obstet. and Dis. of Women and Children.*

Statistique des Operations faites dans l'espace de deux années a l'Hopital St. Louis. Par M. le Dr. Just. Lucas-Championnière, Chirurgien de l'Hopital St. Louis.

Contributions to the Surgical Treatment of Tumors of the Abdomen. Part II. Electricity in the Treatment of Uterine Tumors. By Thomas Keith, M. D., LL. D., Edin., and Skene Smith, F. R. C. S., Edin.

Surgical Treatment of Erysipelas in Children. By A. Seibert, M. D. Reprint.

A Pathological Condition of the Lungs, Hitherto Undescribed in this Country, but which is not Infrequent. By F. Peyre Porcher, A. B., M. D. Reprint.

Studies in Intestinal Surgery. By Wm. B. Van Lennep, A. M., M. D. Reprint.

Transactions of the American Otological Society. Twenty-second Annual Meeting.

Education and Culture as Correlated to Health and Diseases of Women. By J. A. C. Skene, M. D.

Diabetes. By A. H. Smith, M. D.

Transactions of the Association of American Physicians. Vol. IV.

Dr. Reeves, the well known microscopist, of Chattanooga, Tenn., is not connected with the medical school recently organized at Chattanooga. He at first accepted a chair, but subsequently (before organization) withdrew, as he did not consider the arrangements satisfactory or adequate.

Death.

Death of Prof. James Lawrence Cabell. — The faculty of the University of Virginia, at this regular meeting of December 2, 1889, make record of the death of Prof. James Lawrence Cabell, M. A., M. D., LL. D. He died August 13, 1889, aged 76 years.

In the year 1833 he attained the degree of Master of Arts of the University of Virginia; in 1834 he graduated as Doctor of Medicine in the University of Maryland; in 1873 he received the title of Doctor of Laws from Hampden-Sidney College, Virginia.

In December of 1837 he was called from professional study in Europe to the chair of Anatomy and Surgery in the University of Virginia, afterward changed to the chair of Physiology and Surgery, which he occupied until a few weeks before his death, thus fulfilling nearly fifty-two years of professional service. During the last thirty years of this service he was the senior professor of the University.

As a member of the Faculty of the University he was conservative in spirit, wise and weighty in counsel, just and firm in judgment.

As a teacher of Physiology and Surgery he was diligent and successful, constantly imparting the latest results of science, and contributing to its advance.

As a physician he was skillful and sympathetic, always ready to relieve suffering in hospital or home.

As an associate he was a friend to each one of us, a private counsellor and a peacemaker. His scholarly attainments and the great dignity of his character inspired profound respect, and ever aroused our earnest emulation.

In his death the University has lost a strong support, the church a sincere Christian, the State an upright citizen, the world a rare man.

As it is impossible, within the present limits, to do justice to his worth or to the services he rendered in his day, it is proposed to hold memorial exercises on some suitable occasion in public, which shall more fully emphasize and proclaim the excellence of his character and the value of the work of his life.

Death of Dr. Edmond Bouvier.—At a meeting held today, by the Pensacola Medical Association, the following resolutions were read and adopted:

Your committee on resolutions regarding the death of Dr. Edmond Bouvier respectfully report as follows:

That the members of the Pensacola Medical Society have learned with sincere sorrow of the unexpected and untimely death of their fellow and colleague, Dr. Edmond Bouvier, who departed this life at his residence in this city Dec. 11, 1889. He has endeared himself to every one of us by his warm and true heart, by his quiet and courteous manner, and by his able, cultivated, and refined intellect. He applied himself to the study and practice of medicine by choice, and his industry in his profession made him familiar with its great truths and principles.

He was charitable because a genuine philanthropist. As a practitioner he was successful, and his qualities as a companion were rare indeed, springing from a generous, noble nature, ever pleasing and ever commanding. He was a public spirited and useful citizen, and did much for the amelioration of sickness and suffering among all classes of his fellow citizens. Therefore, be it

Resolved, That in the death of Dr. Edmond Bouvier the profession of medicine and ourselves have sustained a great loss, and we extend to his bereaved family our deep and sincere sympathy.

Resolved, That we attend his funeral in a body.

Resolved, That a copy of these resolutions be engrossed in the minutes of the Pensacola Medical Society, of which he was an honored and useful member, and given our city press for publication, and be sent to his family.

J. Z. Cravey, M. D., Chairman.
F. G. Renshaw, M. D.
C. R. Oglesby, M. D.

—*Pensacola Commercial, Dec. 12, 1889.*

Death of Prof. Rudolph Voltolini.—Laryngology abroad has lost one of its most prominent representatives in the person of Prof. Rudolph Voltolini, of Breslau, who died on Sept. 11, 1889, in his seventy-first year. Voltolini was an enthusiastic worker in the field of medicine which he had chosen. He has not been unjustly called the father of rhinoscopy, and certainly did more to improve the *technique* of that difficult art than any other teacher.

He was a most able teacher. He was a most able writer, being one of the editors of the *Monatschrift für Ohrenheilkinde* up to the time of his death. He was also the author of numerous works dealing with his specialty.—*Medical News.*

Medical News and Miscellany.

Professors and Pupils at the University.—According to the catalogue of the University of Pennsylvania, just issued, there are 169 professors, lecturers, and instructors at the university, an increase of seventeen over last year, and 1,222 students, as compared with 1,187 in the list of the previous year.—*Med. Bul.*

A Serious Case.—Old Doctor (called in for consultation)—"Tut, tut! You'll worry yourself sicker than your patient if you're not careful. Don't be so anxious. It isn't good for your health." Young Doctor—"But isn't my patient dangerously ill?" "He is. I told you three months ago you could only prolong his life; he can't be cured." "My, my! Oh, my!" "Goodness me! The idea of a doctor allowing himself to worry that way over one case." "Ah! but he's my only case. When he dies I'll starve."—*Med. Bul.*

Warner's Safe Kidney and Liver Cure.—In Germany each maker of patents must furnish the government with the formula for the patent he makes. This is the one furnished by Warner for "Safe Kidney and Liver Cure." Each bottle contains:

Extract of lycopus virginiana (the herb)	308 grains.
Extract of hepatica (the herb)	232 grains.
Extract of gaultheria	7½ grains.
Potassium nitrate	39 grains.
Alcohol (90 deg.)	2½ ounces.
Glycerin	10 drachms.
Water sufficient to make one pint.	

Any one can now make this nostrum equally as well as Warner.—*Formulary and Druggists' Magazine.*—*Omaha Clinic.*

MORTUARY REPORT OF NEW ORLEANS

For November, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	1	2	1	2	2	1	3
" Congestive	5	.....	5	.....	4	1	5
" Continued,	.....	.....	.....	.....	.....	.....	.....
" Intermittent	.....	1	1	.....	1	.....	1
" Remittent	1	.....	.....	1	1	.....	1
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	6	1	5	2	5	2	7
" Puerperal	1	.....	.....	1	1	.....	1
" Typho-Malarial	3	.....	2	1	3	.....	3
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	5	4	5	4	.....	9	9
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	7	3	8	2	.....	10	10
Pneumonia	20	11	21	10	25	6	31
Bronchitis	6	4	5	5	2	8	10
Consumption	35	30	39	26	61	4	65
Congestion of brain	6	4	4	6	6	4	10
Diarrhœa	6	4	6	4	4	6	10
Cholera infantum	7	2	7	2	.....	9	9
Dysentery	1	2	2	1	3	.....	3
Debility, General	.....	2	1	1	2	.....	2
" Senile	14	13	9	18	27	.....	27
" Infantile	9	6	9	6	.....	15	15
All other causes	191	88	150	129	187	92	279
Total	324	177	280	221	334	167	501

Stillborn children—White, 33; colored, 13; total, 46.
Population of city—White, 184,500; colored, 69,500; total, 254,000.
Death rate per 1000 per annum for month—White, 21.07; colored, 30.56; total, 23.67.

DIPHTHERIA RECORD FOR NOVEMBER, 1889.

Dist.	Cases. White.	Cases. Colored.	Cases. Total.	Deaths. White.	Deaths. Colored.	Deaths. Total.
1	4	2	6	2	1	3
2	.....	2	2	.....	1	1
3	3	1	4	.....	.....	.....
4	4	2	6	2	.....	2
5	.....	2	2	.....	2	2
6	5	.....	5	1	.....	1
7	.....	.....	.....	.....	.....	.....
	16	9	25	5	4	9

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—NOVEMBER.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	76.0	81.0	70.0	.18
2	59.0	63.0	55.0	.62
3	56.0	63.0	50.0	.....
4	58.0	66.0	51.0	.....
5	60.0	66.0	55.0	T
6	61.0	68.0	54.0	.01
7	73.0	82.0	64.0	T
8	62.0	70.0	53.0	.01
9	54.0	60.0	48.0	.....
10	54.0	63.0	45.0	T
11	62.0	77.0	48 0	.....
12	69.0	79.0	59.0	.38
13	54.0	63.0	44.0	.28
14	58.0	67.0	49.0	.....
15	58.0	66.0	49.0	.....
16	54.0	57.0	50.0	.60
17	46.0	51.0	42.0	.....
18	48.0	58.0	39.0	.....
19	52.0	62.0	42.0	.....
20	60.0	75.0	46.0	.10
21	66.0	78.0	55.0	.....
22	58.0	67.0	50.0	.....
23	62.0	76.0	47.0	.....
24	65.0	74.0	56.0	.....
25	67.0	76.0	58.0	.....
26	63.0	71.0	55.0	.....
27	59.0	63.0	55.0	.....
28	52.0	60.0	45.0	.....
29	47.0	56.0	38.0	.....
30	46.0	55.0	38.0	.....
31	....	....	....	.....
Sums . .	....	....	....	.....
Means	....	....	.....	.....

SUMMARY.

Mean barometer, 30.150.
Highest barometer, 50.491, 30th.
Lowest barometer, 29.620, 20th.
Mean temperature, 58.8.
Highest temp., 82.0, 7th; lowest, 38.0, 29–30
Greatest daily range of temp., 29.0, 20th.
Least daily range of temperature, 7.0, 16th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..60.1	1876..59.1	1881..61.2	1886..59.1
1872..57.1	1877..58.2	1882..62.8	1887..61.1
1873..61.1	1878..60.7	1883..63.5	1888..59.1
1874..63.0	1879..64.9	1884..59.7	1889.. —
1875..65.5	1880..56.3	1885..59.7	1890.. —

Total deficiency in temp. during month, 66.
Total deficiency in temp. since Jan. 1, 3.95.
Prevailing direction of wind, N.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 60 miles, S. W., on 20th.
Total precipitation, 2.18 inches.
Number of days on which .01 inch or more of precipitation fell, 8.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875..... 6.79	1880..... 6.04	1885.... 3.47	
1876..... 4.35	1881..... 7.24	1886.... 5.33	
1877..... 6.58	1882..... 1.98	1887.... 0.52	
1878..... 7.78	1883..... 6.36	1888.... 1.50	
1879. ... 3.79	1884..... 3.13	1889.... 2.18	

Total deficiency in precip'n for month, 2.99.
Total deficiency in precip'n since Jan. 1, 10.71.
No. of clear days, 17. No. of partly cloudy days, 6. No. of cloudy days, 7.
Frosts, 18th, 19th, and 30th.
Thunder storm on ——. Excessive rainfalls, ——; Mean Max. Temp., 63.8; Mean Min. Temp., 53.7.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates precipitation inappreciable. * Dew. ‡ Fog.

R. E. KERKAM, *Signal Corps Observer.*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

FEBRUARY, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

Reports of Cases Showing Certain Complications of Rhinal Disease.*

By C. L. DREESE, M. D., Goshen, Ind.

HEART TROUBLE, SEQUENCE OF RHINAL DISEASE.

Mrs. S., aged 43, health apparently bad, weight 103 pounds, usual weight 148 pounds, has been failing in health for the last seven years. She complains of heart and stomach trouble, pain in the chest and shoulders, with occasionally a sore throat and hacking cough; often compelled to sit up in bed to obtain rest at night on account of difficult breathing.

In April she consulted a prominent physician of this city about her case, as her throat was quite sore and her cough worse. He looked into her throat and told her that the palate was the cause of her cough, and that nothing could be done for her throat unless he could stop the cough, which he claimed he could do if she would let him "clip" her palate. She made up her mind to consult some one else before submitting to the operation, so she came to see me.

*Read at the Seventh Annual Meeting of the American Rhinological Association, held in Chicago, Oct. 9, 1889.

I made an examination, beginning with the larynx, as she complained most of her throat. The vocal cords were somewhat inflamed, but not near so much as I had expected after hearing her subjective symptoms. The color of the mucous membrane deepened passing upwards, and a posterior rhinoscopic view showed that the pharyngo-nasal cavity was nearer the source of the pathology than the larynx. I noticed especially that the posterior surface of the inferior turbinate on the left side was more congested and swollen than the right one. The climax of symptoms, however, was reached on inspection of the left anterior nasal passage, which was narrowed somewhat by slight deviation of the septum with a spur so large and long as to bury its crest into the tissues of the left inferior turbinate, so completely closing the passage that it was with considerable difficulty that I could pass the point of a curved probe along its under surface into the meatus behind.

The mucous membrane of the turbinate at this point was really a blue black, and so thickened as to cause marked deformity of the nose on this side. I really should have taken plaster of Paris casts in this case, but did not think of it until some time after the operation, when it was too late.

The spur and turbinate were both so sensitive that when I was passing the probe her face turned pale, causing much pain, extending to the region of the heart, nausea, and a very faint and depressed feeling. This fully convinced me that the source of all this lady's trouble had now been discovered, and that the heart, stomach, and lung troubles were caused by sympathy from the rhinal disease; that the apparent disease of these organs, which had misled her former physicians in their diagnosis, was but reflex symptoms, and that upon the successful treatment of the nasal trouble hinged the cure of this case.

After hearing our explanation, she seemed to be favorably impressed, and, with promises of seeing me again before she had anything done in her case, she left the office.

I hardly expected to see her again, but was happily surprised, for in about a week later she reported ready for the operation. She had consulted one or two other physicians, but neither of them seemed to trace the trouble to the nose.

After a preparatory course of about ten days, I cocainized and removed the spur, saving all the soft tissues and menbrane I could, so as to leave as small a scar as possible. I now replaced the soft tissue and covered the wound with a cotton pledget saturated with *glycerole of calendula*, changed once each day for one week.

Before leaving my office on the day of the operation she said: "Doctor, you surely have hit the spot, for that pain at my heart and that awful tired feeling have nearly left me. I can breathe so much easier, and I feel so much better in every way."

She was kept on tonic, diuretic, and laxative medicines, and to assist nourishment *hydroleine* and Wyeth's Beef, Iron and Wine were given. The patient improved rapidly and in four months she weighed 134 pounds—appetite good; sleeps well at night. She has returned to her home in West Virginia, and I have not heard from her since. I am satisfied that she will again see the day to claim her full weight and regain her good health.

Here was a case where one organ after another was made the scapegoat of her troubles, and one course of treatment heaped upon the other without avail, and all because that wretched, suffering nose was overlooked, though it hung in the way.

The nearest that any of her doctors came to her case was the one who frankly acknowledged that there was something about it that was mysterious, but for the life of him he could not make out what it was.

TINNITUS AURIUM.

Mr. H., aged 24, was suffering from a severe cold in his head, and while sitting by the stove his wife slipped up behind him and screamed in his ear. This, moment-

arily, so dazed him that he almost fell out of his chair. The sound was so magnified that it seemed to him like a cannon shot; there was a crash which seemed as though that side of his head was crushed. He became very sick that night and remained in bed a whole week under the care of his family physician.

The noise in his ear was of a high pitch, similar to that of a bullet whistling through the air. He almost went crazy with the noise for a month after the injury, was very nervous and weak, and as he got over the effect of the cold the noise moderated in intensity and lowered in pitch, now sounding like a small table call-bell. But he has not been free from it since receiving the injury, which was about four years ago. Any sudden noise, like the discharge of a gun, immediately raises the noise in his ear to its former pitch, but it soon lowers again if he is not affected with a cold at the time. A less noise is required to irritate when he has a cold. Ordinarily he can work with a hammer driving nails, but can not endure the sound when a cold is on. His hearing in his right and best ear was 42.96, and in his left but 19.96 by my watch which I carry in my pocket. The worst ear discharges a little sometimes. There is nothing uncommon in the remaining symptoms, so I omit mentioning them.

He has been under treatment about one month, with fair improvement of his catarrh, and his hearing, at last treatment, in his right and best ear was 64.96 and 28.96 in his left. I think I could do better, but he has been a little irregular in coming to the office for his treatments. As far as I can learn he has had catarrh for the last nine years.

INCONTINENCE.

M. H., aged 7 years, was brought to my office in May by his aunt, who gave the following history of the case: Three years ago he took a severe cold which affected his head more than his lungs; was very sick for a week; coughed very hard, but could not raise anything, but had a profuse discharge from the nose which made his face very

sore from wiping his nose; a severe frontal headache which extended to the back part of his head; sometimes he said the top part of his head would hurt the most. Hearing seemed to be affected, and he would put his hand to his ear, saying there was something in his ear, for it would hurt him when it moved, and sometimes he would say there is something pushing into the ear, when he would begin to cry and keep it up for hours at a time. The doctor looked into his ear, but could not see any foreign body there. He said the cold had affected his ear, which was the cause of his earache. One of them broke, and has been discharging more or less ever since, being worse when he takes a fresh cold; it stops for a while in the summer and gets worse when the cold weather comes.

When he was getting over his first spell of sickness he began to have trouble with his water, wetting the bedclothes every night. This trouble lasted for several months, when he got better. But after each cold he seemed to be worse. Thinking it was a habit more than anything else, for he was able to attend to nature's call before retiring, he was sometimes punished severely, but all this did no good. He was nervous and timid; would begin crying without an apparent cause.

He has been treated by several physicians for his urinary trouble, but as soon as he quit taking medicine the trouble returned as bad as ever, and in the last year he has been getting so much worse that he can not control himself in daytime, his clothes being soiled most all the time. In this condition he was brought to my office for treatment.

This was just the kind of a case I had been waiting for, as Dr. Rumbold, in his private course of lectures to me last winter, made special mention of this as occasionally being a reflex trouble of rhinal disease.

This once bright little fellow now had a vacant kind of look, odd, moved awkwardly, mouth open, could not breathe through his nose, complained of being tired inclined

to sleep late in the morning, restless during the night, and appetite irregular. The nasal passages were closed almost to stenosis, and the mucous membranes deeply colored and bathed with muco-purulent discharges; tissues of pharyngo-nasal cavities were thickened until they lay in folds, and the tonsils enlarged.

I prescribed the quinine mixture mentioned on page 446 of Dr. Rumbold's work for one week. Then followed with teaspoonful doses of larix comp. before meals. Vaseline and eucalyptol mixture was sprayed into nasal and pharyngo-nasal cavities, and the same with three drops Pum's comp. to throat, vaseline inunction over entire body with hand rubbing afterward.

There was improvement in the urinary trouble from the first, and by the fourth week was nearly all gone; mouth breathing stopped, patient sleeps well, and appetite is good.

Here is a case where the incontinence was a reflex symptom of chronic nasal catarrh, and was cured by treating the catarrhal trouble alone.

EPILEPSY, A COMPLICATION OF RHINAL DISEASE.

Miss L. M., aged 21 years, consulted me March 2, complaining with strange feelings in her head. The following is her history of her case:

Nine years ago she caught severe cold, accompanied by severe headache beginning in her forehead and passing gradually back over the top to the back part of her head, becoming so severe that she was almost unconscious at times. Severe nausea and vomiting now set in, and it was for several days that she could not retain anything on her stomach. The pain in the back part of the head now began to extend down her spine, causing extreme soreness of her bowels and limbs; was confined to her bed for three weeks; her sickness was pronounced a mild attack of cerebro-spinal meningitis. After she recovered from this spell of sickness she had a constant feeling of cold in her head, with headache and sickness at the stomach, and she noticed that at times she would be bothered with forgetting

what she was talking about, would get dizzy, but not so bad but she could go about the house. In this way she gradually got worse, until in about three years after her sickness her menses made their appearance, and in a short time after, one morning one of these dizzy spells came on and she felt prickling pains in her fingers, hands, and toes, and the next she knew of herself she was lying on the couch and the doctor was sitting by her side. She had just recovered from a spell of fainting, but she got better and did not have another for several months after. But she now began to have such depressed feeling in her chest, with a laming soreness which extended downward over her bowels.

She began to experience feelings of fear, with other strange feelings, which were getting so bad that she feared that she was going crazy. The pain in her head would sometimes be so stunning that she could not walk. About four years ago she obtained employment in a woollen mill, first at weaving, but the noise and jar of the loom was too much for her, so she was put to spooling, but had to quit it, as the general noise of the mill made her so nervous that she could not rest at night, even though she felt sleepy all the time. Her spells began to come on at shorter intervals, so that she now had from one to four attacks a week, always in the morning on attempting to rise or shortly after she was up.

A general despondency now came over her, and the strange feeling in her head got worse, so much so that she could not be left alone. One physician after another was consulted, one claiming that it was spinal trouble, another a reproductive disorder, and still another thought the spleen was the cause, but the treatment brought about no improvement. For over a year previous to consulting me, she had taken but little medicine, excepting a few bottles of patent medicine for her nerves.

Pharyngo-nasal cavity of this lady was spacious, somewhat œdematous, bathed with a tenacious muco-purulent

discharge, and a small crust in the upper anterior portion. Tonsils somewhat enlarged, nasal passages dry, with but slight enlargement of turbinates.

I gave the usual local treatment for chronic rhinitis, prescribed the Larix Comp. Celerina, and employed both galvanic and faradic electricity. She improved so much that in August she took a position as clerk in a dry goods store, although I protested against her doing so, for fear her nerves would not stand it. She has had two spells since I began to treat her. The last one occurred on the 2d of October, but was not severe. Since then she is feeling much better, but has great fear of the spells returning. She is at work again at writing.

I also used spray producer with vaseline and eucalyptol mixture for pharyngo-nasal cavities; no local treatment was made to the throat, because I desired to make the test of proving that it would get well by treatment to the superior passages alone. After this the sprays were used every other day, and after the end of the fourth week but twice per week, and later at longer intervals.

Goitre: A New Habitat.

A. B. Holder, M. D., Memphis.

The very considerable prevalence of goitre in a region not mentioned in the literature of the subject may be worth reporting.

It will appear, also, that this prevalence is among a race of whom it has been said (D'Orbigny, *Voyage pittoresque dans les deux Ameriques*, p. 455), that "the native American Indian is much less subject to goitre than the European, or Creole."

My observations were made during a residence in Montana, and the region referred to is within that state, Dakota, and Wyoming.

Exact figures I am unable to give, but I can assert with confidence that there existed in a tribe of Indians with which I was associated, living in Montana, south of the

Yellowstone river, thirty cases of goitre among the 2,500 people, and this proportion at times is exceeded. Not a great while ago occurred, in a brief space of time, six cases in a single family,

It exists to an equal extent among a band of northern Cheyennes, whose reservation lies just east of the one just referred to, and to a still greater extent among the Lower Brulé Sioux, of Dakota. Dr. Jos. Graham, of that agency, informed me that one in thirty of that tribe has goitre, a large majority of the cases being in females. Almost every branch of the great Sioux tribe suffers more or less.

The follicular form is that existing among these Indians, and the goitres never reach large proportions, nor become dangerous to life; indeed they seldom, except for the deformity, cause any inconvenience. The course is not only benign and mild, but the tendency is frequently toward spontaneous recovery, the recovery often being complete.

Authorities agree that goitre is a regional disease. In support of this, I may state that among Indians it is limited pretty closely to those tribes living in the region I have mentioned, viz: the northwest, between the Mississippi River and the Rocky Mountains. It is nearly unknown among Indians of similar habits of life whose home is on the Pacific coast, as I am informed by physicians at Hoopa Valley, Cal.; Tulalip, Neah Bay, and Yakama, W. T., and Klamath, Oregon. While quite common among certain bands of northern Cheyennes living in Montana, Dr. Geo. Westfall, physician at Darlington, I. T., writes me he had never seen a case among the southern Cheyennes living at that agency.

One theory, well supported, as to the cause of goitre attributes it to habitual use of water containing an excess of magnesium salts. This theory received substantial support from the experiment at Rheims, where goitre was prevalent till after closing certain springs, from which the water supply had been obtained, and which were charged with these salts, when goitre at once ceased to prevail. (Agnew in *Pepper's System of Medicine.*)

A theory that perhaps is quoted more than any other, is that stated by Hartshorn (Reynolds's system), "Goitre depends upon a constitutional depravity produced by exclusion of light, stagnation of air, and dampness in narrow and deep Alpine valleys, aided by poverty, ignorance, and frequent intermarriage in restricted population."

Bad air, poverty and crowding alone are not sufficient factors, since goitre is rare in the dense eastern cities. Exclusion of light, stagnation of air, and dampness are not necessary factors, since those cases that have occurred in my practice have been among inhabitants of a region where the reverse of these conditions is found, there being wasteful abundance of sunlight and purest and dryest air.

The waters, however, are of that kind known throughout the arid regions of the west as "alkaline." On evaporation, as spontaneously from the prairie ponds, a heavy white deposit is left, which is used by the natives as an efficient purge. The water itself is, to those not accustomed to it, a decided laxative. What the chemical constitution of this deposit is I do not know, nor do I know that the water is the active agent in the causation of goitre. The two exist here together, but the relation is only a matter of inference. It may be observed that removal from the region is said to have effected cures in the cases of white men who had acquired the disease by residence here.

While the Indian is equally susceptible, race seems not necessarily a predisposing cause, since goitre in this region is not confined to them. I had a patient with goitre, a young white man who had been living three years near the reservation. In his neighborhood, at the time, were two other white men, ranch men, similarly affected.

Heredity is, on the contrary, influential. There is reliably reported to me an Indian family in which six members, father, mother, and four children, were successively affected.

Congenital goitre I have not seen. The youngest case that came under my observation was a girl about twelve years old.

SELECTED ARTICLES.

SANITARY ENTOMBMENT—THE IDEAL DISPOSITION OF THE DEAD.

By REV. CHARLES R. TREAT, of New York.

[From the *Sanitarian*, December 1889.]

It is a strange thing that the time should have come to attack the churchyard in its use for the burial of the dead; but it is really far more strange that the churchyard should have come to be one of man's most deadly foes. This, however, every thoughtful man will have to admit to be true, and this will make easy what otherwise would have been impossible for a tender or reverent mind.

As a general statement, it will suffice to quote the words with which Lord Beaconsfield denounced the churchyard, in the House of Lords, in 1880: "What is called 'God's Acre' is not adapted to the times in which we live or to the spirit of the age. The graveyard is an institution prejudicial to the public health; and the health of the people ought to be one of the considerations of a statesman. The time has arrived when a safer disposition of the dead should be instituted."

In view of such a statement, and of many more that come readily to mind that have been made in stronger terms, and most of all in view of the fact that the agitation against the churchyard has been maintained for more than a hundred years, it is amazing that this use should die so hard; and, as we survey the past, it will amaze us more to be compelled to confess that the churchyard has been made man's foe by civilized and Christian men! The story of this use of consecrated ground is so short, that although familiar, it may well be told again.

In the early Christian centuries, as in the centuries preceding, among men of all religious beliefs and practices, the conviction, both instinctive and founded on experience, prevailed, that the dead should not be brought into proximity with the living. Accordingly the practice definitely

demanded by the "Twelve Tables" became universal, not to bury within a "city" or any group of human habitations. The first step in the wrong direction seems to have been taken at the dying request of the first Christian emperor, who was interred at the entrance of the Church of the Holy Apostles, in Constantinople. The tendency, however, to follow this example, and to secure similar interment in holy earth, was stubbornly resisted; and it was not until the latter part of the sixth century that burials were permitted within towns or cities, and it was not until the eleventh century that burials were permitted in churches. From this time the custom continued without notable interference, until the latter part of the last century. Then, in that era of tremendous change, the churchyard did not escape. In Paris, the church yard of the Church of the Holy Innocents was first condemned in the interest of the public health, because much sickness had been traced to the foul stenches that rose therefrom; and it is worthy of special notice, as indicating the extent of the danger, that M. Thouret, the official charged with the duty of disinterring the dead, was overcome by the foul air that he was compelled to breathe, and barely escaped with his life from a putrid fever that he there contracted. A little later the grounds about the churches of St. Germain des Pres and St Eustache were also barred from burial, and the contents of their graves were carried to the quarries that have since become the "Catacombs" of Paris. In Austria, under Joseph II., the ruler of such unhappy methods, but of such noble aims and advanced ideas, the burial of the dead within or near to churches was prohibited by law, and this was such an honest enactment that neither rank nor wealth could evade it.

In England, unhappily, the progress of this reform was not so rapid. Bishop Latimer had soundly said, in a discourse upon the restoration to life of the widow's son at Nain: "The citizens of Nain hadd their buryinge-place withoute the citie, which no doubt is a laudable thinge.

And I do marvel that London, being soe great a citie, hath not a burial-place withoute. For no doubte it is an unwholesome thinge to bury within the citie, especiallie at such time when there be great sicknesses and many die together. I think verilie that many taketh his death in St. Paul's churchyard. And this I speak of experience, for I myself, when I have been there some mornings, to heare the sermons, have felt such an unwholesome and ill-favoured savour, that I was the worse for it a while after, and I think no lesse but it is the occasion of great sicknesses and disease." And it is deserving of mention that Sir Christopher Wren entreated the citizens of London, in rebuilding the city after the great fire of 1666, to put an end to the pernicious practice of burying within their churches and about them, and even within the limits of their city. But these appeals, and many more that were more urgent and more recent, were vain, and it was not until nearly the dimdle of our proud century that England would listen to the reformer of this crying evil.

In this country, partly because there were few places of large population, and partly because it was an early and general tendency to use cemeteries rather than churches and the grounds adjacent to them, the evils of earth-burial did not manifest themselves so soon or in so marked a manner as in the old world. But there were instances enough to convince the most incredulous that a radical change must be made. Dr. Ackerly, writing in 1822, thus describes the condition of the burial ground connected with Trinity Church, New York, forty years before: "During the Revolutionary war this ground emitted pestilential vapors, the recollection of which is not obliterated from the memory of a number of living witnesses." In the same year the *Commercial Advertiser* published an article in reference to the present evils of earth-burial at the same place, in which it was said: "It will be remembered that the graveyard, being above the streets on the west and encompassed by a massive stone wall, and the east side

being on a level with Broadway, it results that this body of earth, the surface of which has no declivity to carry off the rain, thus becomes a great reservoir of contaminating fluids suspended above the adjacent streets. In proof of this, it is stated that, in a house in Thames street, springs of water pouring in from that ground occasioned the removal of the tenants on account of their exceeding fetidness." At a later date Dr. Elisha Harris brought this telling indictment against the same place of interment: "Trinity churchyard has been the centre of a very fatal prevalence of cholera, whenever the disease has occurred as an endemic near or within a quarter of a mile of it. Trinity place west of it, Rector street on its border, the streets west of Rector, and the occupants of the neighboring offices and commercial houses have suffered severely at each visitation of the pest, from 1832 to 1854." It seems hardly necessary to add that the foregoing statements are not intended to make the impression that there was a worse condition at the churchyard named than at any other. The truth is, that this only illustrates what was universal throughout the city; and, in proof, it may be cited, among the unsavory recollections of the time, that the sexton of the "Brick Church," Beekman street, was accustomed to caution the persons standing near, when a body was to be deposited in the vaults, saying: "Stand on one side. You are not accustomed to such smells!" And the sexton of the Dutch church close by was known to have said that, when going down into the vaults the candles lost their lustre, and that the air was "so sour and pungent that it stung his nose." Naturally, therefore, it was noted in the public press: "This being the case with all the vaults where dead bodies are deposited and subject to be opened at all seasons, this method of disposing of the remains of our friends is at the least an unpleasant and certainly a dangerous one." And the result was to be expected that the board of health should utter their official protest against the continuance of the perilous practice, as

they did in 1806: "Interment of dead bodies within the city ought to be prohibited. A vast mass of decaying animal matter, produced by the superstition of interring dead bodies near the churches, and which has been accumulating for a long time, is now deposited in many of the most populous parts of the city. It is impossible that such a quantity of animal remains, even if placed at the greatest depth of interment commonly practised, should continue to be inoffensiveor safe!"

It may now be said: "Yes, this is all true, but we have changed all that! We no longer inter our dead in churchyards or burial-grounds within the limits of cities. We have provided cemeteries at great distances from our cities and large centres of population, and there the dead can do no harm."

To this the reply is easy and convincing; that, if the dead endanger the living when the population is dense, they certainly also endanger them when the population is sparse. The danger is only diluted. It still exists, and it ought to alarm us just as truly when a few are imperilled as when many are. As lovers of our kind, as claiming to be humane, we can no more be indifferent to the danger of a few than to the danger of many. True philanthropy has no sliding scale by which to gauge her gifts. And if the evils of earth-burial issue from the fact that a lifeless body is buried in the earth, then these are not escaped and can not be, unless the dead are buried at such a distance from the living that the living can never come into contact with the earth in which they lie, or breathe the air or drink the water which they pollute. Therefore, the question, as to the effect upon human health of our cemeteries, can be considered settled in the case of all that are not remote from the habitations or the approach of men; and such cemeteries, as we know, are few, and they are not the cemeteries which lie upon the borders of our great cities.

To strengthen this general position it will be sufficient to

quote the familiar but weighty assertion of Sir Henry Thompson: "No dead body is ever placed in the soil without polluting the earth, the air, and the water above it and about it;" and the testimony of Dr. Holland, who speaks as the opponent of this reform and the antagonist of Sir Henry Thompson, that the best situated cemeteries may be so mismanaged as to become unsafe; that cemeteries should not be too near dwellings; that they should not be overcrowded; that the soakage from them should be carefully guarded against; and that wells near burial grounds are unfit sources of drinking water; and the declaration of the French Academy of Medicine, that the cemeteries of Pere-la-Chaise, Montmartre, and Montparnasse, once suburban, now intramural, are the cause of serious disorders of the head, and throat, and lungs, that result in the loss of many lives; and to note the experience of Brooklyn, half girdled with graves, of which the editor of the *Sanitarian* does not hesitate to assert: "Typhoid fever is, taking one year with another, increasingly prevalent in Brooklyn, and it is, in our judgment, probably due for the most part to sewage pollution of the intensest and most loathsome kind —the seepage of graveyards!"

Thus far this subject has been treated as though the only evil influence that a decomposing body could exert would be through the poisonous character of the resultant compounds. Unhappily, the story is only partly told, and greater dangers remain to be revealed.

Within a few years it has become unquestioned that some of the deadliest diseases that attack mankind owe their origin and propagation to living organisms, and it may yet appear that the field of their operation is far wider than we now think. Not to attempt to tell all that has been ascertained, it will be sufficiently convincing to quote from Sir Henry Thompson's utterance in the *Nineteenth Century*, in 1880: "I state, as a fact of the highest importance, that, by burial in earth, we effectively provide—

whatever sanitary precautions are taken by ventilation and drainage, whatever disinfection is applied after contagion has occurred—that the pestilential germs, which have destroyed the body in question, are thus so treasured and protected as to propagate and multiply, ready to reappear and work like ruin hereafter for others. * * * Beside anthrax, or splenic fever, spores from which are notoriously brought to the surface from buried animals below and become fatal to the herds feeding there, it is now almost certain that malarious diseases, notably Roman fever, and even tetanus, are due to bacteria, which flourish in the soil itself. The poisons of scarlet fever, enteric fever (typhoid), small pox, diphtheria, and malignant cholera, are undoubtedly transmissible through earth from the buried body." That the burial of a body which contains the seeds of zymotic disease, is simply storing them for future reproduction and destruction, is amply proven by the researches of Darwin and Pasteur; of whom the former has shown that the mould, or fertile upper layer of superficial soil, has largely acquired its character by its passage through the digestive tract of earth-worms, and the latter, that this mould, when brought by this agency to the surface from subjacent soil that has been used as a grave, contains the specific germ of the disease that has destroyed its tenant.

We may fitly close this portion of the discussion with the conclusion, so strongly stated by Dr. James M. Kellar, in his report to the session of the American Public Health Association, at St. Louis, in 1884, which is far from an overstatement of the truth: "We believe that the horrid practice of earth-burial does more to propagate the germs of disease and death, and to spread desolation and pestilence over the human race, than all man's ingenuity and ignorance in every other custom."

It may now be asked: "Granting that these evils are inseparable from the burial of the dead in the earth or in tombs, what is the remedy? What else can be done?"

To this question not many answers can be given, because the modes of disposing of the dead have always been and must always be few.

Plainly, no such novel mode as casting the dead into the sea will be generally adopted. Plainly, also, the mode of the Parsees, grounded as it is in ancient, if not original, use—to give the dead to beasts and birds—will not become universal. And, plainly also, cremation will not be welcome to the many, free as it is from objection on the score of public health, if a method equally sanitary, and at the same time satisfactory to a reverent and tender sentiment, can be devised.

The inquiry, then, has reached its limit. For, apart from the modes that have just been named, there are no others but earth-burial and entombment; and earth-burial, as we have seen, can not be made sanitary under common conditions. Therefore, if the demands of affection and sanitation are both to be met, entombment is to do it, or it can not be done.

Happily, better than any other method of disposing of the dead that has ever been devised, emtombment has met the demand of affection. Never has any other mode so commended itself to men as this. There may have been at times a general adoption of cremation, and there may have been a general prevalence of earth burial, but the one has not long satisfied the sorrowing survivors, and the other has owed its beginning and continuance to the apparent absence of alternative. Wherever the living have been able, and the dead have been dearly loved or highly esteemed, the tendency to entomb and not to bury has been constantly manifested.

To call attention to this tendency is enough to prove it, so easily accessible is the evidence and so familiar is its operation in the human heart. The most natural reference will be, first, to the Mausoleum, the tomb of Mausolus, that was erected by his sorrowing Queen, Artemisia, at Halicarnassus, upon the Ægean's eastern shore; and that

became at once one of the few great wonders of the ancient world. This was intended to do honor to the loved and illustrious dead; and this it did, as no grave or pyre could do. This was also intended to protect the lifeless form from ruthless robbery and reckless profanation; and it performed this task so well that, for near two thousand years, no human eye beheld the mortal part of Mausolus and no human hand disturbed its rest. At a far earlier time, Abraham, the Father of the Faithful, while he illustrated this tendency to entomb the dead, also offered an influential example to all who would do him reverence, as, in the hour of his great sorrow, he sought the seclusion and the security of Machpelah's cave for the last earthly resting place of his beloved wife. There he buried Sarah; there he and his son and his son's son and their wives were all laid to rest, and the place of their repose hath not been violated even at this distant day. To this constant tendency constant testimony is borne by the massive and magnificent tombs in which India abounds, the tombs and pyramids that make marvellous the land of the Nile, the tombs that stood thick upon the Appian Way and that rose superb upon the Tiber's shore, the modern use to which the Pantheon is put, the Pantheon at Paris and the Crypt of the Invalides, the Abbey of Westminster matchless in memorials, the sepulchres within the hills that gird Jerusalem, and the sepulchre in which the Nazarene was gently laid when His agony was ended.

It remains to consider whether entombment can be made sanitary; if it can be, the problem is solved, for entombment has ever been the best that the living could do for their dead, and, with the added advantage of promoting or ceasing to be prejudicial to the public health, entombment will be the choice of all whom cost or caprice does not deter.

That entombment can be made sanitary is evident from the fact that, in countless instances, in many lands and through long periods of time, it has been made sanitary by

the ingenuity of man or by unassisted nature; and it is also evident from the fact that decomposition and disease germs are the dangers to be guarded against, and that against these both ancient and modern science have been able to guard. Not to enumerate all the modes that have been chanced upon or that have been devised by men, there are two that have been notable and are available for modern use—embalming and desiccation.

It is a delusion to imagine that embalming is a lost art; that, like some other marvels of the ancient time, this is a secret process that perished with the people that employed it. Did we desire it, we could embalm our princes and our priests and retain their shrunken similitudes for distant coming times to gaze and gape upon as skilfully as they who practiced this art in Egypt's palmiest days. Nay, it is doubtless far within the truth to claim that better than they did we could do; and we are actually apprised of better methods and results than they employed or could attain, and it is not unlikely that we shall hear of better methods still. But Egypt's method, or its modern counterpart, will hardly now be popular. It involves too much mutilation and too much transformation. When it has done its work little is left but bone and muscular tissue, and these are so transfused with foreign substances, that a form moulded from plastic matter or sculptured from stone could almost as truly be considered that of the lamented dead as this. Moreover, indefinite preservation of the dead is not desirable, and is not desired. The uses to which the Egyptian Pharaohs and their humbler subjects have been put in these days of indelicacy and unscrupulousness in the pursuit of science or sordid gain are not such as to make many eager to be preserved for a similar disposition when the present shall have become a similarly distant past.

Desiccation, in striking contrast with embalming, is the process of nature rather than of art; and involves no mutilation and no substitution of foreign substances for human

flesh; and does not by unnatural means preserve the semblance of the human form so long that a susceptible sentiment is shocked and a due return of material humanity to the elements that gave it birth prevented. Desiccation is so far a natural process, that it seems not to have been thought of, until nature had done the work and shown the product; and through many centuries, and upon an extensive scale, nature had employed the process before it occurred to man to copy her, and adopt her method for the disposition of his dead.

Wherever the air that enwrapped the lifeless form of man or beast was dry, desiccation anticipated and prevented decomposition. In deserts, upon elevated plains, upon the slopes of lofty mountain ranges, to which the winds that passed their summits bore no moisture, the dead have not decayed, but have dried undecomposed. In the morgue attached to the Hospice of St. Bernard, the dead, lifted too late from their shroud of snow and borne thither to await the recognition of the friends, dry and do not decay. In the "Catacombs" of the monastery of the Capuchins at Palermo, and in the "Bleikeller" at Bremen, the same phenomenon has appeared. Even Egypt is a confirmation of these statements, for it is probable that, had much less care been taken to preserve the dead, they would not there have yielded to decay as in other lands; and that moisture is so far absent from the atmosphere that the dead would have been preserved from decay by desiccation had not embalming been resorted to. Upon the elevated western plains of this continent, the bodies of beasts and men, by thousands, have been preserved from decomposition by desiccation. To take one instance out of many that might be cited: A cave was not long ago discovered high up among the Sierra Madre Mountains, within which were found, where they had rested undisturbed for many years, the lifeless figures of a little aboriginal household, dried and undecayed. Father, mother, son, and daughter, one by one, as death had

overtaken them, had been brought thither, bound so as to keep in death the attitude that had marked them when at their rest in life, and there they bore their silent but impressive witness to the beneficent action of the unmoist air that had stayed decay and kept them innocuous to the living that survived them. In Peru, instances of this simple, wholesome process abound on almost every side; upon the elevated plains and heights, as also beside the sea, the dead of Inca lineage, with the lowliest of their subjects, are found in uncounted numbers, testifying that in their death they did not injure the living, because desiccation saved them from decomposition; and a recent traveller has vividly described the scene that a battle field of the late war presents, and that illustrates the same process, where, though years have passed since the last harsh sound of strife was heard, the fierce and bitter combatants still seem eager to rush to conflict or to sink reluctant into the embrace of death. And all these instances furnish conclusive proof that decomposition can be controlled, and that its loathsome and unwholesome transformations can be prevented, if only the simple conditions are secured that have already so extensively effected this result. That these conditions can be secured no one can doubt; for, every day, in almost every clime, by processes familiar and available to man, the atmosphere has moisture added to it or taken from it; and the extraction of the moisture from a portion of the atmosphere is all that is required to introduce the process of Peruvian desiccation into the sepulchres of Chicago or New York.

It will naturally be further asked, "Is this all that has been done to demonstrate the efficiency and availability of desiccation for the dead?" To this the answer would be sufficient that the evidence that has been adduced is ample; and that, at once, in perfect confidence as to the result mausoleums might be erected, with provision for the withdrawal of the moisture from the atmosphere and for

the passage of the desiccated air through the sepulchres in which the dead should rest. So little is involved, and so much has been accomplished without the application of any human skill, that it seems inevitable that, as soon as the resources of modern architecture and sanitary science are drawn upon, the desired result will be at once attained. But, to make assurance doubly sure, several carefully conducted experiments have been made under the supervision of the directors of the New Mausoleum movement, that prove that the conditions of desiccation can be controlled, and that decomposition can be prevented, that where it has begun it can be stayed, and that prolonged preservation, with a fair approximation to the appearance in life, can be made sure, for the recognition of absent friends, for transportation, or for the furtherance of the ends of justice.

When, now, it is added that desiccation has been ascertained to be an efficient agent in the destruction of disease germs, as proved by the experiments of Dr. Sternberg, of the Hoagland Laboratory, and by the investigations of other experts, enough seems to have been said to establish the truth of the assertion that entombment can be made sanitary, and that, therefore, entombment offers the satisfactory solution of the problem how to dispose of the dead so as to do no violence to a reverent and tender sentiment and at the same time not to imperil the public health.

The proposition, then, soon to be submitted for public approval is this: to erect in the suburbs of our large towns and cities, perhaps even in their most thickly populated parts, extensive and handsome edifices that will provide sanitary sepulchres for the dead. To be comparatively inexpensive they will have to be comparatively plain; and it seems not too much to hope that our cities will soon adopt this mode of disposing of the dead that depend upon the public care for burial, and that the horrors of a "Potter's Field," of which it can not be divested even in a fair and sea-girt isle, may be forevermore unknown to men.

All these structures, however, will not need to be inexpensive and plain. Many of them, as the rich shall lavish their wealth upon them, will be spacious and splendid, as no tombs of earlier time have ever been. These will naturally differ in design and plan, and while one will incline to one order of architecture, another will incline to another; one will incline to the light and graceful style of the Greeks, another to the substantial and enduring Roman type, another to the still more firmly built and time defying type of the Egyptians, another to the rich and exquisitely decorative Byzantine style, and another to the Gothic type, with its suggestions of spiritual aspiration and heaven-sent consolation, and heaven-born peace. It should certainly be the architect's study to avoid, as either of these styles is adopted, the appearance of edifices with familiar and established secular or sacred uses. These must, if possible, be so designed as to speak of repose and loving care, and undying recollection, and should appear to be homes for the dead, and yet temporary habitations in which they only rest until the resurrection.

Perhaps the most favored style will be that of the "Campo Santo," like that at Pisa, where the Holy Field lies light upon the dead, and where the softened sunshine and the tempered wind, and the hushed notes of happy birds, and the sweet seclusion of the spacious and graceful Gothic cloister, with its memorials of many who have been loved and lamented, and its rare pictorial teaching of the life to come, all speak soothingly of hope, and peace, and comfort. Such a "Campo Santo," modified to meet the demands of modern life and art, might well be one of the crowning monuments even of this wondrously achieving age. To what a grand and noble consummation would it seem to lead the race in their efforts for a fitting disposition of their dead! And what honor would it reflect upon the men who should erect it, and place it at the command of their fellows, in due regard for what both health and heart require!

Within, there would be, as the unit of construction, each sepulchre so constructed that anhydrous air could enter, or would be made to enter, and withdraw, laden with moisture and morbific matter, which it would convey to a separate structure, where a furnace would complete the sanitary work that the anhydrous air had begun, and return to the external atmosphere nothing that would be noxious. Each sepulchre, in itself and its surroundings, would appear to provide a place of repose, and would have electrical appliances attached to it for the instant indication of the return of consciousness to any who had been prematurely entombed; and would promise and provide the most perfect and permanent protection against intrusion or theft that can be found on earth. In arrangement these sepulchres would have to conform to the price paid and the taste of the purchaser. Many would be like the single graves that thickly ridge portions of our cemeteries; many more would be grouped together after the semblance of a family tomb, but in the general impression, in the surroundings and suggestions, the resemblance to the provisions of a cemetery would go no farther. For here there could be no burning sun, no chilling cold, no inclement storm; for the living, as they should pay the last sad honor to the dead, or in any subsequent tribute of affection, there could be no exposure, and for the dead, there would be only the constant semblance of the comfort and the quiet of the best ordered and most tranquil home. Thus, in providing the utmost that exacting affection and sanitary science can require, and in taxing to the utmost the resources of art, in architecture, in sculpture, and in the use of subdued and according hues and forms for appropriate decoration, these "Campos Santos," or "Mausoleums," or "Mansions of the Dead," will seem to have realized the ideal disposition of the mortal remains of those who depart this life.

In conclusion, it is evident that the present modes of disposing of the dead are unscientific, unwholesome, repulsive, and, in a word, unworthy of this enlightened age.

On the other hand, it is apparent that the New Mausoleum method of disposing of the dead affords relief from all these obnoxious features, inasmuch as it provides for the perpetual care of the dead; protects from premature interment; protects the dead from theft; protects the living from exposure, while paying the last duty to the dead; meets the demand of the most reverent and tender sentiment; meets the urgent sanitary demand that the dead shall not endanger the living; meets the medico-legal demand that the evidence of crime shall not be destroyed; and costs less, in view of its manifold advantages.

Hospital Reports and Clinical Notes.

A CASE OF SUPRA-PUBIC LITHOTOMY.

Service of Prof. S. Logan, M. D.—Reported by Wm. Elliott Parker, R. S.

John K., a white man, native of Germany, aged 62, applied for admission to ward 7, of the Charity Hospital, on the 31st of October, 1889, occupation carpenter. Says that up to ten years ago was a hard drinker, but has been temperate since that time; complains of frequency of urination; says that about six months ago he noticed that his urine had become bloody; he has pains in the hypogastric region, and his urine sometimes stops suddenly. It was found that patient had an enlarged prostate, and the sound easily detected a stone, which was thought to be large and hard. A specimen of his urine was examined in the Pathological Department before the operation, and found to contain pus corpuscles, red blood cells, and crystals of triple phosphate; reaction acid; specific gravity, 1,013. The parts around the pubes were scrubbed and shaved on the 4th of November, and the patient was taken to the amphitheatre and put under chloroform. An incision about an inch and a half long was made just above, and extending to the pubes. The bladder having been previously distended with twelve ounces of a saturated solution

of borax, Hutchinson's bags were introduced into the rectum and distended. As soon as the bladder had been exposed and all bleeding stopped, a tenaculum was introduced into the bladder and the fluid allowed to escape. Two sutures were then passed through the wall of the bladder and an incision made between them. The stone was then removed. The walls of the bladder and abdomen were then sutured together and a self-restraining catheter introduced through the wound. The stone was found to be of the uric acid variety, and weighed an ounce and a half. The bladder was washed three times daily with a saturated solution of borax, and the wound dressed as antiseptically as possible.

Nov. 4—P. M.—Temperature 102 degrees F. Patient complains of pain in hypogastrium. Teaspoonful of the syrup of morphia (= gr. ¼) ordered. Nov. 5—A. M.—Temperature 98 4-5 degrees F., and patient feeling better. Nov. 5—P. M.—Temperature 100 1-5 degrees, but feels well; no pain. Nov. 6—A. M.—Temperature 98 3-5 degrees; patient feeling well and has a fine appetite; took beef tea and chicken broth several times, and seems in fine spirits. Nov. 7—A. M.—Temperature normal and patient doing well. P. M.—Temperature 101 degrees F. Nov. 8—A. M.—Temperature 98 4-5 degrees, and patient feeling and eating well. Same diet as above mentioned, with the addition of some milk. P. M.—Temperature 99 degrees F. It then ranged at normal until Nov. 13, when it went to 100 3-5 degrees F., and patient complained of dysentery. Nov. 14—A. M.—Temperature 100 3-5 degrees; says that he had seven passages during the night. Powders containing ten grains of Dover's powder and twenty grains of the bitartrate of potassium were ordered for him, to be taken every three hours. P. M.—Had six passages today. Temperature 100 4-5 degrees F. Nov. 15—A. M.—Four passages last night. Temperature 99 1-5 degrees F. P. M.—Seven passages since morning. Temperature 99 4-5 degrees. Nov. 16—A. M.—Five passages during

night. Temperature 99 degrees F. P. M.—Five passages today. Temperature normal. Nov. 17—A. M.—Temperature normal. Six passages last night. P. M.—Six passages today. Temperature normal. Nov. 18—Temperature normal. Six passages last night and five today. Nov. 19—Four passages last night. Temperature normal. His temperature never rose above 99 2-5 degrees F. again, The above prescription was discontinued Nov. 19 and the following mixture ordered for him:

℞ Magnes. Sulph. ..... ℥ ii
Morphinae Sulph. ..... gr. ii.
Aqua Cinnamoni ad. ..... ℥ 07 M.
Sig: Tablespoonful every three hours.

This was tried for three days, and as no favorable results were obtained, twenty drops of laudanum was ordered for him, to be followed in one hour by ℥ss pulv. ipecac. This caused excessive nausea and vomiting, so was stopped, and the following powders were ordered for him:

℞ Pulv. Opii ..... gr. xii.
Plumbi Acetat ..... gr. x.
Gum Camphor ..... gr. viii.
Ft. Pulv. No. 8.
M—Sig: One every six hours.

The patient gradually grew weaker, and died Nov. 28, although every effort was made to stimulate him. He had no lung or heart trouble that was made out by the careful examination given before the operation. Never had any peritonitis. The wound in the bladder had healed so that the tip of the small finger could barely be introduced. The catheter was removed on the fourth day after the operation, and the sutures on the sixth day. Unfortunately, no autopsy could be held, but the patient undoubtedly died from the dysentery that complicated the case, and not from the operation itself.

Dr. A. B. Holder, a graduate of our Medical Department of 1886, has resigned from the Indian service in Montana, and is now located at Memphis, Tenn. The doctor has not kept his eyes shut, but has seen things not laid down in the books. He gives one of the results of his observations in an interesting article in this issue of the JOURNAL.

LEADING ARTICLES.

THE EPIDEMIC INFLUENZA.

We can not let this number of our JOURNAL go forth without some comment on the epidemic prevailing at this moment throughout Europe and in the northern states of this country. Though we have encountered this disease in New Orleans during the past two months—for there is a mild epidemic here—yet its symptoms are so light and its duration so brief that we can well afford to extend our sympathy and interest to sister cities without asking a similar act in return.

The presence of "la grippe" in a community may be augured by the increase of such lung troubles as bronchitis and catarrhal pneumonia, and likewise a higher death rate from these two diseases, which so frequently complicate and cause to prove fatal an otherwise mild affection. For a time it looked as if our city was going to join the other afflicted districts, when Dr. Blanc, chief sanitary inspector, called attention to an increase for December, 1889, of the mortality from lung diseases, including pulmonary phthisis; but more recent reports make the outlook much more favorable, and the influenza has thus far caused but one death in New Orleans.

Epidemic influenza is not a new thing by any means, and has been described more or less vividly by many of the older writers, including Hippocrates, but it was not until about 500 years ago that the records were clear enough to indicate the peculiar character of these epidemics. Dr. E. A. Parkes, in Reynolds's System of Medicine, has isolated the earlier epidemics into the following table:

Century.	Epidemics.
Fourteenth	6
Fifteenth	7
Sixteenth	11
Seventeenth	16
Eighteenth	18
Nineteenth (first half)	10

Since 1850 some seven or eight widespread epidemics have occurred, occasionally associated with or following upon the epizootic of the lower animals, as in the year 1880. It is said that "la grippe" occasionally precedes cholera, to which it is supposed to have some special relationship, as a causative factor, but this has never been demonstrated, and it is likely that it has nothing more to do with this dread scourge than any other epidemic affection that weakens the system and diminishes its power to resist the onset of a graver disease.

It is worthy of note, however, that several close observers have accepted the relationship of the two diseases, and Prof. Zdekauer, of St. Petersburg, who has studied this question, believes that the influenza is a precursor to cholera epidemics, after having observed this to be the case in four different instances. This theory would seem to be corroborated by the announcement from the daily press of the spread of the cholera up into Mesopotamia, that country of Asiatic Turkey, between the Tigris and Euphrates rivers. It is said that, should the disease proceed further north to the banks of the Caspian sea, it will be almost impossible to keep it out of Europe, because of the frequent and general intercourse between the Eastern and European ports.

Like the cholera, the influenza usually begins in the East. The great epidemic of 1830 began in China, spread to the Indian Archipelago, swept Russia, Prussia, Denmark, and Finland, Germany, and France—all within eight months; it then reached England and Sweden, and finally crossed to the United States, eking out its existence here in February, 1832. It had been in the United States before this, however, as early as 1647, according to Noah Webster; and when it raged in the democratic days of 1790, it attacked the august person of the President of the United States, and so it is recorded that George Washington had the "grip."

The cause of epidemic influenza is unknown. It must

be an exceedingly imponderable something, capable of reproducing itself in the atmosphere of every country, in the most diverse climates, and under a great variety of conditions. Ozone has but little to do with it, damp soil is not responsible for it, and cold and heat are familiar with it. The *materies morbi* is breathed in from the atmosphere, through which it is diffused, but it may be directly acquired from proximity to a patient suffering from the disease.

All ages are alike liable to it, and there is no locality to which one may flee from this omnipresent contagion, for vessels just from sea have been attacked while anchored off shore.

The cases which we have seen in New Orleans yielded well to treatment when the treatment was quinine, which seems to be almost a specific. This, according to extensive observers, should be used early, and we believe that the action of this wonderful drug in relieving and preventing local congestion, is the secret of its success in influenza. During the present epidemic quinine has been largely used, and with good results. Many other remedies have been tried, and we await the report of their action in this interesting malady.

DR. STERNBERG AND DR. FREIRE.

The Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the fiscal year 1889 is an interesting one, and doubly so to the physicians of the Gulf states on account of the large space devoted to the discussion of yellow fever. While it is our intention to speak principally of Dr. Sternberg's work, still we can not refrain from making more than a passing notice of some valuable work done by Dr. Chas. Faget, of New Orleans.

Dr. Faget contributed an important chapter to the work on "The Treatment of Yellow Fever." He details his experience at Camp Perry, Florida, during the epidemic

of 1888. His paper is illustrated by thirty-three clinical charts, and accurate notes as to the appearance of albuminuria, etc. The notes as to the therapeutic measures employed in individual cases are somewhat scanty. In his remarks Dr. Faget says: "The typical course of this fever is a want of correlation or correspondence between the course of the pulse and temperature; the temperature rising or keeping up for one or two days, rarely three or four, with an ordinary decrease in the mornings, while the pulse decreases in frequency from the first day to the second, and so on, with an exceptional or insignificant rise in the evenings, and continues to decrease in convalescence, falling below the normal to 58, 50, 44, and, in rare instances, to 40 a minute, which is, as it were, the signature of yellow fever, if any doubt had existed previously about the diagnosis. The low range of the pulse during the whole course of this fever, and compared with the corresponding temperature, and during the prostration of convalescence, when the pulse would be expected to be quick, as after fevers in general, is also a most remarkable fact."

The credit of the discovery of the want of correspondence between the pulse and temperature in yellow fever is due to a New Orleans physician, Dr. Chas. Faget, Sr.

In regard to practical treatment, Dr. Faget justly remarks: "It seems to me to be more difficult to say what to do in yellow fever than what not to do. As this disease has a tendency to rapid asthenia from the beginning, anything which would tend to weaken the patient should be carefully avoided. The direful effects of bleeding have been demonstrated. * * * Purging, with the idea of driving the microbes from the alimentary canal, is still practised extensively. Do not the symptoms and pathological anatomy prove that the whole system is affected? And what proof is there that it is affected through a different process—through the ptomaines—the alimentary canal alone containing the original cause of all the subsequent

general disturbance? * * * Overheating with blankets and hot applications tends to increase the fever, and, by inducing excessive perspiration, exhausts the patient. * * * I would also distrust anything tending to irritate the stomach, as repeated doses of bichloride (tending also to asthenia and disorganization), calomel, castor oil, turpentine in large doses." The last he considers as of doubtful efficacy. * * * "As symptomatic medicines, I have found antipyrin in doses of ten to fifteen grains to reduce high temperatures and to allay the nervous pains of the head, back, and limbs. I have not yet observed any decided bad effects from its use, the pulse sometimes becoming a little irregular and weaker. * * * Muriatic acid is recommended in typhoid fever almost as a specific. Why not the muriate of iron? Might not its happy effects in zymotic or infectious diseases be ascribed to its being a chloride? Even through its iron does it not help in the reconstruction of blood or stay its disorganization? Certainly it is a good remedy in yellow fever, which has, furthermore, such a tendency to hemorrhages (of the gums, stomach, etc.). * * * Besides the muriated tincture of iron, the medicine which I believe most important in the treatment of yellow fever is quinine, which should be exhibited whenever there is the least suspicion of a malarial complication. When yellow fever is recognized, the possibility of the intervention of another fever is not generally suspected. A clear case of intermittent fever supervening during the convalescence of yellow fever is called a relapse; the remedy is not applied, and an unfortunate result may be the consequence."

One part of Dr. Faget's report affords an apt illustration of the saying that great minds do not always run in the same grooves. He says that he distrusts bichloride of mercury on theoretical grounds, and does not see why the alimentary canal should be regarded as the laboratory of the *materies morbi*. The more recent investigations of Dr. Sternberg show the yellow fever microbe does take up its

residence in the alimentary canal and there elaborates the ptomaines which, when absorbed, set up all the changes which characterize the tissues of yellow fever victims. Basing himself upon this fact, Sternberg advised a plan of treatment which, in practical results, is certainly better than any other system of medication that has been adopted. This plan was tried in the Military Hospital of Havana on a large scale. The most striking result of "Sternberg's potion" (of bichloride of mercury and bicarbonate of soda) was a decrease in the mortality of 50 per cent. See NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, October, 1889, page 262.

A novelty in quarantine methods is described in this report. It consists of a portable disinfecting steam chamber, modeled after those in use at our own quarantine station, but modified so as to accommodate itself to railway transportation. The advantages arising from the use of this portable apparatus are too apparent to need description. We note a communication from Dr. Chas. B. Goldsborough, who died recently in this city.

The most interesting part of the M. H. S. report is that contributed by Dr. Geo. M. Sternberg. He went to Mexico and Brazil to hunt for the germ of yellow fever. The positive claims of Carmona y Valle, in Mexico, and of Freire, in Brazil, to have discovered the specific cause of this dreaded disease, gave the impulse to Sternberg's investigations. The substance of his results is this: that neither Carmona nor Freire has discovered the specific germ of the disease. Sternberg's report covers more than a hundred pages of printed matter, and even a brief synopsis of it is out of the question here. He sought carefully for the germ, but could not find it. Dr. Paul Gibier, who was sent by the French government to investigate yellow fever where it habitually prevails, said, "I am obliged to confess here, however much it may cost me, that my results contradict in an absolute manner the facts advanced by M. Domingos Freire."

Dr. Freire's own *confrères* in Rio de Janeiro would not accept his conclusions. One man especially, Dr. Araujo Goés, combated Freire's statements. It was Sternberg's fate to work with Dr. Goés, who is an intelligent worker and an accommodating man; but he had incurred the hostility of Freire. Before Sternberg published his report, Freire was his friend, and worked with Sternberg in his own laboratory and with his own materials for several weeks. Sternberg investigated Freire's claims and methods very closely, and, as a conscientious student of science, he could not corroborate anything that Freire claimed. It is hard to believe that a mere difference of opinion on matters purely scientific would cause unpleasant personal relations between enlightened men; but Sternberg's dissenting opinion seemed to have aroused the ire of the energetic Brazilian bacteriologist, aud, sad to relate, he published a pamphlet in Rio, in which he attacked Sternberg's good breeding. He accuses Sternberg of many and serious lapses of courtesy which are at once the obligation and the pleasure of gentlemen, and particularly so of the members of a liberal and enlightened profession. Freire, it seems to us, has been somewhat hasty, and his charges are calculated to do more harm to himself than to Sternberg. Matters of purely scientific interest should be discussed in a sober, serious manner, and unpleasant personalities should not be allowed to intrude themselves. Sternberg is not the man to make himself unpleasantly obtrusive. In Mexico he differed from Carmona, but no unpleasantness followed. Carmona's *hidalguia* prompted him to hear the dissenting views of Sternberg with the spirit that springs from the love of truth.

It is much to be regretted that any bad feeling was created in Brazil. Sternberg, the accredited scientific envoy of the United States, represented the professional body of his country. What he did, therefore, whether scientifically or socially, was a reflex of the condition of

the profession in our country. What he is capable of doing scientifically, his writings abundantly show; and what he is socially is too well known for us to seek information from the intemperate outburst of a hostile critic.

HOLT'S SYSTEM OF MARITIME SANITATION.

In the *Weekly Abstract of Sanitary Reports*, for Dec. 20, 1889, published by the United States Marine Hospital Service, we find the following:

"The following are the specifications for the steam disinfecting chambers about to be constructed for the United States Quarantine Station, Angel Island, San Francisco Bay. The drawings, to which the specifications refer, may be seen in the annual report of the Marine Hospital Service, 1889. These plans have been developed from the ideas first promulgated by Dr. Joseph Holt, formerly president of the State Board of Health, of Louisiana, and from the improvements made by Dr. C. P. Wilkinson, the present president of the same board. The principle involved, however, has recently been published in a description of Washington Lyon's steam disinfector, on page 420 of 'Hygiene and Public Health,' by Louis C. Parkes, M. D., of London."

This system of disinfection is being adopted at all the Southern seaports. It is, indeed, a source of pride to know that this method is entirely the product of indigenous brains, and not an importation. The adoption of the Holt system means the abandonment of crude, uncertain means of excluding pestilence in favor of positive and scientific methods of destroying the morbific agents at our very threshold. This system is Louisiana's gift to the world; it is her contribution to the vast store of knowledge which makes the nineteenth century a marked one.

In this connection it may be stated that our State Board of Health has recently very materially reduced the quarantine fees. All parts of the system now work with so little friction and loss of power that the imposts laid upon vessels were more than sufficient to cover the cost of the maintenance of the quarantine service.

Proceedings of Societies.

EAST FELICIANA MEDICAL SOCIETY.

At a regular meeting of the East Feliciana Medical Society, held in Clinton, La., Jan. 8, 1890, the following officers were elected to serve the ensuing term: Dr. E. M. Hooper, president, Wilson P. O., La.; Dr. A. Gazain, first vice president; Dr. A. J. Roberts, second vice president; Dr. Jas. Robinson, secretary and treasurer, Clinton, La.; Dr. A. P. Holcombe, corresponding secretary, Jackson, La.

The following delegates were elected to the State Medical Society: Drs. E. M. Hooper, L. G. Perkins, A. A. Carruth, W. F. Roberts, and W. J. Wall.

[It would give us great pleasure to chronicle the proceedings of the local medical societies of our State. We would esteem it a favor if the secretaries of these bodies would forward notices of meetings, papers, discussions, etc. The medical men of different parts of our own State are further removed from one another, as far as intercourse is concerned, than the great men of New York and Philadelphia. This is not as it should be. Our brethren should, in thought, come in closer contact. The pages of this journal shall always be open to anything that may in any way render the relations of our friends closer and more binding.—Eds.]

Abstracts, Extracts and Annotations.

MEDICINE.

ERYTHROXYLON COCA; ITS VALUE AS A MEDICAMENT.

By Marc Laffont, M. D., Paris, Professor of Physiology at the Faculty of Lille. France.

During the last few years the therapeutic use of coca has been so greatly extended that it may be interesting and useful as a *résumé* to enumerate its many applications.

Although coca has, from its earliest introduction as a pharmaceutical product into France, enjoyed the highest

professional recognition, this South American plant can hardly be said to have entered into current therapeutics. It is only since the discovery of the scientific application of the alkaloid of *Erythroxylon coca*, and since the important essays on the drug, and the experiments made with it, that physicians generally have studied and recognized its therapeutic value.

It is well remembered how, in former years, the virtues of the salts of quinine were held to entirely supersede those of cinchona; in like manner this inevitable error has arisen with coca, its alkaloid, cocaine, only having been considered by many.

In consequence of the tests made with cocaine, which, from a physiological point, have established the dose and the limit of its toxic effect, and, from a medical view, have brought to light cases of abuse which have resulted in more or less serious accidents, many have been led to regard the plant coca itself as a dangerous drug.

The proof of the therapeutic value of the coca leaf is clearly shown by the many excellent results obtained in practice with such reliable preparations of the drug as have been furnished the profession by that worthy pharmacist, Mariani.

As to the comparison which many of our *confrères* make between the preparations of cocaine and of coca, we do not fear to state that, however sound may be the theory of preferring to administer certain alkaloids to administering a preparation of a plant of which the virtues vary according to where and how it was gathered, the place of its cultivation, its quality, and the constitution and nature of the preparation—we repeat, we do not fear to state that in the majority of cases, as the alkaloid does not contain all the active principles of the plant, it can not be preferred, except in special cases where the particular action of the alkaloid alone is desired.

The fact is well established that the salts of quinine can not replace the extract, the wine, or the powder of cinchona the tonic principles and the essential oils of which have, without doubt, shown a special therapeutic value; and I need merely cite the indisputable success obtained by Prof. Trousseau with the powder of cinchona in checking malarial fevers which had resisted even the largest doses of sulphate of quinine. More especially cocaine can not replace all the active principles and the essential oils

of the leaf of *Erythroxylon coca*, as has been proved from the time of the earliest discovery and use of this plant.

In 1887, at the Institute of France (Académie des Sciences), and in 1888, at the Académie de Médecine, I demonstrated that coca, by virtue of its active principles, had three very distinct, separate actions (published in the "Proceedings"):

1. As an anæsthetic, acting upon the protoplasm of the terminations of the sensory nerves, preventing the transmission of painful sensations to the centres or the unconscious sensibility of Bichat.

2. As a nerve tonic, producing functional excitement of the cerebral and spinal nerve centres, and increasing the intellectual and muscular activity.

3. As a tonic to the unstriped muscular fibres of the stomach, the intestines, and the bladder, producing functional excitement of the constrictor action of the great sympathetic nerve, with consequent functional exaltation of all the smooth muscular fibers or muscles of organic life.

The dissatisfaction produced and the complaints which are made that the plant is wanting in uniformity of quality and is unreliable in producing the desired effects, are due to the varying quality of the preparation.

An essential requisite to produce reliable uniform preparations of coca, is a thorough knowledge of the origin of the leaf, its nature, and its quality.

Careful study and researches made by Mr. Mariani for many years as to the origin, the nature, the species, the culture of the different leaves of coca, and the care which he gives to his preparations, have been the means of placing at our disposal products uniform in quality and unvarying in their effects in those varied cases where their internal administration is called for.

It has long been known that the natives used the coca leaves to lessen fatigue, to keep up the spirits, and to appease the cravings of hunger.

The first and main application of the "vin Mariani" is, therefore, as a general tonic for persons either physically or mentally overworked; in convalescence after lingering wasting diseases, where nourishment is needed, and where it would be dangerous to overcharge the stomach; with all

whose recovery is tardy from wasting or constitutional weakness; in chlorosis, anæmia, and rhachitis.

It is further used in diseases more specially referable to atony of the smooth muscular fibres, among which we class atony of the stomach. In dyspepsia, in those very common cases where this organ has become weak and torpid, is distended, and fails to secrete gastric juice, coca is well indicated.

It is also serviceable in weakness of the vocal cords, in the case of ministers, singers, actors, teachers, and orators.

It is, moreover, of value in weakness of the vascular organs, with the anæmic, the plethoric, where, principally on the face, the small blood vessels show enlargement or venous arborescence which points to a similar state in the vessels of the nervous centres. The same vascular weakness is also observed with the varicose, in whom coca is indicated; likewise with the paraplegic, with whom it regulates the circulation of the nervous centres.

It may be also as a regulator of the nervous centres that the infusion of coca, known as thé Mariani, produces such marvellous results in mountain sickness, in sea sickness, and in the vomiting of pregnancy. It is well remembered how this preparation sustained the illustrious Gen. Grant during several months.

From a psychological point of view, and from mental pathology, it may be stated that coca is the only drug which successfully combats melancholia, low spirits, and all forms of depression of the nervous system, upon which it acts "like fulminate," to use the felicitous expression of Prof. Gubler.—*New York Medical Journal, Dec. 7, 1889.*

LEPROSY IN TURKEY—ISLAND OF SAMOS.

[Extract from the *Revue Medico-Pharmaceutique*, Constantinople, Turkey, Nov. 30, 1889.]

The population of the Island of Samos is about 42,000 souls.

According to the official report of this little principality, printed in 1886, there are but twenty-two men and twenty-one women lepers, but many cases have been discovered which are not on the official list. Only the lepers in whom the disease has reached an advanced stage are isolated.

The Samian physicians and people attribute leprosy to uncleanliness, the excessive use of inferior olive oil, and of a sort of red caviar, known as tarama, a mixture of eggs in a state of putrefaction, very salty and offensive.

Marriage among lepers, or between a leprous and non-leprous person, is not prohibited. But if the non-leprous person asks for divorce the law accords it.

The Samians consider leprosy as contagious; still, the leper may go about freely and exercise the calling of muleteer or porter in the sight and knowledge of all men, until some day he is brutally expelled to the mountains and abandoned to his fate, unless received into a monastery where the monks accommodate the lepers in huts a little removed from the convent. The prince of Samos has lately constructed a refuge in which he proposes to collect and isolate the lepers of the island.

The archimandrite of a monastery in which there are fifteen lepers states the results of his observation of leprosy since 1839. He has observed a great many lepers at his convent. He does not believe leprosy to be contagious, basing his belief on the fact that he has never seen the disease transmitted to parents or by marriage. He also relates the history of a man attacked by a deep ecthyma, which made him repulsive, and for which he was expelled from the community. This unfortunate man took refuge among the lepers, and lived among them twenty years. His body, covered with suppurating surfaces, exposed him to the easy transmission of the disease. He never, however, contracted leprosy. He cites the cases of many mixed marriages, lasting as much as twenty years, in which there was no transmission of the disease. Finally, he cites himself as an example. For forty years he has lived in daily communication with lepers without contracting the disease.

With regard to hereditary leprosy, he is convinced of it by many facts. He cites cases of hereditary leprosy transmitted by grandparents to descendants whom they have never seen, and who have, in some cases, been born after their death.

The superior of the same monastery has studied leprosy in the cases of 200 lepers, who have died in the convent since 1835. His ideas differ little from those of the archimandrite. He has never seen leprosy transmitted from husband to wife. He has seen leprosy spontaneously

arrested in the case of one leper, who lived many years after having lost successively his fingers, toes, hands, and feet.

In another convent at Samos the result of careful observation of leprosy is that it is not contagious.

Doctor Panas, of Samos, has observed many facts opposed to the contagion of leprosy. He says, however, "the discovery of the bacillus embarrasses me," from which remark it may be seen that practitioners who are opposed to the theory of contagion can not resist the influence of the seductive theories of the day.

Mr. Zambonis, for many years secretary-general of the principality, and who has, consequently, been in a position to be aware of all that passes on the island, states that he has known many marriages in which one of the couple was a leper. He has never known the other to become contaminated by the disease. He cites one case of which the following is a brief account:

A few years ago the people of a certain village demanded the expulsion of a woman, become a leper, who belonged to one of the best families of that place. The prince, Aristarchi, was opposed to it, and had a detailed medical report on her case drawn up and sent simultaneously to Paris and Vienna. Casenave, Devergie, and Gibert, of Paris, and Hebra and Sigmund, of Vienna, expressed themselves in opposition to the contagiousness of the disease, and advised that the woman should not be expelled. On these reports the unhappy woman was left unmolested. The leper lived fifteen years in her family, with her relations and friends, none of whom contracted the disease. They lived in free intercourse with her and took no precautions against contagion.

A young lady of good family became attached to a man in whom leprosy was beginning. She married him in spite of opposition, and lived with him for eight years. She did not wish to survive him and took no means to avoid the disease. She was even inoculated with it several times by her husband, who wished to communicate it to her, all without result. The husband died a leper, while the woman still lives, strong and well.

In some villages lepers continue to live in their own homes for a length of time. They draw water at the wells with their bleeding, ulcerated hands. After them the women and children of the village draw water at the same

well, making use of the same well ropes. There has never been an example of inoculation or transmission.

In spite of the opinion of doctors, authorities, and of each Samian in particular, especially of such Samians as have been intimately thrown with leprous relatives and friends, the people are so afraid of leprosy that they oppose the erection of the lazaretto at less than six hours travel from Vathy, the capital of the island.

The present prince of Samos, Catheodori Pacha, a man of superior mind and education, consulted the writer of this article as to the means of extirpating leprosy in his principality, and of ameliorating the condition of its victims. The following is his reply:

1. A lazaretto should be erected at a distance from dwellings, conformed to the laws of hygiene, and removed from the regions where the malady is endemic, for close observation has shown that there are localities which are immune from this plague, and others where it is persistent. All things being equal, certain meteorological and telluric conditions unknown up to the present time have to do with this predilection of the disease.

2. To collect in the lazaretto all lepers, in all stages of the disease, whom a medical board capable of diagnosing leprosy from its inception shall certify.

3. To prohibit marriage between lepers or persons suspected of leprosy, until a medical inspector shall authorize it.

4. To prohibit the use of salted food, spoiled potatoes, tarama, oil, and pork, and to require at least one bath a week.

5. To have the lepers treated therapeutically, for experience shows that some cases are curable, and all may be ameliorated by good hygiene and medical care intelligently directed.

6. To isolate all children of lepers, and put them under observation until the adult age, ordinarily the extreme term of the manifestation of hereditary leprosy.

7. To draw up and distribute among the people, pamphlets formulating hygienic principles, especially as regards cleanliness and food, the neglect of which appears to be a potent factor in the development of leprosy in those countries in which it is endemic.

The Samiotes are an uncleanly people. Many of them acknowledge to taking only one bath a year.

Leprosy, in the opinion of the writer, will progressively diminish and disappear by the observation of the preceding principles. It will definitely disappear only when the people shall be better housed, better fed, and have acquired better personal habits. The extirpation of leprosy appears to be synonymous with the extirpation of poverty.—*Weekly Abstract of Sanitary Reports, U. S. M. Hosp. Service, Dec. 20, 1889.*

RESORCIN IN WHOOPING COUGH.

Adeer (*Centrb. f. d. med. Wochenschr.*, 1889, No. 40) warmly recommends resorcin in whooping cough, after having tried it on his own child, aged 7 years. He gave half a wineglassful of a 2 per cent aqueous solution, four times a day, partly to gargle, and partly to swallow. The paroxysms rapidly diminished in number and violence, and in the course of eight or ten days the disease was cured. He has since tried it in a series of cases, with the same happy result.—*Hospitals Tidende.*

[In the New Orleans Medical and Surgical Journal, December, 1888, page 428, appears an article on this subject by Dr. J. Guerra y Estapé, who applied the resorcin solution directly to the laryngeal mucous membrane, using a 10 per cent solution. He claimed that the drug destroyed the specific germ of the disease, which took up its residence in the mucous membrane just below the true vocal chords.—Eds.]

TREATMENT OF ACUTE TONSILLITIS AND PHARYNGITIS, INCLUDING DIPHTHERITIC SORE THROAT.

Dr. Haberkorn, of Glogau, thus writes in the *Deutsche Medizinal-Zeitung*, Nov. 14, 1889:

The great frequency of the socalled inflammations of the throat would long ago have caused them, like coryza, to be neglected by the patients without any medical attention; but the spectre of diphtheria always looms up in the background, so that the laity seldom allows a tonsillitis to run its course without using some kind of gargle.

It can not be said that the effects of these gargles have been gratifying. The gargle can not exert any direct influence upon the diseased mucous membrane in the posterior nares and pharynx, because it does not come in contact with it. At least, the gargle keeps the mouth clean.

The gargle most generally used is a solution of chlorate of potash. In many households the chlorate is regarded as a remedy of varied uses, and is always kept on hand. Solutions of corrosive sublimate and carbolic acid are also beginning to be used by laymen as remedies in severe tonsillitis.

The object of these lines is to avoid these dangerous practices, and to offer a sure and very prompt remedy in tonsillitis.

Gargles are insufficient in inflammations of the tonsils and pharynx. It is possible, however, to make their action more certain and thorough by directing the patient to swallow some of the liquid. This can be done in children when the medicine has a nice taste.

All the indications are fulfilled by a shaking mixture of salicylic acid with water and raspberry syrup, to which the white of an egg or mucilage may be added, in order to keep the particles of salicylic separated in suspension. The formula is as follows:

℞ Salicylic acid..... 2 grams,
Gum arabic..... 10 grams, (or white of 1 egg)
Water..... 180 grams.
Shake Well. Sig.—A dessertspoonful every two hours.

This mixture can be taken by children as well as by adults. It is useful whether fever be present or not. In tonsillitis, the local phenomena disappear in most cases in twenty-four hours, together with the fever, and the general condition of the patient is improved.

It remained to try the mixture in diphtheria. It has been used as a prophylactic in families where diphtheria had already gained a foothold; a dessertspoonful was given morning, noon and night.

In diphtheria of the pharynx, the fine acicular crystals of salicylic acid should be applied with a dry or slightly moist brush, moving it from below upward in the pharynx, and from behind forward on the tonsils. The crystals melt slowly. They protect the parts of the mucous membrane that are still healthy, and permanently disinfect the products and exciters of the inflammation. This advantage of a permanent disinfection is not obtained from the use of carbolic acid, corrosive sublimate, or any readily *soluble* disinfectant, They do not stay long after the penciling, and do not act deeply. Moreover, the pencilings must be frequently repeated, whilst the application of the salicylic

acid need not be repeated more than twice, or, at the most, three times, a day.

The pressing in of the salicylic acid with the camel's hair pencil does not give rise to symptoms of irritation, and children can tolerate it when they can not tolerate the penciling of liquids.

The application of the salicylic acid to children should be quickly performed. The nurse (or mother) sits with her face to the window, takes the child on her lap, presses the child's head against her breast with one hand, and with the other hand holds the little one's hands. The physician quickly passes the handle of a spoon between the teeth and upon the tongue until the latter is depressed and gives free passage to the pharynx. The brush is quickly passed over the posterior wall of the pharynx, and then right and left over the tonsils.

These applications should not be entrusted to the untrained hand of the mother, and even the nurse is not always capable of making them satisfactorily. The physician should do it himself. In diphtheria, at least two visits should be made daily, in order thoroughly to control the diphtheritic process. It is rarely necessary to make more than two applications a day.

When the false membrane is thick and extensive, simultaneous dissolving of the exudate hastens the cure of the disease. For this purpose, the following solution may be used:

R	Pepsin	2	grams.
	Hydrochloric acid	½	gram.
	Water	20	grams.
	Glycerine	15	"

This should be swabbed over the false membranes. When the membranes are dissolved the salicylic acid should be applied.

PRESERVATION OF URINE FOR MICROSCOPIC EXAMINATION.

When it is desired for any reason to preserve urine for making a microscopic examination, Wendringer recommends the addition of a solution of boric acid in borax, made by dissolving 12 per cent of boric acid in a 12 per cent solution of borax. To the urine to be preserved, one-fifth to one-third of its volume of this solution is to be added.—*Am. Jour. Med. Sciences.*

SURGERY.

MICRO-ORGANISMS IN FINGER-NAIL-DIRT.

In the "Weekly Abstract of Sanitary Reports," published by the Marine Hospital Service, vol. IV., No. 47, there is an interesting report by Assistant Surgeon Joseph J. Kinyoun upon certain experiments made by him to determine the micro-organisms in the nail-dirt of nurses in surgical wards.

In this investigation attention was chiefly directed to the hands of the surgical nurses and those having charge of or making surgical dressings. Observations were made from time to time, extending over a period of three months, the clientele of the wards constantly changing, so that a patient designated as a source of infection would not apply to the whole series.

The nurses had been, we believe, instructed to use the nail-brush and other agents for cleansing their hands. The usual method was as follows: Scrub the hands with soap and warm water to be followed by immersion in bichloride solution (1 to 3,000), the usual ward mixture for the surgical wards.

The examinations were so timed as to take the nurses when they were making or assisting in dressings, or just before an operation. In all the examinations only in two instances were the hands found to be sterile; in all the others bacteria were found.

The general plan of procedure followed was thus: The nurse was called from his ward to the laboratory and was caused to immerse his hands in moderately strong solution of sodium carbonate, which had been previously rendered sterile. After allowing them to remain in this solution three to five minutes, scrapings were made from their hands and under their nails by means of a stout-pointed aseptic needle, and the material was transferred to test tubes containing nutrient agar-agar, and roll Esmarch's tubes made; these were placed in a thermostat, at a temperature of 37° C., for twelve to sixty hours.

Usually the development of colonies had taken place at the end of twelve hours, but in some instances the bacteria were inhibited for a considerable time.

In all, twenty-seven nurses were examined; and of these only two carried no micro-organisms in the dirt under their finger-nails, or on the surface of the nails.

CONTROL EXPERIMENTS.

Three surgical nurses were called to the laboratory and instructed to wash their hands thoroughly with soap and warm water. Their finger tips were then dipped in a gelatine culture of *Staphylococcus pyogenes aureus* then the hands were treated with soap and water, then in alcohol three minutes, then in bichloride solution (1 to 500) three minutes, then this was neutralized in the usual manner and the nails examined. In all the cases there developed a considerable number of colonies consisting of a saprophytic bacillus. None of the pus organisms were found.

In another instance all the day nurses were prepared in the same manner. Their hands were then infected with *Staphylococcus pyogenes aureus*, then scrubbed well with soap and warm water, then treated for six minutes with alcohol containing (1 to 3,000) bichloride, then in bichloride solution (1 to 500), (1 to 1,000), (1 to 1,500), (1 to 2,000), (1 to 2,500), respectively, for another six minutes, and then neutralized in the usual manner.

The Esmarch tubes made from the nail scrapings of the hands subjected to (1 to 500), (1 to 1,000), (1 to 1,500) remained sterile, but in the others there were many colonies of *Staphylococcus pyogenes aureus*.

SOURCES OF CONTAMINATION.

It is safe to say that in most cases of suppuration you will find present a micro-organism for its production.

In the Marine Hospital service a great number of chronic patients are treated, and among these are those suffering from old leg ulcers, which have no prospect of healing, nor do their possessors, as a rule, show much solicitude for recovery.

These patients "go the rounds" from one hospital to another, and carry a well-assorted stock of pyogenetic material.

Five cases were studied in connection with this paper. Two cases were treated with hot bichloride solution (1 to 1,000), two others with bromine water, and one with boracic acid ointment. In all the cases pus organisms were found. They were less in number in those treated with bichloride solution; next in order were those treated with bromine water, and an enormous number in the one treated with boracic acid.

Another great source of infection are the venereal cases,

a majority of which are suffering from a suppurating disease.

A careful bacteriological examination was made of the walls and tables with which the hands of the nurse had not come in contact, and in no instance were there any pus organisms found. Whereas on the other hand the articles which were used by the nurse, such as irrigator tubes, basins, etc., including coverings to surgical dressings, gave pus micro-organisms.

From the foregoing it is thought safe to assert that the hands of the nurse play a greater role as an infectious agent than is supposed.

In twenty-six observations, pus organisms were found in sixteen; *Staphylococcus pyogenes albus* in ten; *Staphylococcus pyogenes aureus*, two; *Streptococcus pyogenes*, four.

Fürbringer has offered a very good plan for rendering the hands aseptic. It is the same as was followed in the control experiments. From our observations, it appears that if we add a small quantity or bichloride solution to our alcohol the effect is much more constant, and, with proper care, the hands can be freed from micro-organisms.

Control experiments were made on all the observations, and in but one instance did experiment have to be discarded on account of outside contamination.

These few observations may serve to emphasize the constant danger of infection from these sources.

ESCHAROTICS IN MALIGNANT DISEASE.

In the last issue of the JOURNAL appeared a very interesting article by Dr. R. Matas on the treatment of cancer by caustics. The *Medical Communications of the Massachusetts Medical Society*, Vol. XIV, contains an article by Dr. John C. Munro, of Boston, on a similar subject. Dr. Munro's paper contains a brief historical sketch of the use of caustics in the treatment of malignant disease, which is very interesting. He says: A short glance at the history of escharotics and of the men that have marked separate eras, either by the benefit or harm that they have contributed, will help to show perhaps some of the merits that really belong to this much abused subject.

In the writings of Hippocrates we find mention of the use of desiccants and caustics for the purpose of producing a superficial slough and of removing the morbid parts in indolent and malignant ulcers. One of his applications contained hellebore, flakes of copper, arsenic, and cantharides, and it seems not improbable that some of the ulcers he speaks of were epithelial.

Galen distinctly advises such caustics as sulphide of copper, tersulphide of arsenic and quicklime, and in speaking of excision of mammary cancer he says that, if it is intended to cauterize the remaining roots of the cancer, care must be exercised when this occurs near important parts.

Following Galen, but after a long lapse of years, we find Guido "lavish of his encomiums on arsenic;" soon after come writers such as Fallopius, Ossenius, Penotus, and Borellus, each with some particular preparation containing the same caustic. But it was not until the latter part of the sixteenth century that the use of arsenic as a cancer-caustic was at all systematized and placed on a firm footing. At this time Fuchs practised with great success in England, Germany and Poland; his powder, called by one writer, *Pulvis Benedictus*, was made up of white arsenic, ground to a fine powder, brandy (*aqua vitæ*), a species of wormseed dried in an exposed place and refined (*splendidi*) chimney soot. All this was finely ground together and kept in a well covered glass vessel a year before being used.

For nearly two hundred years little progress was made. It was a prosperous time for quacks and home remedies. Among the latter is the Earl of Arundel's recipe, said to have been given him in 1638 by one of a family of cancer curers. Later, in 1714, we find the MS. recipe belonging to a family named Pains, with this marginal note: "Used by my Father & Grandfather & Brothers and known as a thing excellent by long Practice in our Family of Pains." Both of these recipes relied upon arsenic for their activity.

In the middle of the eighteenth century the famous Plunkett flourished. He laid great stress on the extraction of cancer roots, and his recipe, which is also said to have descended from his ancestors, is interesting as given by Sir Spencer Wells:

R Crowsfoot which grows on low ground, one handful,
Dog fennell, 3 sprigs, } well pounded.
Crude brimstone, three middling thimblefuls,
White arsenic, same quantity. All incorporated well in a mortar, then made up into small balls the size of nutmegs and dried in the sun.

He sold the recipe to Guy, a contemporary, and it is also at this period and a little later that we hear of Martin, Pope, the younger Guy, and Davidson—the latter enjoying a considerable reputation in our own state.

It remained for Frère Côme to crystallize the various and blundering methods of using arsenic in malignant growths. His paste, originally containing red sulphide of mercury, charcoal, and dragon's blood, beside white arsenic, was the basis of all future arsenical pastes; it was simplified later and adopted into the French Codex. Very many cases were treated by Côme and other enthusiasts, such as Rousselot, Dubois, Dupuytren, Maisonneuve, and Manec.

In 1834 Canquoin communicated to the Royal Academy at Paris the results in a number of cases treated by himself since 1824, with pastes of which chloride of zinc was the basis. Four years later appeared a complete exposé of his treatment, and although there is no question as to the virtue in his various pastes, the extravagant claims made by him must be taken with a good deal of latitude.

In 1847 Filhos recommended, especially in uterine cancer, the caustic that bears his name; that is, potassa and lime melted and run into moulds. This caustic, much prized in France for a while, is a slight improvement over the time honored Vienna paste.

Eight years later, Landolfi, Surgeon-in-chief to the Sicilian army, made strong claims for pastes containing the chlorides of bromine, zinc, gold, and antimony in various degrees of strength; he considered the gold as a specific in encephaloid cancer, and internally he gave chloride of bromine, fennel, and hemlock. Many cases were treated under the diagnosis and attendance of Rokitansky, Meckel, and others, but a commission being appointed to investigate the method, decided that it was only a modification of that of Canquoin, besides being more painful and not so efficacious.

At this same time the notorious Dr. Fell, an American

practising in England, appeared before the public. He claimed that his treatment, imparted to him by the Indians, was new and depended on Puccoon (blood root) for its activity; it soon came out, however, that he used chloride of zinc, but he made such glaringly false statements and used the caustic so injudiciously that he brought a storm of wrath upon himself from educated, conservative practitioners. The accounts that the latter give of patients that had been through Fell's hands are simply horrible in many cases; in fact they remind one strongly of that which takes place under quackery at the present day and in our own state.

One recalls the story of the Emperor Gallienus cured of a sciatica after undergoing a thousand painful experiments: "Take," he said to his physician, "Take, Fabatus, two thousand sesterces, but withal, be informed I give them not for curing my sciatica, but that thou mayest never cure me again."

Meanwhile in 1859 one of the most notorious of all quacks was holding sway in Paris. This was the socalled "Black Doctor," a negro named Vriés. He soon gained a large clinic among the laity, and in order to give him a fair trial Velpeau placed sixteen cases under his entire charge, at the Charité. At the end of three months Velpeau, who had closely watched the cases, reported to the Academy, mainly as follows: No cases had been cured; the composition of the specific varied, it being aloes or iodine in England, but an inert vegetable powder of some kind in Paris; Vriés had no idea of cancer, nor of examining a patient; no promises had been fulfilled, and he had made false statements to the papers for publication. The patients were taken from his care, and later he was imprisoned, but it is needless to say that he had many devoted believers and followers.

A year after this another impostor was claiming attention in England; the Rev. Hugh Reed, whose treatment consisted in the use of some gas, probably chlorine, together with some internal medication that brought on salivation. At Reed's own request, Sir Spencer Wells investigated a number of his patients. In six he found no benefit from treatment, and in three others there was no cancer.

In 1870 another fraud, Buchanan, appeared on the scene. He claimed to use chlorate of carbon, which he sold for $5 per pound, but which later proved to be chlorate of potash.

It is needless to name any of the quacks that have flourished since this date, while the names of the few men that have helped, from higher motives, to keep this method of treatment at its proper level can be found in any modern text book of surgery.

GYNÆCOLOGY.

MANAGEMENT OF HEMORRHAGE INCIDENT TO PLACENTA PRÆVIA.

In the course of a clinical lecture on the above subject, Dr. Herman C. Bleyle, of Newark, N. J., said: The subject chosen for this paper, although a somewhat commonplace one, is, nevertheless, one familiarity with which is of the utmost practical importance.

I will therefore give a few experiences in the treatment of this most dangerous obstetrical contingency. At the outset of a discussion as to the proper procedure to which recourse should be had in cases of placenta prævia with antepartum hemorrhage, we are met with the fact that unanimity of practice among the recognized authorities is by no means the rule. In fact, the means advised, range from the risky and active procedures to the most veritable temporizing course—from venesection to transfusion. Nor are these differences of opinion confined entirely to treatment. It exists to the same degree in the explanation of the mechanism of the production of the hemorrhage, the physiological changes that are taking place in the lower segment of the uterus between the seventh and ninth months of pregnancy, and, in fact, in the very anatomy of the cervix itself. Out of the multiplicity of advice, discussion, and argument, how shall we choose tha proper course which each individual case of this dangerous condition demands? As a natural consequence I have met this same uncertainty in the consulting room. There, as well as in the books, each practitioner has his favorite mode of practice, and there, too, I have seen the patient gradually become almost exsanguine before the consultants could agree on a line of treatment for her relief. Often, in our experience, have we been summoned to a patient pregnant and near term, and on reaching the sick room find her almost pulseless and exsanguinated, with blanched and anxious countenance, appealing to us

for aid, not alone for herself, but for the unborn babe as well, and to halt at such a time between conflicting views as to treatment is to imagine a condition of doubt in our profession which should not exist. For this reason it may, perhaps, not be unprofitable to us if I invite you to the bedside of a few patients, detailing the treatment employed, courting your most just criticism of the same, and soliciting your views based, as far as possible, on your own experiences as to its correctness. For convenience I will arrange the cases into two classes. 1, those occurring before, and 2, those occurring at labor; and, in order not to tax your patience unduly, will divest them as much as possible of all minutiæ as to pulse, temperature, etc., giving only such salient points as will be necessary for the proper consideration of the case. They have been selected with the object of bringing up and inviting discussion on the following points, namely, the induction of premature labor, the proper use of the tampon, separation in whole or in part of the placenta, and rapid dilatation of the os manually or by means of instruments.

Case 1: Mrs. B,, multipara, 28 years old; pregnant 7½ months. This patient had progressed favorably during this pregnancy without the occurrence of anything of note until the night of Sept. 28, 1878, when a considerable hemorrhage took place during sleep. On vaginal examination, no dilatation of the os was discovered, and the patient declared she had suffered no labor pain, and was at a loss for an explanation of the hemorrhage. Not being entirely certain at this time that the case was one of placenta prævia, nothing further than rest and opium were prescribed. There was no return of hemorrhage until Oct. 4, on which day, while in the performance of some household duty, she suffered quite a large loss of blood. On second examination, the finger pressed through the softened os could detect a soft, thick mass between it and the child's head. Feeling quite certain now that a placental presentation undoubtedly existed, the induction of premature labor was strongly advised. To this proceeding the relatives, however, objected, but deeming the patient's life would be greatly imperiled should any further hemorrhage take place, notwithstanding their objection I took the initiative step in inducing labor by using the tampon. The application of the tampon was followed during the night by labor pains.

On Oct. 5, 9 A. M., the pains were quite regular. The tampon was partially forced from the vagina, and some flow had taken place during the night. The bladder was emptied by means of a catheter, and the remains of the tampon were removed. On removing a large clot of blood the os was found to be somewhat dilated, soft and dilatable. Fearing that a further and possibly a fatal hemorrhage might take place if the case was left to the natural powers, artificial dilatation by means of Barnes's dilators and delivery by version were determined on. The dilators accomplished their purpose very effectually, and the hand was passed upward, separating the placenta on one side from its attachment, the membranes were ruptured high up, the feet seized and delivery rapidly accomplished. The after-birth was delivered shortly afterward and no further hemorrhage took place. The child was still-born, but the mother made a good recovery.

In this case, it is just possible that this patient might have passed through her labor naturally and have made as good a recovery as if premature labor had not been induced by the tampon, and rapid delivery by the other means attempted; but how are we to feel assured on that point? By waiting until our patient is almost exsanguinated by repeated hemorrhages, before we resort to these means, when their employment is attended by an immensely increased risk? Clearly not. The view held by many, namely, when repeated hemorrhages have taken place and reasonable ground exists that placenta prævia exists, either the patient's life or her pregnancy must terminate—is a good one to accept and act on.

Now as to the best means to bring about this result. When it has been decided on to induce premature labor a good plan to follow is first to employ a large vaginal douche of warm water, introduce a sponge tent and then tampon the vagina effectually with either plain or borated cotton. If the os will admit of it, I sometimes insert a common rubber finger cot, distended with cotton, and dipped in some antiseptic solution, secured by a string to facilitate its removal and hold it in place by the tampon. I prefer the form of tampon commonly denominated "kite-tailed," using Sims's speculum to facilitate its introduction. This is left *in situ* if necessary for twenty-four hours. If not followed by pains it is then removed, the bladder emptied by the catheter, and a soft rubber catheter introduced into the cavity of the

uterus and a second tampon applied. This generally accomplishes the purpose. Dr. Edward J. Ill, of this city, has devised an instrument, consisting of a soft rubber cone-shaped bag which, after introduction and distention by water, he claims answers an excellent purpose, not only as an oxytocic, but as a tampon as well. I can vouch for its utility in inducing pain, but, with all due respect for the doctor's great medical ability, I am not enthusiastic in its efficiency as a hemostatic agent. The objection to its use is that it can only be employed after some dilatation has already taken place. The doctor informs me he has used them in some cases with gratifying results, and after all, that is the end we are striving for. After the os is somewhat dilated, the Barnes dilators, in the main, answer excellently in completing this desired condition, and rendering the application of forceps possible, or version feasible.

In this case we also meet with a very common experience, namely, the opposition of the patient and her relations to the inauguration of—to them—so formidable a proceeding as the induction of premature labor. Nor does the opposition entirely rest with them. If your experience at all coincides with mine, you will find that the consultant physician occasionally will not accede to your views as to the necessity of the procedure, viewing it in the light of meddlesome midwifery.

Just here let me remark that, in my opinion, this term should be expunged from the text books on obstetrics. I think more lives have been sacrificed by its wrong interpretation than is generally acknowledged. I think its continued use in midwifery practice is only to furnish a screen behind which temporizing and inefficient practice seeks a refuge.

As a rule the relatives will not become convinced of the necessity of the induction of premature labor until the patient's life has become jeopardized by repeated hemorrhages. I hear some of you remark, that in such cases the physician would be justified in retiring from further professional connection when his patient will not accede to the carrying out of such procedures as the physician deems absolutely necessary for her safety. This is precisely the action I have taken in more than one of these cases. Other medical advice has assumed charge, the waiting policy carried out, and when the labor commenced

and the real danger threatened, they were conveniently absent, and the responsibility that should have been assumed by them on account of the delay advised, was finally thrust on me, when nothing but vilification and damage to professional reputation were to be gained by this enforced attendance at the last juncture.

Case 2: Mrs. B., 25 years old, multipara; eighth month of pregnancy. When called to this patient I learned that she had suffered from number of hemorrhages, not alarming in quantity, excepting the one just preceding my visit. On examination, the finger could detect the placenta just inside the os. The latter was soft and dilatable. On auscultation no fetal heart could be heard. The patient felt assured that she felt no life since the shock following the last hemorrhage. The examination had caused a still further hemorrhage, and an alarming syncope took place. On account of the suspected non-viability of the child, the extremely dangerous condition of the mother, and the lack of assistance to carry out any other procedure, separation of the placenta was decided on. The finger introduced through the os loosened as much of the placenta as was within reach. No more hemorrhage took place, and as soon as dilatation would allow, the forceps were applied and the child delivered as expeditiously as possible. The placenta followed shortly afterward. The child was still-born, and all efforts attempted at bringing about resuscitation were unsuccessful. The mother made a good recovery.

The above case is one by no means infrequent in occurrence, in which we are called on to decide on the employment of a means which, while enhancing the safety of the mother, is very nearly certain to cause a destruction of all the chances the child has for further existence. The decision of this question, to my mind, is of such great moral responsibility, that if time would allow, I would not attempt its decision alone. The responsibility of human life is nowhere, in everyday medical practice, more forcibly thrust on us than it is in just such cases as the one narrated. How shall we be governed in finally deciding this grave question? The existence of viability or non-viability of the child as demonstrated by auscultation must, in a large measure, guide us in its decision, as well as the dangerous condition of the mother which, while often not allowing of more formidable proceedings for her relief,

must also have much weight in the choice of this means of her safety. If on auscultation no fœtal heart can be heard no compunction should be felt in immediately separating the placenta. But what if the opposite is the case and the child is living? I hold that if the time will not allow of the employment of those means to dilate the os, and thus deliver by either forceps or version, and if the condition of the mother will not admit further delay, then clearly we should not hesitate, repugnant as this procedure is to us, to immediately separate in whole or part the placenta from its attachment and give to the mother the greater chance of life to which she so justly is entitled.

The teaching of the Roman Catholic Church opposes any procedure which takes from the child any chance of existence, and this opposition is carried to the extent of forbidding the faithful to allow its employment, even at the sacrifice of the mother's life. But this circumstance should have no weight with us, even among the followers of this faith. Clearly the mother has the prior right of existence and such measures should always be employed, having for their object the accomplishment of her safety, that of the child being of secondary consideration. If time will allow, I prefer the methods of rapid dilatation, because of the fact that the child's chances are not so seriously abridged. However, I think my experience in the management of such cases teaches me to be satisfied when I am fortunate enough to have my efforts rewarded with the recovery of the mother only. Further, in my experience in the employment of separation of the placenta, I have only seen two children born living. Dr. Jas. Y. Simpson gives a table of 141 cases in which this procedure was employed, attended with the birth of thirty-three living children—a result which I believe will not correspond with the general experience of most practitioners.

Case 3: Mrs. M., multipara, 35 years old; in ninth month of pregnancy. Was called to this patient on June 3, 1872, at 10:30 P. M. The patient had had several hemorrhages dating the first in the neighborhood of the seventh month. The losses of blood had not been large in quantity, but were of frequent occurrence. On this day, however, the hemorrhage was very profuse, and at my visit her condition was alarming. On examination it was learned that labor had commenced, the os was slightly dilated, and on searching the cavity the cause of the hemorrhages was ex-

plained by the fact that a lower lateral insertion of the placenta was presented. No pains of any account were present, and absolute rest, and internally, brandy, opium, and ammonia, were prescribed. Externally, warmth was also employed. At this time it was learned from the patient that the membrane had ruptured. The administration of the stimulant was followed by some reaction, and I remained with the patient for 1½ hours in order, should pains supervene, and hemorrhage recur, I would be ready to render such assistance as the case demanded. In the meantime I sent for additional assistance, but on account of the unseasonable hour, and the distance of the residence (being on the outskirts of the city), I was unable to obtain it, so I was left to cope with the case alone. About 12 P. M., pains recommenced, as did also the flow, at first slight in quantity, but after the fourth contraction she had a large hemorrhage, and it became very apparent that temporizing was no longer to be entertained, the labor must be terminated, and that, too, as soon as possible. I immediately brought the patient to the edge of the bed, thinking that, on account of the softness of the os, rapid dilatation and delivery by version could be accomplished; judge of my astonishment, however, when on introducing the finger, I discovered the os entirely dilated and the vertex presenting. As a forceps operation was entirely feasible that method of delivery was chosen. Careful traction was made and the head brought well down. Congratulating myself that now no further hemorrhage would take place, on account of the direct pressure the child was exerting on the parts involved, I would allow her a short rest before completing delivery, but at the recurrence of the next pain a terrible gush of blood occurred, and my patient sank lifeless on her pillow just as the child was born. The child was stillborn.

In this case the final and fatal loss of blood took place when the child was exerting pressure to its fullest extent. Nor is this the only case in which this circumstance, namely, hemorrhage, when the child was very nearly delivered, has been noted. It is a question in my mind whether the teaching of the books is as correct on this point as has heretofore been received. The idea uppermost in our minds in the management of this variety of uterine hemorrhage, is to rely on the fact that the bleeding will finally be checked if we are only

able to bring the child well down, and thus not only hasten delivery, but actually to utilize the child as a tampon. This reliance, in my experience, has received a rude shock on more than one occasion. Another case will be detailed in which the same loss of blood took place when the os was almost distended to its utmost limit by the body of the child. Now, as to the question of treatment employed in this case. You will remember this woman had suffered periodical losses of blood since the seventh month, and some hours preceding my visit had sustained a sudden large and dangerous loss, rendering her condition at the time of my visit one giving rise to great alarm. The os at that time was undilated, although dilatable. The membranes were ruptured and no flow was taking place. Should I have used the tampon? I am no believer in the employment of the tampon at, or near, term, after the membranes are ruptured and the waters evacuated, and for this reason: It is a well known fact that damming up the mouth of the uterus by means of the tampon after the cavity has become emptied of its waters and hemorrhage is taking place, is simply to convert an open into a concealed hemorrhage. It is simply covering up the deadly process from our eyes. It is just as well known that the tampon being used, the cavity of the uterus, at term, can contain enough blood to terminate the life of the patient, and yet not one drop of blood show externally. But the advocates of the efficiency of the tampon claim that it has not only a restraining effect on the quantity of blood effused, but it has a hemostatic effect by its direct pressure exerted. In my case, could any tampon, however skilfully applied, have exerted any more direct pressure than did the child itself? Should I have immediately on my visit begun operations looking for an early emptying of the womb, or should I have done as I did, namely, as no hemorrhage was going on, wait for the recurrence of pains and hemorrhage before assuming alone this great responsibility? I am fully satisfied that this particular case would have terminated the same, had I dilated and performed version, as it did, I leaving this natural process to go on to the extent of the few natural pains before interfering. The correct treatment this case should have received should have been instituted weeks before, namely, the induction of premature labor. It would have been much better to have terminated the pregnancy weeks before than to have

allowed it to proceed to that point when, alas, our efforts at ending the pregnancy only too often appear to terminate not only that condition, but the life of the patient as well.

Case 4: Mrs. M., 35 years old. Multipara. Ninth month of pregnancy.

This patient, like most of the others spoken of, had had periodical hemorrhages since the seventh month. As a necessary result she was reduced to a very dangerous condition of weakness.

I was called first during the night of Jan. 20, 1886, to render assistance to the midwife, to whose care it seems this patient had been entrusted since the seventh month. The patient had experienced a very large loss of blood a short time prior to my connection with the case. On vaginal examination the os was found to be but slightly dilated, although some labor pains had been experienced. The placenta could be distinguished, being implanted very near the internal os. The patient's condition would admit of no delay, so rapid dilatation of the os and rapid delivery were decided on. The patient was anæsthetized and dilatation by Barnes's dilators was rapidly accomplished and version performed. The child was delivered living. During the process of delivery the mother suffered a large loss of blood, and immediately after the child's birth the pulse disappeared, and to all appearance respiration also ceased. However, I directed the husband to assist me in raising her to an almost inverted position, and by our united efforts we held her suspended in that manner until we were rewarded by a return of respiratory effort. After a number of injections of brandy and digitalis reaction came on and she finally made a good recovery.

Case 5: Mrs. F., 39 years old. Multipara. Eight and one-half months pregnant.

This case was under the previous care of Dr. Rudolph Braun, of this city, who informed me that he was first called on April 22, 1888, on account of severe hemorrhage. He learned that she had suffered almost daily hemorrhages since April 16 preceding. On vaginal examination he found the os dilated to the size of a quarter dollar, and soft and dilatable, but no placenta could be distinguished. There were no pains. He advised rest and opium. On April 23, 9 A. M., the patient had a slight hemorrhage. No pains and no change in the condition of the os. He visited the patient again in the evening on ac-

count of the profuse flow, which largely consisted of the waters, the membranes having ruptured. But still no pains were present and no further dilatation of os had taken place. On April 24, at 9 A. M., the patient again had a hemorrhage, alarming in quantity, and my assistance was requested in the case.

I found the patient almost bloodless and greatly shocked. Although in a condition plainly indicating the great hazard of the undertaking, I advised delivery by means of rapid dilatation of the os and version. After active stimulation she was anæsthetized and the operation began.

The dilatation was easily and rapidly accomplished, and the hand, on being carried through the os, discovered what appeared to be a central implantation of the placenta. This was separated on the mother's right side sufficiently to allow the hand to pass. This action was followed by additional hemorrhage, to check which the whole placenta was detached and expelled into the vagina. The hand was carried rapidly upward to the fundus, and owing to the evacuation of the waters on the preceding, great difficulty was experienced in rupturing the membranes. They were, however, finally torn, and in the hurried attempt at version, I committed the error of hooking an elbow, under the impression it was the knee, and an arm was brought down. It will be remembered that during all of this time the placenta was hanging loosely in the vagina, and consequently, without the shadow of doubt, no utero-placental circulation could have been taking place.

A second and more skilful attempt at version was then made, and the child was shortly afterward delivered, which, notwithstanding the above mentioned conditions, immediately cried on being born, needing absolutely no efforts at resuscitation. I am positive that the placenta was entirely separated at least eight minutes before the child was born, and I will not even attempt to explain the fact that asphyxiation in no degree existed. The mother made a rapid and good recovery.

This last case is an example of one of the most common conditions under which I have been brought to face this most dangerous trouble.

The patient, having for days suffered successive losses of blood, is finally reduced to a condition of collapse. The os is undilated, no pains are present, and nature has as yet made no effort to empty the womb. To wait longer

is only to add one more to the already large mortality list from this cause, and to interfere by efforts at terminating the pregnancy, is to assume the terrible responsibility of perhaps ending the patient's life during such attempts. Which course shall we pursue? For this is the case that admits of no decision. To my mind there is but one course, and that is to terminate the pregnancy then and there. I believe—and this belief has been gained by hard bedside experience—that in the majority of cases of placenta prævia at term, or during labor, after large hemorrhages, and particularly in multiparæ, that the os very readily admits of dilatation, either manually or instrumentally. Of the two methods I prefer the hand. The Barnes dilators often accomplish the purpose, and just as often they utterly fail. When distended sufficiently to exert a dilating effect they are apt to slip either inward, into the uterine cavity, or outward into the vagina. Again, they rupture very easily on account of the hyper distention to which they are generally subjected, both above and below the point of opposition to dilatation. For some years I have relied almost entirely on the hand in bringing about dilatation in just these cases. I have no doubt of the justifiability of manually dilating the os and forcibly terminating the pregnancy in this condition, on the grounds of, first, feasibility; second, comparative safety; third, its affording some chances to the child of further existence. I do not think that the first and last grounds need any defence at my hands; they are generally acknowledged and accepted as facts. On the question of the safety of this proceeding some difference of opinion may exist. Strictly, the operation is only safe comparatively speaking, and its performance is not to be viewed as devoid of danger. The chief danger to be apprehended lies in the infliction of the additional shock. As a rule, I think shock, more than further hemorrhage, is to be feared in the operation. The employment of an anæsthetic aids materially in averting the shock. In a large number of these cases the os can be rapidly dilated manually with safety to mother, for the reasons that the placenta never is attached to any portion of the cervix proper, that the form called central implantation is rare, and the fact that in the great majority of cases the form called by some writers latero-cervical is more often met with. In these latter cases, after slight dilatation, we

can partially separate the placenta from its attachment to that portion of the uterus which must be stretched during the passage of the child's head, and thus check hemorrhage. Again, after dilatation and during the performance of version, the hand and arm act as important hemostatics by their direct pressure on the torn utero-placental vessels. Other grounds might be adduced, but that would involve a discussion on the anatomy and physiology of the lower segment of the uterus and cervix, which is not exactly the object of this paper.

In my experience no great loss of blood, as a rule, is provoked by its performance, and I am satisfied that when not too long delayed it offers one of the best safeguards to the mother that is within our power to afford her. I would not hesitate to employ this means, under the proper conditions, knowing by experience of its safety, and knowing, just as well, the great responsibility its employment entails. Too often its ill success is due to the fact that many of these cases are allowed to reach that point when interference through any justifiable means has only the appearance of hastening an unfavorable termination. I believe these delays will always occur, on account of one reason or another. Sometimes it will be the thought that if we do not attempt some hazardous proceeding the hemorrhage will not recur, no more shock will be inflicted, and may be our friend, good old mother Nature, will make all things right. Sometimes the delay will be caused by the fear that comes to all of us, that if we do not save both mother and child, or if we assume a responsibility that may sacrifice both, we will either suffer in reputation, or receive only vilification for our pains. But, gentlemen, ingratitude for ministrations at our hands or duties well performed is our common lot, and that fact should not deter us in just such cases as the one last cited from hopefully and fearlessly discharging a grave responsibility, relying only on an approving conscience for that justification only too often withheld by those for whom responsibility is incurred.—*Medical and Surgical Reporter.*

HYGIENE.

AVINE ORIGIN OF DIPHTHERIA.—

The identity of diphtheria with the disease of chicken known as pip (*pepita*), has been very vigorously opposed

Whilst Nicati published in *Marseille Médicale* (1879, page 105), cases showing the transfer of contagion from chickens to children, Mégnin, basing himself upon numerous cases and microscopic examinations, denied (*Tribune Médicale*, 1879, page 211), the identity of the two diseases.

However, the cases related by Nicati are not the only ones, since we find in a thesis but little known, sustained by Meuziès before the Paris Faculty of Medicine, in 1881, new data favorable to this opinion; more recent observations are those of Dethil, Pamard, and Bouchard at the Congress of Nancy (1886), and of Teisier (of Lyons) at the Congress of Vienna (1887).

Meuziès, in his thesis, endeavors to show that diphtheria is caused by the dejections of fowls, and he bases his assertion upon his personal observations. It is known that in Italy diphtheria among fowls is common; we have the assurance of Escolani and Pietra Santa to that effect. On the other hand, on the housetops many flocks of turkeys, chickens, pigeons, and rabbits take up their residence, the excrements of which, washed by the rain, are carried into the wells containing the drinking-water of the people. In 1871, in Posilipo, near Naples, Meuziès saw an epidemic of diphtheria attack the children of a colleague of his, whose house and yard presented the above-mentioned conditions. Of five children, four became sick and died. In another house there was a large dovecote; in that house a lady and four or five children were attacked by diphtheria, and three of them died. From these cases, the epidemic spread and became generalized.

The unfortunate professor, being convinced that the diphtheria was due to the use of contaminated water, forbade his servant to use the water from the suspected well for culinary or drinking purposes, and ordered him to go to a neighboring well to get pure water; but the laziness of the servant defeated his purposes and caused an epidemic of diphtheria. The only child that did not fall sick was a suckling infant, who did not drink water; and a neighbor's child of seven years, who did drink the well water, took sick and died.

Meuziès thinks that in every epidemic of diphtheria it is reasonable to seek the source of the trouble in neighboring chickenyards, dovecotes, dungheaps, and, above all, in barnyards and deposits of manure. He asks: Is

it not possible that the well, from which the disease spread, might have been contaminated by feces thrown out on some neighboring field? Has the appearance of an epidemic or of an isolated case never been observed shortly after the scattering of chicken manure in the fields, or after the arrival of a certain quantity of this stuff at a barn, or after the cleaning of a barnyard or a dovecote?

Paulinis speaks of an epidemic in such terms as scarcely to leave any doubt as to the relationship between the diphtheria of man and that of birds.

The island of Skiatos, on the north of Greece, inhabited for about fifty years, has a population of about 4,000, and, with the exception of some fevers, it is very salubrious. Bild says that in a practice of thirty years on the island, he had never seen a case of diphtheria. But a flock of turkeys was brought to the island, and among them were several that clearly had diphtheria, of which they died; in a few days the disease attacked children, and rapidly spread over the whole island. The number of persons that were attacked was 125; the deaths were 36 during the summer and autumn of 1884.

Truly, these facts are very forcible; but against them may be adduced the objection raised by Liebermeister. It is to be borne in mind that diphtheria chiefly ravages cities and large communities in which there are no barnyards, chicken coops, or pigeon-houses, and that the false membranes cast off by the sick birds are scattered over the fields in the country, where they are at the mercy of the first urchin who plays in the sand. From these facts we must conclude that the belief in the identity of the diphtherias of man and birds rests upon accidents which rarely occur, considering the frequency of both diseases.

But what light does microbiology throw on the subject? Does it incline to one or the other side of the question? It only introduces more confusion. Lœfler, Cornil, and Babès find similar germs in both diseases, but the inoculation experiments give negative results, and the last two authors have demonstrated the innocuity of the false membranes of the bird with respect to man. Still, in regard to the nature of the germs of human diphtheria, we are not quite sure that Lœfler has completely shown that the diphtheritic process is due to a chain-micrococcus (*streptococcus pyogenes?*) which produces, upon inoculation, a phlog-

osis without membranes, and to the bacillus resembling the bacillus tuberculosis, which causes pseudo-membranous exudates in ulcers and mucous membranes of rabbits and birds.—*Le Scalpel. Gaceta Medica Catalana.*

Book Notices.

A Hand Book of Dermatology. For the use of students. By A. H. Ohmann-Dumesnil, A. M., M. D., Professor of Dermatology, St. Louis College of Physicians and Surgeons; Consulting Dermatologist to the St. Louis City Hospital; Physician for Cutaneous Diseases, Alexian Bros. Hospital, etc.; Editor *St. Louis Medical and Surgical Journal.*

St. Louis: St. Louis Medical and Surgical Journal Publishing Company.

This is a little unpretentious volume, designed for the purpose of interesting students in the science which treats of diseases of the skin, and for instructing them in its elements. The acute exanthemata and syphilodermata have been omitted The descriptions are concise and graphic; the wood cut illustrations are very good.

Something new in the way of therapeutics is the author's treatment of ringworm of the scalp. He encloses the scalp in a "rubber cap, connected by a tube with a receiver in which a lamp, burning bisulphide of carbon, is placed. By means of a stop cock the air contained in the cap is driven out by the sulphurous anhydride, which is then allowed to accumulate in the cap until it attains a certain pressure. The pressure serves the purpose of forcing the gas to penetrate more deeply into the follicles, and of causing more surface to come in contact with it." The author does not give the results of this method of treatment.

H. W. B.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M. D., LL. D., F. R. C. P., Professor of Obstetric Medicine in King's College, etc. Fifth American edition and seventh English edition. With notes and additions by Robert P. Harris, M. D. Philadelphia: Lea Brothers & Co., 1889. Armand Hawkins, New Orleans.

We always welcome a new edition of Playfair's obstetrics; to us it is the ideal text book. Any tendency toward a nomenclature leading to something like uniformity in obstetric description is badly needed, and we are glad Dr. Playfair has lent his influence in having such adopted. The book is kept well abreast of obstetrical progress, and is too well known to need any commendation beyond this.

G. B. L.

Contributions to the Surgical Treatment of Tumors of the Abdomen. Part II. Electricity in the Treatment of Uterine Tumors. By Thomas Keith, M. D., LL. D., Edin., and Skem Keith, F. R. C. S., Edin. Edinburgh: Oliver & Boyd, Tweeddale Court. London: Simpkin, Marshall, Hamilton, Kent & Co., limited, 1889.

This book consists of a series of 106 cases of fibroid tumors treated by Apostoli's method. The success in the treatment is remarkable, and should these results continue there will be no question that Apostoli has conferred a great boon upon suffering womanhood. Our own success in similar cases has not been brilliant; but will only say that the careful perusal of this little book has decided us to give the treatment another and more thorough trial.

G. B. L.

International Medical Annual for 1890. The eighth yearly volume of the International Medical Annual (for 1890) is now in press, and will be issued shortly. It will contain about 600 pages, and will be illustrated. Published by E. B. Treat & Co., New York.

A Treatise on "Diseases of the Nose and Throat." In two volumes. By Franke Huntington Bosworth, A. M., M. D. Professor of Diseases of the Throat in the Bellevue Hospital Medical College, New York, etc. Volume I, Diseases of the Nose and Naso-pharynx New York: William Wood & Co., 56 Lafayette Place, 1889. New Orleans: Arm ind Hawkins.

We have been expecting for some time a complete work of this kind from Dr. Bosworth, and though our expectations have been higher, we have not been disappointed with the first volume which has reached us. Dr. Bos-

worth's writing has always been characterized by good practical deductions from sound reasoning, and we think ourselves safe in considering this the most complete and satisfactory book written on the subject. We commend especially to the reader the chapters on hypertrophic rhinitis, and vaso-motor rhinitis, and bronchitis. His masterly treatment of this subject is well worth the price of the book.

G. B. L.

The National Medical Dictionary: including English, French, German, Italian, and Latin technical terms used in medicine and the collateral sciences, and a series of tables and useful data. By John S. Billings, A. M., M. D., LL. D., Edin. and Harv., D. C. L. Oxon, etc. With the collaborations of Drs. W. O. Atwater, Frank Baker, S. M. Burnett, W. F. Councilman, James M. Flint, J. A. Kidder, William Lee, R. Lorini, Washington Matthews, C. S. Minot, H. C. Yarrow. Two volumes. Philadelphia: Lea Brothers & Co., 1890.

The two large octavo volumes forming this work contain nearly 1,500 pages. This will serve to give some idea of the magnitude of this compilation, but it by no means gives an accurate idea of all the labor involved. There are dictionaries and dictionaries; but we are free to assert that the present one eclipses in its way those that have gone before it. The editor-in-chief, Dr. Billings, is better qualified to produce a work of this class than any other man in this country. His vast experience in this kind of work in the Surgeon General's office, on the *Index Medicus* and elsewhere, has given him a practical training which no other medical man possesses. His name, therefore, in the place of honor on the title page carries with it a guarantee of thorough and excellent work. The list of collaborators contains some names of national repute. This array of ability, well supported by a progressive and liberal publishing house, has given to the medical profession of this country the most complete etymological medical dictionary that it possesses.

This dictionary is intended "to furnish to students and practitioners of medicine a clear, concise definition of every medical term in current use in English, French, German, and Italian medical literature, including the

Latin medical terminology of all of these languages." The defining of 84,844 terms would alone commend the work to medical men; but the foreign terms are so numerous that this dictionary is a medical dictionary of the five languages above mentioned. In these days, the medical literatures of different nations are brought in such close contact that he who knows not more languages than his own is an obscure provincial. The vast influence of the German language, especially, in shaping medical thought, is constantly felt. The complete definitions and synonyms of these foreign words will prove of incalculable benefit to any progressive physician.

A very valuable feature of this work is the collection of useful tables found in the beginning of the first volume. These tables, relating to mineral waters and other subjects, are usually scattered through a number of works. As the physician is constantly referring to them, he will find his labors greatly lessened by the work before us.

A. McS.

A Text Book of Human Physiology, including Histology and Microscopical Anatomy; with special reference to the requirements of Practical Medicine. By D. L. Landois, Professor of Physiology, etc., Greifswalls; third American, translated from the sixth German edition. With additions by William Stirling, M. D., Sc. D. With 692 illustrations. Philadelphia: P. Blakiston, Son & Co., 1889.

No branch of medical science has, in the past few years, been allowed to remain idle or to grow old. Activity in original investigation has characterized the whole field of medicine. Progress in many branches has been so rapid that text books almost became old while passing through the press. With the exception of bacteriology, perhaps no branch of medicine has shown more rapid advances than physiology. Works on this subject, printed but a few years ago, have become ancient history.

The literature of modern physiology is very voluminous. The medical student or practitioner can make a selection from a long list of valuable works; and while each in itself discusses the subject in an exhaustive manner, still the different authors approach the subject and handle it in their own fashion, thus impressing their own individuality upon their own productions. Thus, while there

is an abundance of works on physiology, there is no superfluity.

Landois' work is a thorough exposition of modern physiology. To analyze it with justice would require more space than can be given to it. Such an analysis, moreover, is entirely unnecessary, as medical men are too familiar with the science to need to be told what should be embraced in its scope. It is only necessary to call attention to certain features of the work before us, which specially commend it.

As the title announces, the work is written with special reference to the requirements of practical medicine, thus forming a connecting link between physiology and the practice of medicine. As the various chapters of a systematic treatise, while differing from one another, are but parts of one connected whole, so the various branches of medical science, while seemingly disconnected, all tend to one common object. A work, therefore, which shows the connection between physiology and practical medicine at the same time that it thoroughly treats of the former branch, is one which is peculiarly adapted to the needs of medical students. Physiology and pathology are so interwoven in Landois' work that it will serve not only as a trusty guide to beginners in medicine, but also prove a valuable companion to mature practitioners.

This third American edition brings the work abreast of the most recent advances in physiology. The marked success of the work both in Germany and America is an index of its value and adaptability to the needs of medical men. The work of the reviser, Dr. Stirling, is visible on many pages, and is in thorough keeping with the excellent original text, making the book a faithful exponent of modern physiology, and strengthening its hold on the affections of medical readers.

A. McS.

Dr. McDow, the unconvicted murderer of Charleston, S. C., having received the severest censure which his brethren of the medical profession could visit upon him, having been expelled from the crack militia regiment of which he was a member, and having been preached at from almost every pulpit in the city, may possibly be forced from the position of brazen impudence which he assumed after his crime.—*Doctor.*

Publications Received.

The National Medical Dictionary, including English, French, German, Italian, and Latin technical terms used in Medicine and the Collateral Sciences, and a series of tables of useful data. By John S. Billings, M. D. Lea Brothers & Co., 1890. (Two volumes).

Annual Report of the Supervising Surgeon General of the Marine Hospital Service of the United States for 1889.

Foods for the Fat—A Treatise on corpulency and a dietary for its cure. By N. E. Edwards, M. R. C. S., Esq. J. B. Lippincott & Co., 1889.

Insomnia and its Therapeutics. By A. W. Macfarlane, M. D. London: H. K. Lewis, 1890.

Deaths.

On May 10, 1889, died Dr. Jules Francez, of Carencro, parish of Lafayette. In the death of this young, intelligent, and estimable physician this community, as well as the medical profession, has experienced the loss of a worthy, conscientious, and loyal member; one in whom were combined many of the qualities that are essential to a life of promise, usefulness, and distinction:

Resolved, That we here give expression to our sorrow and feeling of condolence with the aged father and other relatives in their great and irreparable loss and sad bereavement in the death of so honored and dutiful a son, and hope the Ruler of our destinies may comfort and assuage their grief.

Resolved, That a page of the record book of the Attakapas Medical Association be set aside and these resolutions be entered thereon, as a slight testimonial of the high esteem and appreciation of this association for the memory of deceased.

Resolved, That a copy of these resolutions be furnished to the family of the deceased.

F. S. Mudd, M. D.,
N. P. Moss, M. D.,
O. C. Durio, M. D.,
Committee.

Death of Dr. Chas. B. Goldsborough.—On Sunday, Jan. 5, 1890, at the United States Marine Hospital; aged 40 years.

A native of Maryland, of a historic family, where he was born in 1850, Dr. Goldsborough received a complete education, and graduated from the University of Pennsylvania with the highest honors. In 1876 he entered the United States Marine Hospital Service, and had ever since discharged the duties incumbent upon him in a most satisfactory manner. He was appointed surgeon, and was stationed successively at Washington, Baltimore, Mobile, Chicago, and New Orleans. During the two years that he had been located here he displayed great industry and enterprise in the office he so ably filled at the hospital. Some time ago he was taken ill, and after many months of suffering died of paralysis of the heart, leaving a wife and two children to mourn his loss.

The funeral services were held at Trinity Church, and the remains interred in the tomb of Mr. James Hayward, in Metairie cemetery.

Medical News and Miscellany.

INVITATION TO THE TENTH INTERNATIONAL MEDICAL CONGRESS.

In accordance with the decision of the Ninth Congress at Washington, the Tenth International Medical Congress will be held at Berlin from the 4th to the 9th of August, 1890.

By the delegates of the German Medical Faculties, and the chief Medical Societies of the German Empire, the undersigned have been appointed members of the General Committee of Organization. A Special Committee of Organization has also been appointed for each of the different sections, to arrange the scientific problems to be discussed at the meetings of the respective sections. An International Medical and Scientific Exhibition will also be held by the congress.

We have the honor to inform you of the above decisions, and at the same time cordially to invite your attendance at the congress. We should esteem it a favor if you would kindly extend this invitation to your friends in medical circles, as way may offer.

REGULATIONS.

1. The Tenth International Medical Congress will be

opened in Berlin on Monday, Aug. 4, 1890, and will be closed on Saturday, Aug. 9th.

2. The congress shall consist of legally qualified medical men, who have inscribed themselves as members, and have paid for their card of membership. Other men of science who interest themselves in the work of the congress, may be admitted as extraordinary members.

Those who take part in the congress shall pay a subscription of 20 marks (one pound sterling, or $5) on being enrolled as members. For this sum they shall receive a copy of the transactions as soon as they appear. The enrollment shall take place at the beginning of the congress. Gentlemen may, however, be enrolled as members by sending the amount of the subscription to the treasurer* with their name, professional status, and residence appended.

3. The object of the congress is an exclusively scientific one.

4. The work of the congress will be discharged by eighteen different sections. The members shall declare upon enrollment to which section or sections they intend more particularly to attach themselves.

5. The Committee of Organization shall, at the opening sitting of the congress, suggest the election of a definite committee (or bureau) which shall consist of a president, three vice-presidents, and of a number — as yet undetermined — of honorary presidents and secretaries.

At the first meeting of each section a president and a certain number of honorary presidents shall be elected; these latter shall conduct the business of the sections in turn with the presidents.

On account of the different languages employed, a suitable number of secretaries shall be chosen from among the foreign members. The duties of the foreign secretaries shall be confined to the sittings of the congress.

After the termination of the congress, the editing of the transactions shall be carried out by a committee, specially appointed for this purpose.

6. The congress will assemble daily, either for a general meeting, or for the labors of the different sections.

The general meetings will be held between 11 and 2 o'clock. Three such meetings will take place.

* Treasurer's Address: Dr. M. BARTELS, Berlin SW., Leipzigerstrasse 75.—Please to enclose a visiting card.

The time for the sitting of the various sections will be fixed by the special committee of each section. It being understood, however, that no such sittings are to take place during the hours allotted to the general meetings.

Joint sittings of two or more sections may be held, provided that the bureau of the congress can offer suitable rooms for such sittings.

7. The general meetings shall be devoted to

(*a*) Transactions connected with the work, and general management of the congress.

(*b*) Speeches and communications of general interest.

8. Addresses in the general sittings, as well as in any extraordinary meetings which may be determined upon, can only be given by those who have been specially requested by the Committee of Organization.

Proposals relative to the future management of the congress must be announced to the Committee of Organization before July 1, 1890. The Committee shall decide whether these proposals are suitable to be introduced for discussion.

9. In the sittings of the sections, questions and problems will be discussed, which have been agreed upon by the special Committees of Organization. The communications of those appointed by the committee to report on a subject shall form the basis of discussion. As far as time allows, other communications, or proposals, proceeding from members, and sanctioned by the Committee of Organization, may also be introduced for discussion. The bureau of each section decides as to the acceptance of such offered communications, and as to the order in which they shall come before the meeting, always provided that this point has not been already determined in the sitting itself by a decree of the section.

Scientific questions shall not be put to the vote.

10. Introductory addresses in the sections must, as a rule, not exceed *twenty minutes in length*. In the discussions no more than *ten minutes* are allowed to each speaker.

11. All addresses and papers in the general and sectional meetings must be handed over to the secretaries, in writing, before the end of the sitting. The Editorial Committee shall decide whether, and to what extent, these written contributions shall be included in the printed transactions of the congress. The members who have

taken part in the discussions will be requested to hand over to the secretaries, before the end of the day, in writing, the substance of their remarks.

12. The official languages of all the sittings shall be German, English, and French. The regulations, the programme, and the agenda for the day will be printed in all three languages.

It will, however, be allowable to make use of other languages than the above for brief remarks, always provided that one of the members present is ready to translate the gist of such remarks into one of the official languages.

13. The acting President shall conduct the business of each meeting according to the parliamentary rules generally accepted in deliberative assemblies.

14. Medical students, and other persons, ladies and gentlemen, who are not physicians but who take a special interest in the work of a particular sitting, may be invited by the President, or be allowed to attend the sitting by special permission.

15. Communications or inquiries regarding the business of separate sections must be addressed to the managing members thereof. All other communications and inquiries must be directed to the General Secretary, Dr. Lassar, Berlin, NW., 19 Karlstrasse.

FOUR HUNDRED DOLLARS IN PRIZES—IMPORTANT TO BIOLOGICAL STUDENTS.

From a desire to verify his own researches as to the causes of failing nutrition in aging organisms, the undersigned hereby offers three cash prizes of $175, $125, and $100 for the best three comparative demonstrations, by means of microscopical slides, of the blood capillaries in young and in aged tissues, canine or human.

By young tissues (canine) are meant tissues from animals between the ages of 1 and 3 years.

By aged tissues (canine) are meant tissues from animals not less than 12 years of age.

By young tissues (human) are meant tissues from subjects between the ages of 10 and 20 years.

By aged tissues (human) are meant tissues from subjects not less than 65 years of age.

While a preference will be given to demonstrations from human tissues, it will be possible for work in canine

tissues to take the first and, indeed, all of the prizes. But of two slides equally well done in all respects, one canine the other human, the latter will be given the preference. Canine tissues should be from large animals.

Twelve slides from young and twelve from aged tissues must be submitted by each competitor, together with a full description of the subjects, methods pursued, and every detail and circumstance which is likely to throw any light upon or account for any peculiarity. The slides are for comparison as to the condition of capillary circulation, the young with the old, and should be in numbered pairs, or groups from the same kind of tissue. The term tissue is used in a general sense, e. g., pulmonary tissue, hepatic tissue, renal tissue, osseous tissue, muscular tissue, nerve tissue, alimentary tissue, etc.

No particular schedule of methods for injection or staining will be insisted upon, and no more definite directions or explanations will be given.

The slides, carefully packed and boxed, together with descriptive manuscript, can be sent by mail.

It is stipulated that the demonstrations which receive the prizes shall become the property of the subscriber for publication. All others will be returned if desired.

No pseudonyms required. Accompany slides in every case with (real) name and address. Unless of known reputation as a biologist, a reference is respectfully solicited.

Reservation: no award will be made unless work of at least ordinary merit is submitted.

This offer is made on the first day of January, 1890, and will remain open until the twentieth day of August, 1890.

Slides and manuscript will be examined and receipted for as soon as received.

The prizes will be adjudged on the first day of October, 1890.

These nominal prizes are offered less in expectation of results from the money as an agent, than in the hope that the offer may furnish a *point d'appui* for really needed work. Besides professional observers and students, there are in the United States a large number of amateur microscopists of acute vision and undoubted talent, who are at present playing with microscopes, as with toys, merely to see curious or pretty things. The time has come to con

centrate observation upon the one proper object of biology, viz: the renovation and prolongation of human life. Address C. A. STEPHENS' LABORATORY,
Norway Lake, Maine.

WHO WAS YOUR GREAT-GRANDFATHER?

The *Detroit Journal* desires to receive, by postal card, the address of all living male and female descendants of revolutionary officers and soldiers of 1776, and, when possible, the name and State of the ancestor.

A NEW MEDICAL JOURNAL.

We have just received the initial number of a new candidate for journalistic honors, *The Dixie Doctor*, a medical journal for the busy practitioner. The editor is Dr. T. H. Huzza, and it is published monthly by The Dixie Doctor Publishing Company, of Atlanta, Ga. Number 1 opens with an interesting article by Dr. Henry H. Battey, of Rome, Ga. If succeeding numbers prove as interesting as the first, the new magazine will go along with a "hurrah," as well as a "Huzza."

ERRATUM.

On page 550 of this number, twelfth line from top, instead of "Pum's comp." read "Rumbold's compound."

The *Annals of Surgery* has now entered upon its sixth year of publication. Much praise is due both to the home and foreign editors for the high literary standard sustained. This is the only journal published anywhere in the English language devoted exclusively to scientific surgery and which does not seek popularity by giving minor surgery, but rather bringing the reader up to the highest literary and practical attainments in surgery, nor does it in the least degree cater to advertisers. The numbers are profusely illustrated with fine engravings and diagrams, elucidating the text. It is well worthy the patronage of all members of the profession who do any surgery. $5 per year; sample copies, 50 cents. J. H. Chambers & Co., St. Louis, Mo., are the publishers.

MORTUARY REPORT OF NEW ORLEANS

FOR DECEMBER, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	9	2	8	3	9	2	11
" Congestive	4	4	4	4	6	2	8
" Continued,	.....	.....	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....
" Remittent	1	.....	.....	1	1	.....	1
" Catarrhal	.....	.....	.....	.....	.....	.....	.....
" Typhoid	4	1	2	3	5	.....	5
" Puerperal	2	1	.....	3	3	.....	3
" Typho-Malarial	2	1	.....	3	2	1	3
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	.....	2	1	1	1	1	2
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	1	1	1	1	1	1	2
Pneumonia	25	16	26	15	35	6	41
Bronchitis	24	5	15	14	17	12	29
Consumption	36	29	29	36	59	6	65
Congestion of brain	1	2	1	2	2	1	3
Diarrhœa	9	3	9	3	5	7	12
Cholera infantum	8	5	4	9	.....	13	13
Dysentery	3	3	6	.....	4	2	6
Debility, General	.....	2	.....	2	2	.....	2
" Senile	20	11	16	15	31	.....	31
" Infantile	8	4	8	4	.....	12	12
All other causes	185	90	166	109	193	82	275
Total	342	182	296	228	376	148	524

Stillborn children—White, 37; colored, 14; total, 51.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for month—White, 22.24; colored, 31.42; total, 24.75.

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—DECEMBER.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	P'c'p. in inches and hund.
1	48.0	57.0	39.0	.....
2	52.0	64.0	39.0	.....
3	58.0	68.0	49.0	.....
4	60.0	70.0	50.0	.....
5	61.0	70 0	52.0	.....
6	60.0	72.0	49.0	.....
7	60.0	71.0	48.0	.....
8	68.0	80.0	55.0	.....
9	66.0	73.0	58.0	.02
10	68.0	78.0	58.0	.....
11	66.0	76.0	57.0	.....
12	66.0	75.0	57 0	.....
13	63.0	74.0	52.0	.....
14	68.0	76.0	59.0	.....
15	67.0	78.0	56.0	.....
16	64.0	74.0	53.0	.....
17	65.0	77.0	53.0	.....
18	68.0	78.0	58.0	.....
19	63.0	76.0	50.0	.....
20	69.0	78.0	60.0	.....
21	70.0	77.0	62.0	.....
22	68.0	76.0	60.0	.....
23	68.0	75.0	61.0	.....
24	68.0	75.0	60.0	.....
25	67.0	76.0	58.0	.....
26	66.0	76.0	57.0	.....
27	66.0	76.0	56.0	.....
28	67.0	76.0	58.0	.....
29	70.0	80.0	60.0	.....
30	65.0	77.0	53.0	.65
31	60.0	74.0	47.0	T
Sums	.	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.240.
Highest barometer, 30.54, 1st.
Lowest barometer, 30.03, 28th.
Mean temperature, 64.3.
Highest temp., 80.0, 8th; lowest, 39.0, 1–2
Greatest daily range of temp., 27.0, 31st.
Least daily range of temperature, 14.0, 23d.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..55.5	1876..47.9	1881..59.2	1886..51.6
1872..51.1	1877..55.6	1882..54.0	1887..52.9
1873..56.5	1878..50.8	1883..60.3	1888..51.2
1874..58.6	1879..59.5	1884..58.7	1889.. —
1875..61.6	1880..52.9	1885..53.1	1890.. —

Total excess in temp. during month, 2.79.
Total deficiency in temp. since Jan. 1, 1.16.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 24 miles, S., on 29th.
Total precipitation, 0.67 inches.
Number of days on which .01 inch or more of precipitation fell, 2.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875..... 5.15	1880..... 6.45	1885.... 4.38	
1876..... 9.51	1881..... 6.62	1886.... 2.57	
1877..... 4.96	1882..... 4.27	1887.... 7.56	
1878..... 8.69	1883..... 3.47	1888.... 3.68	
1879..... 2.90	1884..... 8.01	1889.... ——	

Total deficiency in precip'n for month, 4.20.
Total deficiency in precip'n since Jan. 1, 14.91.
No. of clear days, 12. No. of partly cloudy days, 15. No. of cloudy days, 4.
Frosts, ——.
Thunder storm on ——. Excessive rainfalls, ——; Mean Max. Temp., 74.3; Mean Min. Temp., 54.3.

NOTE.—Barometer reduced to sea level and standard gravity. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

MARCH, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

Kraurosis Vulvæ.

By A. H. OHMANN-DUMESNIL, of St. Louis. Professor of Dermatology St. Louis College of Physicians and Surgeons.

While a consideration of this disease appertains more properly to the domain of gynæcology, it possesses certain cutaneous features which render it in the highest degree interesting from a dermatological point of view. As originally described by Prof. Breisky (1), it is an essential atrophy of the integument of the female genitalia, accompanied, or not, by various objective and subjective symptoms. But comparatively few cases of this condition have been described, and, for this reason, I may be pardoned if I give a short abstract of each one of the cases which I have been able to collect, as a general view of them all may help to throw some light upon a subject which is as yet comparatively obscure. In a number of cases certain symptoms which are marked appear to be entirely wanting in others. In general, however, there are some conditions which are present in all cases.

(1) Neber kraurosis vulvæ, eine wenig beobachtete Form von Hautatrophie am Pudendum muliebre. Zeitzchrift fuer Heilkunde. Bd. 6, Hft. 1, 1885, p. 69.

In a paper published by Dr. Robert F. Weir (2), a case is described which bears close analogy to kraurosis, and is included in the list given below:

Case 1.—Observed by Robt. F. Weir (3), numbered case 3.—In 1869 he saw a woman, aged 61, single, who complained of an intense pruritus vulvæ, running back for many years—since the age of 16. She had taken morphine in large doses—10 to 12 grains daily—to quiet her. The labia majora had been removed with the galvanocautery, the operation being followed by moderate temporary benefit.

Upon examination, the vulva was found extremely sensitive, vaginismus being present. The uterus was the subject of senile atrophy. Starting from the fourchette and running upward, nearly covering each labium minus and insensibly merging into the normal mucous membrane, there existed a long, irregular patch of a pearly blue color covered by a tenacious secretion. There also existed islands through which the reddened subjacent tissues were visible. Those portions adjacent to the labia majora were also involved to a slight degree. The patch was thickened and very sensitive to the touch. The follicles of the vulva were enlarged and prominent in many places. Eighteen months later, epithelioma of the vulva appeared.

Case 2—Breisky (4)—A woman of 25 in her first pregnancy. Varices existed in the legs. The patient was strong and well nourished. The vagina was found to be smooth, the rima being short. A line, looking like a linear scar, was observed running from the mons veneris to the outer side of the frenulum clitoridis. The integument of the lower part of the mons, between the upper portions of the labia majora was shining, smooth, and dry. The labia minora were very slightly developed, being represented by ridges from the labia majora. The least effort

(2) Ichthyosis of the Tongue and Vulva. N. Y. Medical Journal, March, 1875.
(3) Loc. cit.
(4) Loc. cit.

at opening the vulva caused them to disappear. The frenulum labiorum had the same constitution as the skin and felt like a scar. A raphé-like line started from this and went toward the perineum. The dry epidermis of the inner surface of the labia was easily torn. The ostium vaginæ was deep and narrow. The woman went into labor and small fissures occurred.

Case 3.—Breisky (5).—A woman of 25, who had borne a child and had a ruptured perineum. She never had pain or itching of the external genitalia. A vaginal catarrh existed. The tear of the perineum extended into the vagina. The vulva was gaping. The edges of the wound of the perineum were covered with thickened epidermis. The inner surfaces of the labia majora and prepuce of the clitoris were torn and shining. The border of the prepuce and folds of the frenulum were clearly marked. The glans clitoridis had entirely disappeared. The labia minora were entirely gone and seemed to be missing. A search on the left side revealed a small fold, on the inner surface of the labium majus, indicating the boundary of the missing labium minus. The entire vestibule was smooth. Very few caruncles remained, as also mere traces of the hymen. The entrance of the vagina appeared smooth and shining. A thin secretion existed.

Case 4.—Breisky (6).—A married woman, aged 30. She had been married three years and was sterile. She had measles when a child. She menstruated at 18, at long intervals at first and regularly after a time. Each period lasted three days. For the nine months preceding the time of examination she had metrorrhagia. During the three months preceding, each period lasted from twelve to fourteen days. She had leucorrhœa before marriage, which has persisted. A painful itching of the genitals, which came on especially at night, has also persisted. Coitus was painful only at the beginning of marriage.

(5) Loc. cit.
(6) Loc. cit.

The woman was a strong brunette, somewhat pale.

No trace of the labia minora could be found. The frenulum and prepuce of the clitoris were faintly visible, the glans being absent. A white fold extended from the clitoris to the urethral orifice. The entire vestibule was narrowed. The skin all about was shrunken, dry, reddened in spots, partly of a milky opacity, and eroded in small places. No sebaceous glands were to be seen. A diffuse catarrh of the vaginal mucosa was present.

Case 5.—Breisky (7).—A woman of 22, married one and one-half years, had aborted at the third month during her first half year of married life. Since then her menses were regular. She never had any eruption upon the genitals. For the past three years she had pruritus for two or three days at the end of each menstruation. During the preceding hot summer it had lasted throughout the intermenstrual period and then returned to its former type.

The woman was a delicate, pale, medium nourished blonde. The skin of the folds of the pudendum and perineal vicinity was dry, pale grey, shining, and sparsely provided with sebaceous glands. The labia minora were very small and undeveloped, but plainly marked, as was also the frenulum and prepuce of the clitoris. On the other hand marked shrinking existed in the vestibular area which, in front, showed itself as a white, opaque cross fold between the clitoris and the urethra. At the posterior commissure a strong tension of the frenulum and dry skin existed. The vagina and uterus were normal. Coitus produced fissures, on account of the narrow ostium vaginæ.

Cases 6 to 19—Breisky (8)—Breisky merely mentions the fact that he had observed these cases, but did not enter into details on account of their general resemblance to those described above.

(7) Loc. cit.
(8) Loc. cit.

Case 20—Janovsky (9)—A prostitute, aged 20, in whom everything was normal except the genitals. The inguinal glands were enlarged upon both sides. A sore, appearing like bacon 1 c. m. long, and with a soft base, existed in the commissure. There were excoriations on the remains of the hymen. A moderate cervical gonorrhœa was present. The labia minora had disappeared and there existed tensely stretched folds, radiating toward the vaginal orifice. The mucous membrane was milky, smooth, dry, and thin. The prepuce of the clitoris was shortened, the glands being covered with a white, thickened mucous membrane. The urethral opening was small, and the mucous membrane here showed the same changes as above, that of the narrowed vagina being normal. Syphilis was not found.

Case 21—Janovsky (10)—The patient was 24 years old and married. Coitus was painful at the beginning of her marriage. A year before being seen she had been delivered of a large child, causing rupture of the perineum, which healed in twelve days. For six months she had a flow from the vagina. The upper half of the genitals was normal; in the lower part kraurotic changes were present. The margins of the labia minora turned, in an irregular arc, inwardly and disappeared completely in the mucosa of the labia majora. From the edges of the labia majora an opaque surface of mucosa manifested itself as far as the ostium vaginæ, being somewhat tense and dry. From the commissure there extended a whitish, slightly pigmented scar 1½ c. m. long, as far as the perineum, whose integument, in the vicinity, appeared to be slightly atrophied, devoid of pigment, and thinned. The vaginal mucous membrane on the lower wall, behind the introitus, was thickened in places and milky in color. This latter was due to epithelial thickenings which formed islets or sharply

(9) Ueber Kraurosis Vulvæ. Monatshefte fuer praktische Dermatologie, No. 19, 1888.

(10) Loc. cit.

circumscribed plaques encroaching upon the vaginal opening, similar to Schweminer's lenesplakia.

Case 22—Janovsky (11)—A prostitute of 19, who had had ulcers, vaginal and urethral gonorrhœa, and syphilis. She was of medium size and well built. The lymphatic glands were all enlarged, there was a beginning of defluvium capillorum, and seborrhœa. Opaline plaques existed on the tip of the tongue; mucous patches were present; a macular syphilide was disappearing, and there existed the remains of condylomata upon the nates. The labia majora were normal, strongly developed, moderately hairy, and carrying isolated condylomata. The duplicature of the labia majora had disappeared, the prepuce of the clitoris being absent, except a small portion at the upper part, which was covered with white thickened epithelium. The clitoris was moderately developed. Instead of labia minora, there was found a fold on the inner surface of the labia majora at the *niveau* of the vulvar opening. The mucous membrane was thickened and opaque. The vaginal opening was contracted and the entire vagina small. The uterus was freely movable, the mucosa of the vagina had its epithelium thickened in places and everywhere adherent to the underlying tissues.

Case 23—Janovsky (12)—The patient was a large, strong woman, married one year. The internal organs were normal, the lymphatic glands enlarged, two opaline plaques existing on the left palatoglossal arch. Near the tip of the tongue, on the left side, ulcerated mucous papules existed. The remains of a papular syphilide were observed on the body. The labia majora were infiltrated and swelled to five times their normal size. This infiltration was hard in the middle and doughy at the periphery. On the inner surface of the left labium majus there existed a penny-sized, elevated, bacon-like sore with a hard base. There were papules on the labia

(11) Loc. cit.
(12) Loc. cit.

and mucous plaques of the glans clitoridis. On the internal edge of the labia minora and in the creases of the vulva, mucous papules, rich in purulent secretion, existed. The mucosa of the vulva was œdematus, hyperæmic, there being a marked cervical gonorrhœa. After being treated for seven weeks for her syphilis, the woman presented the following appearance: The left labium majus had shrunken to a tense fold between two deep furrows. The contours of the left labium minus had disappeared, it having spread and disappeared in the tissues. There existed an ellipsoidal plaque, covered with whitish, opaque, and thickened epithelium, which lost itself in the remains of the hymen of this side. The prepuce of the clitoris was shrunken up to a semi-circular fold behind the glans. On the right side the kraurotic changes were not so well marked. The right labium majus was normal, the labium minus being reduced in size and attached to the subjacent tissues. A slight change in the epithelium at the vaginal orifice was observed. The orifice itself was slightly narrowed; otherwise the vagina was normal.

Case 24—Janovsky (13)—This patient was a primapara of 24, who had no history of any previous disease. During parturition she had a tear, and from this an ulcer sprang, which did not heal for a long time. For two months before being seen vegetations had grown from the edge. Nothing abnormal was found. The rima of the vulva was very short. The labia minora were but slightly developed and separated from the labia majora by small ridges. Slight epithelial opacities existed on the surface, the cuticle of the lower part of the mons veneris being dry. At the vaginal opening a linear, bacon-like ulcer existed with vegetations on its edges. The vagina was narrow, smooth walled, markedly dry, and provided with epithelial opacities here and there, especially at its opening. Between the remains of the labia majora, at the lower portion of the clitoris, a comb-like cross furrow extended from one labium to the other.

(13) Loc. cit.

Case 25—Janovsky (14)—This was a woman of 31, who had been married six years. One year after marriage she aborted and two months later she had an attack of syphilis. Menstruation began at the age of 14; she was chlorotic for two years, and latterly had a slight leucorrhœa. The labia minora had entirely disappeared. The covering of these parts, as well as the inner surface of the labia majora, was entirely smooth. At the opening of the vagina there was a slight swelling, dry, and not well defined. The clitoris was atrophied, its lower portion terminating in a furrow extending toward the meatus urethræ. The vaginal opening was very small. On the mucosa of the vulvar opening and of the vestibule there existed film-like and stronger thickenings of epithelium. The cervical portion of the uterus is somewhat deeply situated in the vagina. On the anterior uterine lip a pea-sized, slightly bleeding erosion. Symptoms of cervical catarrh also existed.

Case 26—Heitzmann, Unpublished (15)—This was a widow of 62, who suffered from an intense itching of the vulva. There were four horny patches, two on the inside of the labia majora, one on the right labium minus, and one at the fourchette.

They were twice curetted, and after the operation cauterized with liquor ferri sesquichloridi. A permanent cure followed.

Case 27—Heitzmann, Unpublished—This was a married woman of 52, affected with an intense itching of the vulva. A thickening of the labia majora, which was almost universal, existed. There were small patches on the inner surfaces of the labia majora. Intense leucorrhœa was present. A 1.5 per cent salicylic acid lotion was ordered. The patches were curetted ten times. After three months' treatment there were only vestiges of the disease remain-

(14) Loc. cit.

(15) This and the following three cases were reported to the American Dermatological Association in 1888, but never published. I wish to return thanks to Dr. C. Heitzmann for his kindness in sending me these abstracts.

ing at the fourchette; itching had disappeared and the leucorrhœa was very slight.

Case 28—Heitzmann, Unpublished—The patient was a married woman of 58, who had slight, parchment-like patches on the inner surface of the labia majora and all over the labia minora. Intense itching was present. Salicylic acid lotions, varying in strength from 0.5 to 1.5 per cent, were ordered. Slight curetting was done six times and the case was discharged, cured in two months.

Case 29—Heitzmann, Unpublished—This case was a virgin of 35. There existed numerous, small, parchment-like patches situated mainly in the furrow between the labia majora and minora, on the labia majora, on the prepuce of the clitoris, and at the fourchette. Salicylic acid lotion, pyrogallic acid lotion, (6 per cent), acetic acid (10 per cent glacial), and a dozen curettings were resorted to. There was marked improvement after three months' treatment. Every succeeding month the patches which again came out were curetted. The itching was much reduced in intensity. The patient was seen two months before being reported. At that time there were scarcely any patches left. Breisky had seen the case and declared it incurable.

Case 30—Hyde, Unpublished (16)—A case simply mentioned—no details.

Case 31—Bermays, Unpublished (17)—Mrs. X., a widow of 56, who never conceived. She has suffered from pruritus vulvæ of the most aggravated type for the past fifteen years. All methods of treatment recommended failed to relieve her. Her external genital organs, at the first glance, appear to be atrophied. They are covered with a sparse growth of grey hair. The clitoris is small and projecting, the glans imperfect, no frenulum, the prepuce thin. The vestibule is very narrow. During her married

(16) Dr. J. N. Hyde stated at the meeting of the American Dermatological Association, held in 1888, that he had seen a case. Upon request for a history, he replied that he was too busy at the time to attend to the matter.

(17) I wish to return thanks to Dr. A. C. Bermays for his kindness in furnishing me the notes given above.

life coitus was very painful. The vagina is scarcely large enough to admit the index finger. The opening of the urethra is within the vagina—a form of hypospadias. The skin of the labia majora is very thin and shining and shows the effects of scratching. There are no labia minora and no well developed folds of any kind, the labia majora themselves being very small and lost in the nates above the usual point. There are numerous whitish plaques on the skin of the labia majora.

Case 32—Personal, Unpublished—The subject was a prostitute, aged about 30. No details obtainable as to subjective symptoms or history. The condition present is as follows: The labia majora are much changed, being represented by ridges with an intervening furrow and disappearing in the integument rather high up. The labia minora and clitoris are apparently normal, the left labium minus showing some atrophy at its posterior portion.

Case 33—Personal, Unpublished (17)—Mrs. Y., a widow of 71, first menstruated at 14½. The menopause occurred at 47. She bore her first child at the age of 28, and her last at 35, there being five in all. She had one miscarriage. She first noticed the present condition two years ago when she suffered from rhus poisoning. She states that small ulcers occurred upon the external genitalia. She never suffered from any trauma, except at the birth of her last child, when a slight tear occurred, which healed kindly. The vaginal opening was always small. When examined she presented the following condition:

The upper portion of the labia majora has disappeared, the lower portions being rather large and thickened. The clitoris has nearly disappeared, the glans is diminished in size, and covered with a whitish thickened epithelium. The skin of the labia majora, of the clitoris, and of the vestibule is tense and shining. The labia minora have entirely disappeared, as also the caruncles and all traces of a

(17) This case was kindly referred to me by Dr. A. S. Barnes.

hymen. The ostium vaginæ is narrow and contracted, scarcely admitting the index finger. There is slight leucorrhœa present. The uterus is atrophied and somewhat prolapsed. At the posterior commissure there exists a plaque on both sides and encroaching upon the perineum, which is at times covered by a whitish thickened epithelium, and again appears denuded, red, angry, and glazed in appearance. Herpetic and urticarial eruptions occur from time to time upon the inner surfaces of the labia majora. An intense itching of the parts accompanied by neuralgic pains existed at first, but these have been greatly relieved by the suspension treatment which has been attended to by Dr. Shaw. The patient is of a highly nervous temperament, and suffers much from neuralgic pains along the anterior crural nerve. At times the labia majora swell up and become exceedingly tender, as well as the plaque. At other times there are no subjective sensations. A marked acid condition is also present, but is diminishing. General measures, accompanied by local soothing applications, have been adopted, but little progress has been made so far.

Case 34—Personal, Unpublished (18)—Miss Z. is a rather well developed girl of 20. She is tall, complexion dark, and is affected with xerosis. She first menstruated when about 17½. She also noticed, at this time, the leucorrhœa with which she is still affected. Upon examination of her genitalia it is found that the clitoris is rudimentary, the prepuce being well developed. The mons veneris is entirely absent at its central portion, forming a comparatively deep furrow. The labia majora are atrophied, this condition being most marked at their lower portion. The pudenda are well supplied with hair. The labia minora are pendulous at their lower portions, but imperfectly developed at the upper. Upon the inner surface of the labia minora some whitish plaques exist. The hymen is rather thick, the opening central and dilatable.

(18) For this case I am indebted to Dr. Philip Scholtz, who requested me to examine it.

The ostium vaginæ is apparently normal, as also its mucosa. During the winter of 1888-89 pruritus of a severe character affected the labia, but this has disappeared. The patient does not know when the condition described first appeared.

Case 35—Scholtz, Unpublished (19)—Mrs. X.Y., aged 27, is well developed, but has always been sterile. As in the three preceding cases, there is no history of previous venereal infection. There is no history of itching or of any affection of the uterus or vagina. In this case there is a complete absence of the labia majora and minora. The clitoris is rudimentary, and there is no cushion to represent the mons veneris. There is no hair upon the genitalia, with the exception of a small tuft situated at the symphysis. The skin covering that portion which should be occupied by the labia is thin and glossy. The vaginal opening will just admit the index. Coitus is painful. Menstruation has always been normal.

A consideration of the histories and descriptions of the cases given above will render apparent the difficulty of making a clinical analysis. In considering his cases Breisky states that in no one was there a history of inflammation or exanthemic disease of the external genitals. There were a few cases of pruritus. Out of five pregnant women it occurred only in one, and disappeared spontaneously before the termination of pregnancy. In four gynæcological cases one had itching which lasted three weeks. In three private patients, two had itching; one for years, it being painful, especially at night. Vaginal leucorrhœa and profuse menstruation existed in this case. In the other one pruritus had lasted three years, occurring at the end of each period, and lasting two or three days.

Summing up his cases, Breisky states that chronic vaginal catarrh was found in four; two had scars of former abscesses of the cervical glands (scrofulous); none ever had

(19) I am indebted to the kindness of Dr. Philip Scholtz for the notes of this case.

syphilis; one was sterile; one had aborted; three were in their first pregnancy; two were in a late pregnancy; five had borne from one to (ten) children. None of the multipara had ever had any accidents of parturition or inflammation of the external genitals.

This author is of the opinion that chronic eczema may bring on the atrophy, but no traces of the disease could be seen in the cases reported. He also regards pruritus as a possible cause, but it was not present in all cases. All treatment he regarded as useless.

In Janovsky's cases two were prostitutes who had gonorrhœa; and four married women, two of whom had leucorrhœa and two syphilis, one of the prostitutes being also syphilitic. No history of pruritus is given in any case. Janovsky is of the opinion that chronic gonorrhœal discharges and venereal ulcers predispose to kraurosis, if they do not actually cause it. He also states that therapeutic measures are of no avail.

In Heitzmann's cases, the reporter has unfortunately not dwelt upon the anatomical features, nor do we find much detail of this sort in Weir's case, which is in all probability one of kraurosis. In all these five cases, pruritus is a prominent symptom as well as the peculiar plagues. In Heitzmann's cases excellent results followed therapeutic measures. Out of the five cases, three were married (one being a widow) and the other two unmarried. In all of the cases no mention is made of any previous eruption, nor of any vaginal discharge being present or not.

In the remaining five a history is given in four cases only. In all but one of these pruritus is a factor. The presence of leucorrhœa was also noted to a greater or less extent. Opaline plaques existed in three, and all were of a nervous temperament. In three the ostium vaginæ was considerably narrowed, and in all the five the atrophic condition of the external genitalia was well marked.

In taking a review of all the cases given above, the

No.	Age.	Social Condition	Parts Affected.	Pruritus.	Plaques.	Syph.	Gon.	Leuc.	Number of Children.	Number of Abortions	Reporter.
1	61	Single.	Labia majora (?)	Marked.	Yes.	No.	No.	No.	None.	None.	R. F. Weir—N. Y. Med. Jour., March, 1875.
2	25	Married.	Mons, lab, min.	None.	None.	No.	No.	No.	None.		
3	25	Married.	L'b,m'n,gl'ns,clit.	None.	Yes.	No.	No.	No.	None.		
4	30	Married.		Distressing	Yes.	No.	Yes	Yes	One.	One.	
5	22	Married.		Yes.	Yes.	No.	No.	No.	None.	None.	
6			Not mentioned	Four are mentioned as being affected with pruritus.	Not mentioned.	Not mentioned.	Not mentioned.	Four cases are mentioned.	Five had from one to ten children. Five were pregnant.	One had had an abortion.	Breisky, Zeitschrift f. Heilkunde, 1885, I.
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19		Prostitute.	Lab, min,		Yes.	No.	No.	No.	None.	None.	Janovsky, Monatshefte für Prakt. Dermat, 1888, '89.
20	20	Married.	Lower half,		Yes.	No.	No.	No.	One.		
21	24	Married.	Lab, maj, lab,		Yes.	No.	No.	No.	None.		
22	19	Prostitute.	min. clit,		Yes	No.	Yes	Yes			
23		Married.	Left half and	No.	Yes.	No.	No.	No.	None.	None.	
24	24		right lab, min,		Yes.	No.	No.	No.	One.	One.	
25	31	Married.	Lab,min,lab,maj,		Yes,	No	No	No	None.		
26	02	Widow.	Lab,min,and clit.		Yes.						
27	52	Married.		Intense.	Yes.						
28	55	Married.		Intense.	Yes.						
29	35	Virgin.		Intense.	Yes.						
30	35		Lab, min, lab,			No.	No.	No.	Sterile.		C. Heitzmann, unpublished.
31	56	Widow.	maj, and clit,	Intense.	Yes.						
32	30	Prostitute.	Lower part lab,								Paul F. Mundé and C. Heitzmann.
			maj. and left								J. N. Hyde, unpublished.
			lab, min,	Intense.	Yes.	No.	No.	Yes	Five.	One.	A. C. Bermays, unpublished.
33	71	Widow.	Lab, maj, lab,								
			min, part clit,	Intense.	No.	No.	No.	Yes	None.	None.	Ohmann-Dumesnil, unpublished.
34	20	Virgin.	Lab, maj,								
			mons.	Intense.	No.	No.	No.	Yes	None.	None.	
			All								
35	27	Married.		Moderate.	No.	No.	No.	No.	None.	None.	Ph. Scholtz, unpublished.

NOTE.—Case No. 29 in the table was one of Dr. Breisky's cases which was referred to Dr. Paul F. Mundé, of New York. The latter had Dr. Heitzmann see it and he eventually treated her.

etiology remains obscure and a surmise of a possible cause can not be made. The fact that there have been but few cases of this character reported does not argue that it is a rare condition by any means. In fact, I am inclined to the belief that it is rather frequent, and that it is simply owing to inattention that more of a similar character have not been reported. It is only lately that any considerable degree of attention has been drawn to this disease in medical journals, and all the literature given so far has consisted of short abstracts of the articles quoted in this paper and of Dr. Heitzmann's cases. When the condition becomes better known the number of cases will, no doubt, multiply, and what is now looked upon as an unusual disease will be frequently seen and noted.

No. 5 South Broadway.

Hospital Reports and Clinical Notes.

A CASE OF HYDROPHOBIA.

Reported by E. A. Robin, R. S., Service of Prof. S. Logan, M. D.

Solomon Coleman, colored boy, æt. 10, a native and resident of New Orleans; gave no history of any inherited or acquired trouble; patient came to ward 1 in the out clinic on the morning of Jan. 27, 1890, accompanied by his mother; he gave the history of having been bitten by a dog on the posterior aspect of right leg four weeks previous to his coming to the hospital. The cicatrix was somewhat inflamed, and patient felt pain along the course of the great sciatic nerve. He stated that he was bitten through his stocking only; he was perfectly rational, and unusually intelligent for one of his age, but though answering when spoken to he became silent, morose, and uncommunicative. Upon asking him a question he was noticed first to swallow his saliva, which brought about a pharyngeal spasm lasting several seconds, after which he could converse with ease. The mere mention of something to swallow occasioned violent spasms of his pharynx, and

these seemed to extend throughout his entire muscular system. He stated that the dog died the day following that on which he was bitten. This statement was corroborated by his mother. The surgeon of the ward advised the patient to remain in the ward for treatment, being confident of the true and serious nature of the disease, still giving the patient every hope and assurance of recovery. The parents, however, preferring to treat him at home, the following directions were given, viz., that he be placed in a dark, well ventilated apartment, free from noise of any kind, and that he be given by enema, large doses of chloral hydrate and bromide of potassium at intervals of two to three hours. On morning of Jan. 28, the ambulance was summoned to the patient's residence; he was conveyed to the hospital and placed in ward 1. The ambulance surgeon found it imperative to administer chloroform by inhalation in order to quiet the violent convulsions under which he now labored. Upon arrival at hospital he was examined by the house surgeon, accompanied by another member of the faculty, who pronounced it a typical case of hydrophobia. Patient then presented the following symptoms: Frothing at the mouth, and, upon attempting to swallow, violent pharyngeal spasm and rigor, involving all the muscles of the body. His eyes then became fixed and exophthalmic; his features contracted, and countenance expressive of the deepest anxiety. His limbs shook, and the whole body shivered; these paroxysms lasted ten or fifteen seconds, then subsided, to be renewed upon the slightest irritation. A marked condition of hyperæsthesia existed, so that even a breath of cold air or the sight of some bright object was sufficient to bring about a paroxysm. Patient died at 12 P. M., Jan. 28, in frightful convulsions. The treatment, consisting of hypodermics of gr. ¼ sulphate of morphia every two hours, with gr. xv of chloral, and gr. xx of bromide of potassium by enema, had no apparent effect in relieving patient's evident sufferings or of lengthening intervals between paroxysms.

On Jan. 29, ten hours after death of patient, inoculation of animals was performed by Drs. Archinard and Parham, assisted by Ambulance Surgeon Ames and the writer. The animals selected were two pups, a month old, and a large dog. The material for inoculation was prepared as follows: A portion of the patient's medulla was removed and made into an emulsion, using sterilized water and instruments for the purpose. About thirty minims of the emulsion were introduced by means of a hypodermic syringe into the anterior chamber of one eye of each pup. The large dog was anæsthetized and trephined over the right parietal bone a little behind the ear, under strict antiseptic conditions, and about sixty minims of the emulsion injected beneath the dura mater. The pups and dog were placed together in a large coop for observation. The animals ate and drank well until the tenth day, when the large dog began to present symptoms of rabies. He became quite distant in his manner and remained silent, apparently pensive and melancholic, in the corner of the coop. On the following day he became very irritable and excited, and killed both pups, with which his relations had previously been apparently friendly. He took no nourishment after Feb. 8, the day on which he first showed symptoms of the disease. Upon attempting to eat, he would have a spasm of the pharynx, after which the morsel would drop from his mouth. This was followed by rigors involving his whole frame. When attacked with a stick he would snap at it, but was utterly unable to hold it firmly, owing to the evident paralysis of the muscles of mastication. He died on the twelfth day after inoculation.

This case goes to confirm a truth already demonstrated that we have at our hands a means which, when attended with success, is absolutely diagnostic of this dread affection.

CORRESPONDENCE.

EOLA, La., Feb. 20, 1890.

Editors New Orleans Medical and Surgical Journal:

I request the privilege of using a short space in the columns of your valuable journal, in order to remind the members of the Louisiana State Medical association of the very great importance which attaches to the approaching meeting, which will be held at Baton Rouge on the second Tuesday in May, 1890.

To the gentlemen composing the Louisiana State Medical association, it would be superfluous to do more than call attention to the date and place of meeting, and to remind them that a full attendance will not only insure an enthusiastic meeting, but will convince the public at large that, as an educated body of medical men, the combined efforts of our association will be used to elevate the standard of medical education; so that future matriculates of our medical colleges, wishing to practice medicine in Louisiana, must either by a suitable preparatory education reach a certain standard of proficiency or abandon the study of medicine entirely.

Considering, gentlemen of the Louisiana State Medical Society, the vast amount of deep study and research necessary to acquire even a modicum of medical and surgical lore, to say nothing concerning the collateral sciences so interwoven and associated with a liberal culture of medical studies, does it not behoove us, in this enlightened age of progress, to endeavor by our influence with the legislative body of the state to inaugurate such a change in the laws relating to the practice of medicine in Louisiana as will, in the future, exclude from our already overcrowded ranks those who, from a neglect of preliminary education, are palpably unfit to enter on the vast field of medical study?

The subject of a more elevated standard of medical education pertains not only to our own State, but is exer-

cising the best minds of the medical profession in other States.

To illustrate the importance which the subject of a more "creditable standard of medical education" is assuming in the minds of the medical profession to-day, I excerpt from "The Journal of the American Medical association," Feb. 15, an article headed "Medical College Conference, p. 241:

BALTIMORE, Md., Feb. 7.—The medical colleges and schools, of Maryland, in conference here to-day, issued an appeal to the Medical Colleges of the United States, asking them to send delegates to the approaching convention of the American Medical Association at Nashville, Tenn., with a view of effecting a reform in the methods of medical institutions in vogue in this country.

Shall we be deaf to such an appeal? I trust and believe that that honorable esprit de corps, which pervades and animates every collective body of intelligent gentlemen, such as you are, will furnish the zeal to make our meeting at Baton Rouge a success, financially, socially, and intellectually, by the large numbers in attendance. Especially do I address myself to my confreres, whose destiny, like my own, is not cast in soft places, nor whose paths are strown with roses. To the country physicians, I appeal, and I hope not in vain, to lend their aid, by their presence and influence at Baton Rouge on the second Tuesday in May, that, with the hearty co-operation of our entire association, we may concert such measures relating to a higher standard of medical education as will redound to our honor and prove a palladium to the citizens of Louisiana.

In conclusion, I beg to add a word of explanation: Several weeks ago I was notified, as the president of the Louisiana State Medical association, that it would perhaps be best to change the place of meeting from Baton Rouge to New Orleans.

Wishing to consult only the interest of the association, I went to New Orleans, and, after due and deliberate discussion of this subject, I did not feel constrained to change

the place of meeting, because at our meeting in New Orleans, April 9, 10, 11, 1888, the association, for very special and specific reasons, selected Baton Rouge as the place of our next meeting. I have the honor to remain, gentlemen, very respectfully and fraternally,

C. D. Owens, M. D.,

President Louisiana State Medical Association.

LOUISIANA STATE MEDICAL SOCIETY.

SECTION OF SURGERY.

The next annual meeting of the Louisiana State Medical Society, which will be held at Baton Rouge, May 13, 1890, is rapidly approaching, and the attention of the members, as well as that of other members of the medical profession of the State, who have not yet joined the organization, is urgently directed to the necessity of maintaining this most beneficial organization in a condition of vigorous and influential prosperity. This can only be accomplished by making our meetings interesting and instructive; the undersigned, therefore, earnestly appeals to all those who have had instructive or novel surgical experiences, observations, or suggestions to come forward and contribute with their presence and their ideas, or at least with their communications, to the general fund of medical knowledge which should be gathered and distributed on such occasions.

The "Transactions" of the State Medical Society are the measure by which the medical world estimates our collective professional efficiency and capacity, and it is sincerely hoped that the next volume will not discredit the merits of the profession of this State.

All those who propose contributing papers to this important section—and it is hoped sincerely that there will be many—will please communicate their intention, title of their paper, and probable length to the undersigned.

Rudolph Matas, M. D.,

Chairman Section of Surgery, 72 *South Rampart street, New Orleans, La.*

Leading Articles.

ANNOUNCEMENT.

Commencing with the next (April) number, Messrs. L. Graham & Son will assume charge of the business management of the New Orleans Medical and Surgical Journal. We can assure both our subscribers and advertisers that their interests will not suffer, as the gentlemen who will take charge of this department of the Journal are both experienced and conscientious, and have been connected with it as its printers and as stockholders therein for nearly fifteen years; on the contrary, this division of labor connected with the publication of the Journal will enable us to give our undivided attention to sustaining and improving the literary department. In a literary way, our efforts shall be directed so as, first, to give a condensed but accurate review of medical progress in all lands, and second, to reflect in a special manner the status of medicine in the southern states.

We trust that our efforts will continue to meet with the approbation of our medical friends, whose appreciation and encouragement lighten one's burdens, and convert tasks into pleasures; and we commend our successors in the business department to our friends, and bespeak for them a cordial reception at the hands of those who favor us with their patronage.

The Editors.

All communications of a literary character should be addressed to

Editors of N. O. Medical and Surgical Journal,
P. O. Drawer 282,
New Orleans, La.

* * *

Referring to and confirming the foregoing, and with the assurance of the editorial staff of its earnest support in its

field, we beg to advise the many friends and patrons of the JOURNAL of our desire and intention to place it in the foremost line of medical journalism, to enlarge its sphere of usefulness, and to improve its appearance and make-up.

In order to avoid any confusion in the current volume, we shall defer any radical changes in contemplation until the beginning of the new volume (July number). One feature of the JOURNAL hereafter will be the PUBLISHER'S DEPARTMENT, through which our advertising friends can convey more definitely and distinctly than in an advertisement, the special words of advice and explanation they may wish to give to the profession. The appearance and style of the advertisements will also be improved; and we wish to convey to the advertising patrons of the JOURNAL that it will be our aim to secure to them entire satisfaction for their patronage. We wish to be advised at once of any cause for complaint, that it may be remedied, and studious attention will be given to their wishes and suggestions.

To the subscribers it is sufficient to refer to the expressed purpose of the editorial staff, whose ability and reputation in the progress of medicine, are guarantees of the result.

All remittances, either for new account or in settlement of old accounts, and communications on all subjects not connected with the literary part of the JOURNAL, must be addresssed to

L. GRAHAM & SON,
Business Managers N. O. Med. and Surg. Jour.,
103 Gravier street, New Orleans.

THE GREAT CHLOROFORM QUESTION.

At the present time the whole medical world is agitated over the action of chloroform. This anæsthetic has been used for more than forty years, and during that time a large clinical experience has been gathered, from which rules for the safe administration of chloroform have been formulated. Since the advent of chloroform into the

domain of medicine, a new branch of medical investigation has been cultivated, namely, modern experimental physiology. It is impossible to estimate the great advances made in all branches of medical science by means of experiments. Without vivisection, physiology would not now be the full and attractive science that it is; and pathology owes much to these cruel experiments, particularly in the elucidation of problems connected with the infectious diseases. But, while experimental physiology has done much toward clearing up obscure biological problems. it can not, in its present state, be accepted as infallible on disputed points; or, rather, the methods and appliances used are so complex in many instances that a very slight imperfection in some part of the apparatus might cause very misleading results. This has been most strikingly illustrated in the present discussion of the merits of chloroform.

A remarkable series of experiments has been performed in India—the land in which our race was probably nursed, in which our distant bronzed cousins now live, and which possessed an over-ripe civilization when our more recent ancestors were clad in the skins of wild animals. The Nizam of Hyderabad is a liberal patron of learning, and he seconded the efforts of Surgeon-Major Lawrie to prove, by means of laboratory experiments, the view of his late teacher, Prof. Syme, viz., that chloroform could be administered with perfect safety if the respiration be but carefully watched. A commission was appointed by the Nizam's government to investigate the subject. The commission arrived at the conclusion that "chloroform always arrests the respiration before the heart."

This finding did not meet with favor in some quarters, and it was specially combated by the *London Lancet*. Lawrie proposed a second commission, of which a representative of the *Lancet* should form a part. The *Lancet* selected Dr. Lauder Brunton as its representative. The Nizam contributed £1,000 to pay the expenses of the

commission. This second commission, consisting of Lawrie, Brunton, Bomford, and Rustamji, worked daily, except Sundays, from Oct. 23, 1889, until Dec. 18, 1889; in that time 430 animals cheerfully gave up their lives for the purpose of deciding whether chloroform killed by paralyzing the heart before the respiration, or *vice versa*. In all, 360 dogs and 70 monkeys learned the beauties of chloroform euthanasia.

The substance of the report of the second commission is given at another page of this issue.

At the conclusion of the Commission's labors, Dr. Lauder Brunton candidly acknowledged that his former teachings as to the action of chloroform had to be entirely discarded; that chloroform paralyzed the respiration first and the heart afterward, and that the heart became seriously affected only when the breathing had ceased.

A striking result of the commission's finding was the vigorous stand that the London *Lancet* took in regard to the moral responsibility of the medical men who choose chloroform when they find it necessary to administer an anæsthetic. The *Lancet* says: "The practical outcome of the research would appear to be that deaths from chloroform are not inevitable. They are, therefore, preventible, and *by due care* in its administration *they may be with certainty avoided*."

This deduction was not allowed to pass unchallenged. Two of our most reliable American therapeutists, Dr. H. C. Wood and Dr. Hobart A. Hare, have placed themselves on record as emphatically opposed to such a conclusion (*Medical News*). These gentlemen referred to experiments formerly made by them, and found that the results that they obtained did not accord with those of the Hyderabad Commission. In order to strengthen their position, they repeated their experiments, and varied them in such a way as to cover all loopholes through which errors might creep in. The tracings obtained by them show emphatically that *chloroform paralyzes the heart*

first, and that respiration continues even after the pulse waves have entirely ceased.

How is it that such eminent, conscientious men can come to conclusions diametrically opposed to each other? It was not due to lack of proper apparatus either in Hyderabad or Philadelphia, for Lauder Brunton confesses his surprise at the thorough equipment which he found in the Indian laboratory, and the University of Pennsylvania is not niggardly in matters that tend to keep its departments abreast of the times. The American writers, fully acknowledging the competence and sincerity of the Hyderabad Commission, hint at a difference in the constitutions of American dogs and pariah dogs. Dr. Brown-Séquard, at the International Medical Congress at London, stated that he had experimented upon hundreds of dogs both in Europe and America, and he had found that the vascular systems of the European dogs were much more developed than that of American dogs, operations upon the former being much more bloody than upon the latter. It is not impossible that the dogs of India may be so degenerate that they do not react precisely as do American dogs. Wood and Hare say: "A fact to be remembered is that though 450 pariah dogs in India have died of respiratory failure, an equal number in America have died of cardiac arrest, whilst the records of clinical medicine show that death in the human being from chloroform usually takes place either by primary arrest of the heart or by a simultaneous arrest of the heart and the respiration, while in etherization the respiration usually ceases distinctly before the heart's beat." * * * "The great respect and friendship which we have for some of the members of this commission make us loth to differ from them, and the issue between us is not simply a scientific matter, which would allow of silence, but is of such immense practical importance, involving, as it does, human life, that we feel it a duty to speak. In the first place, we fear that the Commission's statement that their object is to *test* the suitabil-

ity and safety of chloroform as an anæsthetic, will mislead the minds of readers as to the proper scope of experiments upon animals in regard to therapeutic questions. We believe that no one will accuse us of attempting to diminish the importance of such experimentation, but we insist that the only proper objects of such experiments are to lead the way to clinical studies, and to explain clinical facts. A well established clinical fact can not be disproved by any amount of experiments upon animals. We have given elaterium to dogs until it has caused death, but it has not purged. Suppose that every dog in India had had administered to it elaterium, without the production of purgation, would that prove that elaterium does not purge man?"

A mountain of negative evidence vanishes into thin air before the force of a single positive fact. The Hyderabad Commission says, in substance, that it has made a large number of experiments upon Indian animals, without ever having seen the heart arrested by chloroform before the respiration—therefore, chloroform never causes death by syncope; or, in other words, the Commission has not seen a certain phenomenon, therefore, the said phenomenon never occurred. In rebuttal, Wood and Hare say that they have seen this phenomenon repeatedly, and their testimony is supported by tracings which have the same relation to physiology that photographs have to human faces.

In the midst of this conflicting testimony, what shall the general practitioner do? He is unable to determine experimentally, for his own satisfaction, how chloroform kills, and hence he has to rely upon the leading physiologists for guidance, The practical outcome is one of great importance to every surgeon. In commenting upon the quotation from the *Lancet* given above, the American investigators say: "We desire most emphatically to protest against any such conclusion being considered as justified by the work of the India Commission. If, with due care in administering chloroform, accidents may with certainty be

avoided, they are, when they do occur, the result of ignorance or carelessness, and the coroner's jury in a given case could scarcely, under the rulings of the *Lancet*, fail to bring an accusation of manslaughter against the surgeon. We can not help wondering if the editor of the *Lancet* appreciated the force of his own words."

Wood and Hare bring forward the names of prominent men who have met fatal results. The list embraces the names of Billroth, Jaeger, and Dumreicher, of Vienna; Sir J. Y. Simpson, Sir Geo. H. B. McLeod, J. Farrant Fry, and Francis W. Clark, of England and Scotland; Hunter McGuire, J. H. Wellford, and Chancellor, of Virginia; and Drs. A. W. Hammond, A. J. Parsons, W. N. Dawson, and others. "Does the *Lancet* mean to charge that these accidents could have been avoided? That these men have been practically guilty of taking life through carelessness?"

In the Southern States, the chloroform question is of special importance on account of the extent to which that anæsthetic is used. In the other States of the Union ether has, in a great measure, displaced chloroform. The greater safety of ether as an anæsthetic caused the compiler of a little work, entitled "Medical and Surgical Aphorisms," to launch forth in this strain: "On account of the demonstrated danger attending the use of chloroform, no surgeon can administer the anæsthetic without incurring moral blame," or words to that effect. Notwithstanding this, chloroform still holds its ground in our part of the world, and in the hands of those who know how to administer anæsthetics its use is not attended with any very great danger. The conditions which contraindicate the use of the one or the other anæsthetic have been well made out, and may be found in any suitable text-book.

The cause of the discrepancy in the results of the British and American investigators may or may not lie in the constitutional differences of the dogs of different climes. There may be some condition, not yet made out,

which may underlie the fatal effects of chloroform, and which, when discovered, may be eliminated. But until that discovery be made, we will occasionally hear of deaths from chloroform, and the surgeon should neither incur moral blame nor be subject to criminal or civil prosecution.

THE STATE SOCIETY.

It is an unfortunate fact, but one easily apparent to all, that medical organizations have not, as a rule, prospered in this State of ours. It is barely six weeks since the New Orleans Medical and Surgical Association went formally out of existence, and turned its paraphernalia over to the Orleans Parish Society. This latter body, though holding its own and making earnest endeavors to increase its membership and enlarge its work, is still far from being a true representative of a city of near 250,000 souls; and, moreover, it is the only one here.

As to the State Society, though we all know and fully appreciate the labors of a devoted few to elevate it and infuse fresh life into it, still must we acknowledge how far it is below the plane to which it rightfully belongs and should attain.

In our own city we honestly think that the absence of proper *esprit de corps* and want of community of sentiment following so naturally upon the demoralizing effects of "society practice," and other forms of contract work, are largely responsible for the poor showing made by our local medical organizations. We have heard men refuse to join the Parish Society "because it recognized the code of ethics." Some of these men we know never saw the code, but they very naturally concluded that it discountenanced contract work, or else should do so.

Nevertheless, and notwithstanding all the above, there is a goodly and a very influential number of physicians in this city who love the State Society and would do anything in their power to assist its advancement. Alone they are

too few—the past meetings in this city itself have proven this. But there is a still larger number of men in the country who honor their society, and most of them have proven their devotion by frequent attendance. Now, if these two contingents, the city and the country, will make one more earnest effort to gather in force at Baton Rouge, in April, 1890, we believe that we may yet succeed in infusing the proper amount of life and energy in the society, and prove that with careful nurturing Louisiana soil may be made to bear as good fruit Esculapian as that of Texas or Alabama.

A special reason why we should go in numbers to Baton Rouge next April is the fact that the legislature meets this spring and there are many things which we should endeavor to have them do. Now, if when we are assembled, then the roll call should show a small band of thirty or forty, would it be very strange if some of our law makers should question whether we are really a body representative of the profession of the entire State, and competent or authorized to come before the legislature, asking or demanding measures for relief?

In our next number we shall note the subjects which have been mentioned as calling for legislative action. Any of our readers, members of the Society or not, who have any matters which they think should be presented to the legislature, would do well to send a resumé of them to us in time for our next issue. The points could thus be thoroughly considered and the bad removed before the subjects are presented either before the Society or the legislature.

Finally, let every man that goes take something of interest with him, be it a history of a case, a specimen, or an elaborate paper. Then with plenty of time allowed for discussion of the papers and cases presented, and not only time given, but discussion invited and if necessary insisted upon, our meeting must of necessity be successful and the precursor of others like it.

Abstracts, Extracts and Annotations.

MEDICINE.

REPORT OF THE SECOND HYDERABAD COMMISSION.

The *Lancet* contains the full text of this great report, from which we make the following lengthy extract, which is due to it on account of its importance:

The experiments of the commission were designed to show the effect upon the blood pressure, heart, and respiration of the inhalation of chloroform, ether, and A. C. E. mixture, administered in various ways and under varying conditions. The objects of the commission were five in number—

I. To test the suitability and safety of chloroform as an anæsthetic. The experiments with ether and the A. C. E. mixture were instituted principally for the sake of comparison with chloroform on certain points, and it is not pretended that they afford a complete exposition of the action of those agents on the system.

II. The effect of pushing the above named anæsthetics (*a*) to a dangerous degree, and more especially until the respiration ceases; (*b*) until death results.

III. The modifications in the effects of these anæsthetics which result from (*a*) asphyxia in varying degrees and produced by various means, (*b*) from the use of drugs, such as morphine, atropine, physostigmine, and others.

IV. The reality or otherwise of the alleged liability during ordinary chloroform administration to the occurrence of primary or secondary syncope or stoppage of the heart, brought about either by shock or through fatty or weak heart, or by hemorrhage, or by change in the position of the body. To investigate these points, in the first place, a large number of operations, which are reported to be especially dangerous in reference to shock, were performed in every stage of anæsthesia, and numerous experiments were also made to show the effect of direct irritation of the vagus. Secondly, a number of animals were dosed with phosphorus before they were experimented on. This caused weakening of the heart by fatty degeneration of its fibres, but at the same time other complicated changes in the whole of the organs of the body not met with in the condition known as fatty heart in human

beings. On the other hand, there are conditions often met with in the fatty heart, such as changes of the coronary vessels, which were not produced by the phosphorus.

V. The effect of the anæsthetics above mentioned upon different animals, more especially upon monkeys, as the nearest approach to human beings.

The conclusions to which the commission has been brought by the study of these experiments are the following:

1. Chloroform, when given continuously by any means which ensures its free dilution with air causes a *gradual* fall in the mean blood pressure, provided the animal's respiration is not impeded in any way, and it continues to breathe quietly without struggling or involuntary holding of the breath, as almost always happens when the chloroform is sufficiently diluted. As this fall continues, the animal first becomes insensible, then the respiration gradually ceases, and lastly, the heart stops beating. If the chloroform is less diluted, the fall is more rapid, but is always gradual, so long as the other conditions are maintained; and however concentrated the chloroform may be, it never causes sudden death from stoppage of the heart. The greater the degree of dilution, the less rapid is the fall, until a degree of dilution is reached which no longer appreciably lowers the blood pressure or produces anæsthesia.

2. If the inhalation is interrupted at any stage, the fall of pressure still continues at a rate which depends altogether on the rapidity of the fall while the chloroform was being inhaled. This after fall is probably due to absorption of a portion of the residue of chloroform in the air passages after the stoppage of the inhalation. In this way, it often happens, if chloroform is given rather freely, that, though the respiration may be going on when the chloroform is discontinued, it afterward stops.

3. If the administration of the chloroform is stopped at an early stage, the pressure very soon begins to rise again, and gradually becomes normal; but if the chloroform is pushed further, there comes a time, not easy to define, when the blood pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation is stopped.

4. If the fall has been very gradual, it may occasionally

happen that the respiration stops completely, and still the blood pressure rises again, the respiration recommencing spontaneously in the course of the rise. In the same way, when the inhalation has been discontinued, the respiration may stop during the after fall of the blood pressure, and begin again spontaneously. As a rule, if the respiration has stopped, or even becomes slow and feeble at the time when the inhalation is discontinued, and artificial respiration is not resorted to, the fall in blood pressure will continue until death ensues.

5. There are two conditions which frequently disturb the gradual fall of the blood pressure—viz.: struggling and holding the breath—and it is only by great care that they can be avoided in animals.

6. Struggling, independently of any change in the respiratory rhythm, appears generally to raise the blood pressure. In one case of a dog, much weakened from phosphorus, the pressure fell every time he struggled.

7. When struggling is accompanied, as it often is, by acceleration of the respiration and pulse, especially if the respiration is deep and gasping, it leads to a more rapid inhalation of chloroform, and consequently to a more rapid fall of blood pressure and a greater after-fall. In order to keep the chloroform cap or inhaler in its place during the animal's struggles, the administrator is obliged to hold it down more tightly over the nose and mouth, and this materially assists in hastening the rapidity of the inhalation, and consequently of the fall in blood pressure.

8. The effect of involuntarily holding the breath (which, as anybody can prove by experiment upon himself, must happen when an inhaler saturated with chloroform is first applied to the face) is much more remarkable—the pressure often falling with great suddenness, while the heart's action is markedly slowed. As soon as the animal draws breath again, the pressure rises as suddenly as it fell, but the gasping respiration which succeeds then causes very rapid inhalation of chloroform, with immediate insensibility and a rapid fall of blood pressure, which quickly becomes dangerous.

9. The combination of struggling with alternate holding the breath and gasping, which results if chloroform is applied closely to the face without sufficient dilution with air, causes violent fluctuations, and then a speedy fall of the blood pressure, which very soon leads to a dangerous de-

pression, with deep insensibility and early stoppage of the respiration. The after fall, under these circumstances, is rapid and prolonged. It is this combination of events which causes struggling animals to go under chloroform so quickly.

10. The effect of holding the breath may occasionally cause a temporary fall of blood pressure after the chloroform inhalation has been stopped, or even when the animal is quite out of chloroform. This fall is recovered from directly the animal breathes again.

11. Slight continuous asphyxia, such as is produced by pressure on the neck by straps, a badly fitting muzzle, or hindrance of the chest movements by the legs being too tightly bound down, gives rise to exaggerated and irregular oscillations of the blood pressure, and slowing and irregularity of the heart's action. If it leads to, or is accompanied by, deep gasping inspiration, it is apt, like anything else which causes this, to increase the intake of chloroform and bring about a rapid decline of blood pressure.

12. Complete or almost complete asphyxia, as by forcibly closing the nose and mouth, or closing the tracheal tube after tracheotomy, has an effect similar to, but more marked than, that produced by holding the breath, and the character of the trace corresponds precisely to that produced by irritation of the peripheral end of the cut vagus. The pressure falls extremely rapidly, sometimes almost to zero, and the heart's action becomes excessively slow, or even stops for a few seconds. If the Fick trace of Experiment 148 be compared with the photographic reproduction of Trace A of the Glasgow Committee, it will be seen that they are identical, and that the slow action of the heart, with great fall of pressure, which the Glasgow Committee attributed to some capricious action of chloroform upon the heart, was undoubtedly due to asphyxia.

13. This effect of asphyxia is the result of stimulation of the vagi. The proof of this is (*a*) that the trace corresponds exactly, as stated above, to that produced by direct irritation of the vagus; (*b*) division of both vagi entirely abolishes it; and (*c*) the administration of atropine which paralyzes the vagus also abolishes it.

14. In Trace 158, which was taken during asphyxia after a full dose of atropine, it will be seen that there is an alternately slow and rapid pulse according to the phase of the respiratory movement, but no continued slowing of

the heart, as in vagus irritation. But there was still a distinct fall of pressure after the atropine when the breath was held; and it was thought that the slowing of the pulse, above noted in this condition, might be due to the disturbance of the heart from tension in the pulmonary vessels in the absence of respiratory movement, rather than to irritation of the vagi. To test this point, Experiment 184 was instituted. In this experiment the dog's chest was forcibly inflated with bellows, connected by a tube with the trachea, and the effect of this proceeding was to cause a fall of pressure and slowing of the heart exactly the same as involuntary holding of the breath. The dog was then poisoned with atropine, after which inflation of the chest still caused a fall of pressure, but without slowing of the heart. The fall of pressure must be, in some degree, independent of vagus irritation, which, however, usually accompanies it.

15. It only remains to be considered whether the slow action, or temporary stoppage of the heart, with great fall of pressure produced by vagus irritation, is in itself an element of danger in chloroform administration, and if it is not, wherein the danger actually lies.

16. The experiments in which deliberate irritation of the vagi was carried on during anæsthesia show unmistakably that irritation of these nerves diminishes, rather than enhances, the danger of anæsthetics. The effect upon the heart is never continuous, and as the vagus becomes exhausted, or when the irritation is taken off, the blood pressure rises again, as it does when the same result is produced by asphyxia. The slowing of the heart and circulation which is produced by irritation of the vagus by any cause, such as holding the breath in chloroform administration, retards the absorption and conveyance of chloroform to the nerve centres, just as holding the breath, whether voluntary or involuntary, prevents chloroform from entering the lungs; and of itself slowing or temporary stoppage of the heart in chloroform administration is not dangerous.

17. To answer the second part of the last question in paragraph 15 is easy enough, if it is kept in mind that the effect of vagus irritation upon the heart is never continuous: and in chloroform administration, as the pressure rises again after the slowing of the heart and temporary fall of pressure produced by any form of asphyxia, violent

respiratory efforts, with bounding heart's action, lead, as in the case of struggling, to a rapid and dangerous inhalation of chloroform, and consequent rapid and dangerous decline in blood pressure. It is, in fact, the temporary exhaustion of the vagi after stimulation that is to be feared, and not the actual stimulation as long as it is continued.

18. In accordance with this fact, it will be found that in chloroform administration, neither holding the breath, even if involuntary, or vagus inhibition can be kept up beyond a certain time; and if the chloroform is not removed from the face, one or both of two things may happen; (*a*) when the animal breathes again, it takes deep and gasping inspirations, the lungs become filled with chloroform, and an overdose is taken in with extreme rapidity; or (*b*) when the restraining influence of the vagus is taken off the heart, through the irritation ceasing or the nerve becoming exhausted, the heart bounds on again, and the circulation is accelerated in proportion. The blood then becomes quickly saturated with chloroform, and an overdose is at once conveyed to the nerve centres. The theory which has hitherto been accepted is that the danger in chloroform administration consists in the slowing or stoppage of the heart by vagus inhibition. This is now shown to be absolutely incorrect. There is no doubt whatever that the controlling influence of the vagus on the heart is a safeguard, and that it is the exhaustion of the nerve which is dangerous.

19. It can be readily understood how a condition in which the pulse is rapid and bounding, with high blood pressure, leads to more rapid absorption of chloroform from the lungs, and a more rapid propulsion of the chloroformed blood to the medulla oblongata, and consequently to a more rapid paralysis of the respiratory and vaso-motor centre and precipitous fall in the blood pressure. Such a condition is produced in some cases by ether or by division of both vagi, or by a full dose of atropine. Not only is the poisoned blood carried more swiftly to the vital centres in these cases, but added to this there is the fact that, as the heart is already doing its utmost before the chloroform is given, it is unable to stave off by increased work the fall in pressure that occurs when the vaso-motor centre is paralyzed. On the other hand, it seems clear from Experiment 92 that the direct action of chloroform upon the

heart's substance is not the cause of the fall of pressure that occurs when it is inhaled.

20. In Experiment 92 repeated injections of twenty minims of chloroform were made into the jugular vein, and its effect was not to paralyze the heart, but to produce anæsthesia and a gradual fall of blood pressure exactly as if the chloroform had been inhaled. In Experiment 72, after a considerable amount of ether had been injected into the jugular vein, and a bounding condition of pulse had been produced, the effect of injecting chloroform into the jugulars was much greater, and the fall of blood pressure much more rapid and dangerous, than in the case when chloroform alone was injected. Granting, then, the truth of Ringer's conclusions from experiments on the frog's heart (which have not been repeated and confirmed by the commission) that chloroform has a gradual paralyzing effect upon the heart's tissue, we must conclude that such an effect, in the degree in which alone it could occur in the practical inhalation of chloroform, would rather be a source of safety than of danger.

21. The committee discussed the advisability of cutting the vagi some time previously to experimenting on the blood pressure with chloroform. The effect of this procedure is to cause continuous rapid action and tendency to exhaustion of the heart, as well as to degeneration of the terminal branches of the nerves in the heart if the animal live sufficiently long. Such experiments might be of some interest theoretically, and also have had a practical bearing upon the condition of the heart in certain cases of chronic alchoholism; but the committee decided not to perform them, as it considered the end to be gained did not justify the pain they would have inflicted.

22. In Experiment 178, the case of a dog that had had morphine, remarkable slowing and even temporary cessation of the heart's action occurred again and again at the same moment as the respiration stopped, but the heart invariably recovered itself, and began again to beat regularly before any steps were taken to restore the animal, and without any respiration occurring. We find in this case, that it was possible to restore the animal, even after unusually long intervals had been allowed to elapse between the cessation of the natural and the commencement of artificial respiration. The failure of the heart, if such it can be called, instead of being a danger to the animal,

proved to be a positive safeguard, by preventing the absorption of the residual chloroform, and its distribution through the system.

23. The effect of artificial respiration after the natural respiration has ceased, is to cause an alternate rise and fall of small amount in the blood pressure, the trace thus formed upon the drum being a coarse imitation, altered somewhat by the shaking of the table, of the natural respiratory curve. The difference consists chiefly in the fact that the artificial rise and fall are more abrupt than in natural breathing, and that the rise always coincides with expiration or compression of the chest. After artificial respiration has been continued for a certain time, the blood pressure begins to rise again, and a little later natural respiration returns.

24. The effect of artificial respiration in restoring an animal after the respiration had stopped was always marked. In a few exceptional cases, such as Experiment 159, a phosphorous dog, and Experiment 142, a horse which had an enormous overdose, although the artificial respiration was commenced as soon as possible after the breathing was noticed to have stopped, it was not successful.

25. Complete stoppage of the respiration always means that an overdose has been administered, and the overdose may have been so great as to produce a very prolonged after fall of blood pressure, and may thus render restoration impossible. As it is impossible to say whether, after chloroform has been pushed and then discontinued, the respiration will be restored spontaneously or not, so it is never in any case certain that artificial respiration will restore the natural respiration and blood pressure, no matter how soon it commenced after the respiration stops. A great deal depends upon the amount of the after fall: in some cases, even after the respiration had been restored, the pressure continues to fall, and respiration again ceases, and artificial respiration then fails. We thus find respiration restored by artificial respiration while chloroform is still being absorbed, and this tends to show that artificial respiration does not merely pump the chloroform out of the blood, but exerts considerable influence in exciting the natural respiration.

26. The time which elapses before artificial respiration succeeds in restoring natural respiration varies very greatly. In one case—Experiment 116—it was continued

for eleven minutes before the first natural gasps commenced. This period is undoubtedly prolonged in some cases by a condition of physiological apnœa, which renders it unnecessary for the animal to breathe. Consequently, whenever the pressure rose considerably during artificial respiration, it was stopped, and the animal then generally breathed after a few seconds.

27. The time which may be allowed to pass with impunity before commencing artificial respiration also seems to vary considerably. This point was not particularly attended to in the manometer experiments, except in experiments 162 and 178, which were instituted to test the truth of the opinion formed by the sub-committee, that morphine had some slight action in impairing the efficiency of artificial respiration. In these cases the commencement of artificial respiration was postponed for more than two minutes after respiration ceased, and was successful; but this is certainly far above the average interval that can be allowed with safety. The success of artificial respiration in restoring the blood pressure is in some cases very remarkable; *vide* especially Experiment 40, in which the heart had apparently ceased beating, and the dog was believed by every one present to be dead, and yet recovered with artificial respiration. The success in this instance is due to the fact that chloroform had only been administered for a few seconds, and that the depression was the result, not of continuous chloroform administration until respiration ceased, but of a long and severe after-fall.

28. It corresponds to those cases, which are so often reported, in which dangerous failure of the heart is said to have occurred some minutes after the administration of chloroform had been discontinued, and which are sometimes restored, and sometimes not, by artificial respiration. There is nothing at all sudden about the failure of the heart in these cases, but the attention of the chloroformist, which has been wandering, is suddenly called to the fact that the patient is apparently dead. When the animal was really dead, it was found, in some cases, that artificial respiration still maintained a small amount of mean pressure in the manometer. In others, the pressure seemed to fall to the zero line between each compression of the chest.

29. The dangers of too vigorous artificial respiration were illustrated in some of the accidental deaths. In one case the liver was badly ruptured, and in another the pleu-

ral cavity was full of blood. In three cases—Experiments 80, 92, and 103—rhythmical movements of the diaphragm were noticed after the heart had ceased beating and after the chest had been opened. It is remarkable that in two of these cases the splanchnic nerve had been divided. The third was a case in which chloroform had been injected into the jugular vein, and in this case there was a synchronous movement of the jaw as well. In all, death and stoppage of the heart had occurred gradually, and in Experiment 103 the heart was still irritable. These movements can not be called respiration; though the last gasp of a dying animal, that ineffective jerk of the diaphragm, which is such a fatal symptom, is very likely, in many cases, a movement of the same character. Similar movements, which were continued much longer, occurred in Experiment 104, after the thorax was opened, while the heart was still beating. Still more remarkable convulsions of the muscles of the jaws, ears, and forefeet occurred in Experiment 167, in the case of a dog that had been poisoned with nicotine. These movements continued at regular intervals for more than ten minutes after death, and were sufficiently forcible to jerk the handles of a pressure forceps fixed on the end of the tongue off the table at each spasm. In a rabbit, in Experiment 153, the auricles of the heart continued to beat rhythmically for three hours after it was supposed to be dead from chloroform, and its thorax had been laid open. Irritability of the heart after death was noticed in many cases, but seemed to be most marked in cases where ether had been used.

30. Chloroform injected into the heart through the jugular vein did not cause clotting of the blood, as was the case when ether was injected.

31. In the course of the experiments of the committee various drugs were administered, in order to ascertain if they had any effect in modifying the action of chloroform. The result showed that none of them had any effect in preventing the typical descent of the blood pressure that occurs when chloroform is inhaled. Atropine, when given in a dose sufficient to paralyze the vagi, of course prevents the action of those nerves in asphyxia, and, by increasing the action of the heart, it appears to cause a more rapid descent in the blood pressure when chloroform is inhaled, as has been already explained. Morphine appeared, in Experiment 162, to render the rise in blood pressure that

occurred when the chloroform was discontinued slower and less complete, and to bring about a more or less permanent condition of anæsthesia. It may be noted that the animal used in this experiment was a monkey; and in other experiments with monkeys, when no morphine had been given, it was remarked that the animal, after a few inhalations of chloroform, would often lie quite quiet in a state of semi-insensibility for a long time without further inhalations; still this condition was much more marked in Experiment 162 than in any of the others. No action of this kind was noticed in the dog in Experiment 178, but other experiments (90 and 94) showed that pariah dogs are very indifferent to the action of morphine, and it is probable that the dose of morphine in this case was insufficient to bring about the condition noted in the monkey. The peculiar behavior of the heart in Experiment 178 was not the result of the previous administration of morphine, for a similar phenomenon had occurred in other cases (40 and 60) in which no morphine had been given. Experiments 162 and 178 prove conclusively that morphine has no effect in shortening the period that may be allowed to elapse between the cessation of natural respiration and the commencement of artificial respiration.

32. The other drugs used had no effect upon the action of chloroform, except when their own special action became the leading feature in the case, as, for instance, during the vomiting from apomorphine or the convulsions produced by nicotine.

33. In order to test the alleged danger from shock during chloroform administration, the Committee performed a very large number of those operations which are reputed to be particularly dangerous in this connection, such as extraction of teeth, evulsion of nails, section of the muscles of the eye, snipping of the skin of the anus, etc. In many cases the operation was performed when the animal was merely stupefied by the chloroform and not fully insensible. In such cases a slight variation in the blood pressure would sometimes occur, such as one would expect from the irritation of a sensory nerve, or from the struggling that ensued, but in no case in any stage of anæsthesia was there anything even suggestive of syncope or failure of the heart's action. In thrusting a needle into the heart, there was often a momentary but

well marked fall of blood pressure; but even this was absent in all other injuries. If chloroform really had any power to increase the tendency to shock in operations, it is impossible to believe that it would not have been manifested, to some degree at least, in one or other of these numerous experiments. The Commission was, however, not content with this negative result and determined to ascertain the effect of direct irritation of the vagi during continued chloroform administration. The result of such experiments proved that inhibition of the heart's action prevented rather than assisted the fatal effects of prolonged chloroform inhalation. An animal that was put into a condition of extreme danger (from which it could only be restored by means of artificial respiration) by inhalation of chloroform for one minute recovered spontaneously and readily after five minutes of chloroform inhalation, together with inhibition of the heart by electrical irritation of the vagus carried on simultaneously. In one of these experiments chloroform was pushed for seven minutes; and during continued irritation of the vagus the animals repeatedly came round without artificial respiration. The danger really begins when the irritation is discontinued or fails to inhibit the heart, and thus enables the chloroform in the lungs to be rapidly absorbed and thrown into the system. The danger is certainly increased by deliberately pumping the chloroform into the lungs by means of artificial respiration, for animals in which this was done, although they showed a tendency to recover when the chloroform and irritation of the vagus were discontinued, afterward died rapidly.

34. On another occasion, during Experiment 117, the animal was very nearly killed by a comparatively short inhalation of chloroform, owing to the electrodes becoming accidentally short circuited and failing to keep up the irritation of the vagus. Something similar occurred in Experiment 177, the effect of the irritation of the vagus passing off while the chloroform was still being pushed, and thus putting the animal into a condition of extreme and unexpected jeopardy. Nothing could be more striking than these near approaches to accidental death from failure to irritate the vagus efficiently.

35. Other experiments were made to test the truth of the statement that chloroform increases the action of electrical stimuli applied to the vagus, and showed conclusively

that it has no such effect. In one instance only the inhibition seemed to be intensified as the chloroform was commenced, and diminished when it was discontinued; but apart from the fact that the supposed effect ceased much too suddenly, a repetition of the experiment on the same and other animals showed that there was in reality no such effect. The increased inhibition in this instance was due to the chloroformist compelling the attendant who was holding the electrodes to change his position, and thus making him unconsciously apply them more efficiently. When the chloroformist withdrew, they were restored to their former position. This affords an instance of the care that has to be taken in making experiments, if one is not to be deceived.

36. To test the effect of shock due to vaso-motor change rather than affection of the heart, Goltz's experiment on the frog was repeated on three dogs. In one there was slight lowering of pressure, which was not extensive, and in the others no effect was produced at all. Other operations which seemed likely to produce shock, such as violent blows upon the testicle, were singularly devoid of effect. Failing to lower the blood pressure by any of these methods, recourse was had to section of the splanchnics; but the low condition of blood pressure this produced appeared, like stoppage of the heart from vagus irritation, to be a source of safety, rather than of danger, during the chloroform administration. In this connection Experiment III may be studied. There was not much external hemorrhage, but the splanchnics were divided, a proceeding which, as is often said, bleeds the animal into his own vessels. The pressure was after this extremely low, but chloroform was repeatedly given and various other actions taken, and then chloroform had to be pushed on a saturated sponge enclosed in a cap for eleven minutes before respiration ceased.

37. The conclusion, then, is this: Chloroform has no power of increasing the tendency to either shock or syncope during operations. If shock or syncope from any cause does occur, it prevents, rather than aggravates, the dangers of chloroform inhalation.

38. The experiments on dogs that had been dosed with phosphorus for a few days previously show that the fatty and consequently feeble condition of the heart and other organs so produced have no effect in modifying the action

of chloroform. The ease with which vagus irritation and the Glasgow trace could be produced in these animals, by even slight degrees of asphyxia, was very remarkable: but this was equally the case in dogs that had been given phosphorus only a few hours before the experiment, and whose organs were not yet fatty. Many of these cases were in the last stages of phosphorus poisoning, and several of their companions died without any experiment having been performed on them before or on the same day as they died. Numerous attempts were made in these animals to produce shock by operations in the recumbent and vertical positions, but without any more result than in those that were healthy.

39. The truth about the fatty heart appears to be that chloroform *per se* in no way endangers such a heart; but, on the contrary, by lowering the blood pressure, lessens the work that the heart has to perform, which is a positive advantage. But the mere inhalation of chloroform is only a part of the process of the administration in practice. A patient with an extremely fatty heart may die from the mere exertion of getting upon the operating table, just as he may die in mounting the steps in front of his own hall door, or from fright at the mere idea of having chloroform or of undergoing an operation, or during his involuntary struggles. Such patients must inevitably die occasionally during chloroform administration, and would do so even were attar of roses or any other harmless vapor substituted for chloroform.

40. The effect of hemorrhage was tested by opening the femoral artery and allowing a considerable quantity of blood (eight to twelve ounces) to escape. An immediate lowering of the blood pressure results, and this is very slowly recovered from. Such an accident, however dangerous it may be in itself, in no way affects the action of chloroform, except in so far that a patient who has been nearly bled to death would require less chloroform in his system to put him into a state of anæsthesia. The low condition of his blood pressure produced by the hemorrhage would tend to prevent the too rapid intake of chloroform, exactly as in the case of cutting the splanchnics. (*Vide supra* sub-paragraph 36.)

41. When the hind feet are lowered onto the floor so as to place the animal in the vertical position, a considerable fall of blood pressure in the carotid artery occurs: but

when the animal is replaced on the table in the recumbent position the pressure is fully restored. Various operations were performed on animals in the vertical position, but in no case was anything resembling dangerous shock produced. Inversion of the body, so that the animal stands on its head, has exactly the opposite effect, the pressure rising in the carotid artery, and again falling to its former state when the animal is replaced in the horizontal position. Inversion of the body failed to restore an animal that was in the last stage of chloroform poisoning, though it raised the pressure in the usual way as long as it was continued. The change in the pressure of the blood of the carotid, which occurs when the position of the body is changed, appears, therefore, to be due simply to the effect of gravity.

42. As regards the effect of chloroform upon different animals, it may be said to be the same as far as its anæsthetic action is concerned. There are certain peculiarities in its effect on the respiration and circulation connected with its local irritant action on the nostrils and fauces which are interesting to notice. Thus, when concentrated chloroform vapor is applied to the nostrils of rabbits, they hold their breath, and the heart's action is slowed at once. This is always said to be due to reflex inhibition of the heart from irritation of the nasal branches of the trigeminus reflected through the vagus, and is by no means peculiar to chloroform, but is produced equally by any irritant vapor, such as ammonia or acetic acid.

43. In some dogs, and especially in those to which phosphorus had been given, stoppage of the respiration and slowing of the heart occurred immediately after the application of the chloroform to the face, or on forcibly pulling out the tongue, and this suggests that the mechanism of cardiac arrest in them is precisely the same as it is in the rabbit. On the other hand, in rabbits, as in all other animals, it is possible to give chloroform so gently that no spasm of the chest occurs, no reflex effect is produced, and then the pressure falls in the same regular curve and with the same succession of phenomena (anæsthesia, cessation of the respiration, and, lastly, cessation of the heart beat), that was above described as typical of chloroform inhalation.

44. Goats have a great tendency to hold their breath while inhaling chloroform, and monkeys resemble dogs

rather than rabbits, as when ammonia was held before a monkey's nose it did not cause immediate stoppage of the respiration and heart, as it does in rabbits.

45. The experiments with ether show that it is impossible to produce efficient anæsthesia with this agent unless some form of inhaler is used which thoroughly excludes the air. If an ordinary cap containing a sponge saturated with ether is applied very closely to the face, the animal generally holds its breath and struggles, and we at once get the fall of blood pressure and slowing of the heart that invariably occur under these circumstances. If the ether is continued in this way after the animal has recommenced breathing, a condition of semi-anæsthesia results, in which the cornea is sometimes sensitive and sometimes insensitive, and the pressure rises and falls alternately to a slight amount, and forms a wavy trace, which may be continued right round the drum without any particular change. As soon as air is rigidly excluded, the pressure commences to fall gradually exactly in the same way as with chloroform, and with the same succession of phenomena—viz: first, anæsthesia, then cessation of the respiration, then of the heart movements, and, finally, death. How far this is due to ether and how far to the results of asphyxia, it is impossible to say, but an exactly similar succession of events can be brought about by making the animal inhale carbonic acid gas alone.

46. If surgeons choose to be content with a condition of semi-anæsthesia, it can, no doubt, be produced with perfect safety, though with discomfort to the patient, by ether held rather closely over the mouth. Such a condition of imperfect anæsthesia would never be accepted by any surgeon accustomed to operate under chloroform. If more perfect anæsthesia is required, it can be procured by excluding the air more rigidly, but then there is exactly the same danger as in giving chloroform. How very suddenly and rapidly the pressure may fall and death ensue is well shown by Experiment 33. Ether injected into the jugular vein produces a fall of blood pressure and anæsthesia in the same way as chloroform does; but in all cases in which it was so injected, large clots were found in the heart immediately after death.

47. The A. C. E. mixture, given gently with plenty of air and the other conditions mentioned before under chloroform, produces the typical chloroform trace. Given

freely to a struggling animal, it can produce a very rapid and dangerous fall of blood pressure.

Accidental Deaths.—The notes of the cases of accidental deaths that occurred during our experiments * * * can be readily found by a reference to the index. The fatal result was brought about either by neglecting to watch the condition of the respiration during or after the administration of chloroform, especially while the carotid artery was being exposed, or from a reckless administration of chloroform in the endeavor to check or prevent struggles. In all the cases of accidental deaths, the usual chloroformist was absent, and no one was attending to the chloroform. The notes would have been more complete if some one could have watched the condition of the animal and noted the gradual but unheeded cessation of respiration without calling attention to it. As it is, one has to be content with the remark that the breathing was noticed to have stopped at some particular time, but there is nothing to throw any light upon the condition during the important period that immediately preceded this discovery. A similar hiatus appears in the account of accidental deaths in the human subject, and is unavoidable. These cases are probably identical with the instances referred to by Snow, "in which animals died in a sudden and, what was thought, unaccountable manner, whilst chloroform was given to prevent the pain and struggles which would be occasioned by physiological experiments. The death was not really sudden, but only rapid, and the result of reckless administration of concentrated vapor in the first instance, and careless neglect of the condition of the respiration in the second. There is no evidence whatever that a single one of them was due to paralysis or sudden stoppage of the heart, as Snow assumes to have been the case.

It must be remembered, in studying the tracings, that except when it is expressly stated to the contrary, chloroform was throughout administered very freely.* The degree and rapidity of the fall of blood pressure are, in almost all cases, much greater than should be the case in administering chloroform to human beings. To avoid complicating the notes, the inhaler was kept on much more persistently, with none of those little interruptions while

* It may be noted that 109 pints of chloroform and 11 pints of ether were used during the experiments of the commission.

the cornea is being examined, etc., which always occur in practice. The whole series, with few exceptions, may be characterized as examples of reckless administration of chloroform, and accidental deaths would have been much more numerous had it not been that, when once the animal was connected with the manometer, it was kept under the most careful observation. Experiment 79 affords a most interesting exception. The chloroformist, though present in body, was absent in mind, and failed to observe and report the cessation of the respiration. The chloroform was, in consequence, pushed much further than it should have been, and the animal died sooner than was intended.

These cases are of themselves quite sufficient to show that animals are just as liable to death from the careless administration of chloroform as human beings; and the accidental deaths which occurred during the experiments of the commission afford the best possible proof that the effects of chloroform are identical in the lower animals and in the human subject. The statement so frequently made that dogs are more resistant to chloroform than human beings is entirely incorrect.

Practical Conclusions.—The following are the practical conclusions which the commission think may fairly be deduced from the experiments recorded in this report:

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If, during an operation, the recumbent position on the back can not, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To ensure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen is to be strictly avoided; and no assistants or bystanders should be allowed to exert pressure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs, without doing anything which can, by any possibility, interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be

used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap with a little absorbent cotton inside at the apex,

V. At the commencement of inhalation, care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting, struggling, or holding the breath. If struggling or holding the breath do occur, great care is necessary to avoid an overdose during the deep inspirations which follow. When quiet breathing is ensured, as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear, or may deepen, after the chloroform is stopped (*vide supra* subparagraphs 2 and 9 of conclusions in paragraph 30). Struggling is best avoided in adults by making them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anæsthetized and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthetic should never, under any circumstances, be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and not be allowed to come out and renew the stage of struggling and resistance.

VIII. As a rule, no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chance of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will, in a short time, know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

XI. If the breathing becomes embarrassed, the lower jaw should be pulled or pushed from behind the angles forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis, and frees the larynx. At the same time it is well to assist the respiration artificially until the embarrassment passes off.

XII. If, by any accident, the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catch-forceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely re-established.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that the atropine does any good in connection with the administration of chloroform, and it may do a very great deal of harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

The Commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case re-

quiring an operation with perfect ease and absolute safety, so as to do good without the risk of evil.

Edward Lawrie (President), T. Lauder Brunton, G. Bomford, Rustomji D. Hakim, members.

OLIVE OIL IN THE TREATMENT OF CHOLELITHIASIS.

At a meeting of the Berlin Medical Society, Nov. 6, 1889, Dr. S. Rosenberg spoke upon the treatment of gall-stones. In April, 1889, he reported a case of cholelithiasis, which was cured with large doses of olive oil after other remedies had failed to effect a cure; numerous concretions, of a greenish color, flattened, and of a waxy consistence, were passed. Examination showed that these concretions were not true gall-stones, but were merely masses of saponified fat; though three true gall-stones, as large as peas, were passed after the first dose of oil. The patient, a woman of 36 years, had suffered from gall-stones for five years, and had repeatedly taken Karlsbad waters and salt, as well as various other remedies, with negative results. Upon examination, she had a countenance expressive of pain, her skin was jaundiced, and complained of constant pain in the region of the liver, chilly sensations, dyspnœa, and anxiety, radiation of the pain toward the right shoulder and toward the pelvis. As a result of anorexia, aversion to food, and frequent vomiting, she emaciated greatly, constipation set in, and she was unable to work. The liver was enlarged, and there was extreme tenderness to the touch in the hepatic region. Prompted by the results of Dr. Touatre (of New Orleans) with the olive oil treatment, Dr. Rosenberg gave to his patient in the course of fourteen days 1,000 grams (= 33 ounces) of olive oil in doses of from 100 to 180 grams, either in one dose or in fractions given every fifteen minutes. In spite of aversion to the oil, the patient bore it very well; vomiting occurred only once, and that after taking some seltzer water. The appetite always disappeared twenty-four hours after administering the oil, but afterward returned with increased vigor; moreover, a notable feeling of weakness occurred in this patient and in others treated in the same way. The success of the treatment was brilliant, since all pains and disturbances disappeared, and have not returned for a year and a half.

In a second case, the patient was a woman of 37 years, presenting very similar phenomena: pain in the right hypochondrium, typical attacks of hepatic colic, jaundice, intolerable itching of the skin, anorexia, clayey stools, brownish urine. Marked emaciation, and enlargement of the liver three finger-breadths. In this case, Rosenberg employed the following measures: olive oil, 200 grams; menthol, five centigrams; cognac, twenty grams, and the yolks of two eggs (well beaten up), in the course of an hour, and given in two parts. Loss of appetite for twelve hours, no nausea or vomiting. Next day the pains had entirely ceased, and stool was yellow, and the liver smaller by a finger-breadth. In the stool were found fatty concretions, consisting of 43 per cent of neutral fat, 43 per cent of free fatty acids, and 14 per cent of soap. The dose was repeated in four days, and two days later, 200 grams of pure oil were given, but the larger part of it was vomited. In four weeks the last symptoms of the disease had disappeared, and the patient began to increase in weight. A slight relapse in two months was relieved by the oil in a few days.

In a third case of hepatic colic, dating back for nine years, the administratian of the above mixture was followed by the expulsion of a large number of fatty concretions and one true gall stone. The pain in the right hypochondrium became less, though to cause the pain to disappear completely Rosenberg gave, in the following two days, one gram of salicylate of soda three times a day, dissolved in a pint of hot water, and an injection into the bowel of a quart of lukewarm water; which measures were often employed in subsequent cases as an after treatment. The oil should also be used as a food, in salads, etc., also a teaspoonful of pure oil occasionally in black coffee.

Referring to the history of the olive oil treatment of cholelithiasis, Rosenberg stated that it originated about fifteen years since with some American homœopaths. In the year 1880, Dr. Kennedy, a Canadian physician, reported favorable results in four cases of hepatic colic, and his article soon attracted attention to the olive oil treatment. Altogether, twenty-one cases have been published, of which two gave negative results, and nineteen were cured.

The question here arises concerning the action of olive oil on the liver, and how it acts as compared with other agents.

In former times the treatment of cholelithiasis was directed to dissolving the gall stones in the body. In recent times it has been shown that this is impossible, and that it is better to try to expel the concretions from the body. For this purpose, those agents are available which cause an increase in the quantity of the bile, and a diminution in its consistence. In the first category are the alkalies and alkaline mineral waters, which were formerly described as stone solvents, but are now called liver stimulants. In regard to the cholagogue effect of the carbonate, phosphate, and sulphate of soda, of Karlsbad salt, etc., the views of the various observers differ so much that the opinion is gradually gaining ground that the cholagogue effect is due, not to the alkalies, but solely to the water, and especially the warm water, in which the salts are dissolved. At any rate, the action of the alkalies in this respect is very uncertain and slight.

In regard to Durand's mixture (ether and oil of turpentine), Rosenberg did not see that it had any cholagogue effect, and special investigations showed that ether does not influence the secretion of bile, but turpentine in a one gram dose increases the quantity of bile and diminishes its consistence. But even with this quantity the patient soon shows unpleasant symptoms, and it is best to follow the advice of Frerichs, who recommends that turpentine be entirely expunged from therapeutics.

Bile itself is a cholagogue of the first rank, as all experiments concur in showing; but it has the unpleasant property of increasing the consistence of the bile at the same time that it increases the flow. On this account it is practically useless. On the other hand, salicylate of soda increases in a remarkable manner the quantity of bile, and diminishes its consistence.

To a woman over 60 years of age, who suffered from pain in the hypochondrium and swelling of the liver, as well as marked icterus, and who had for years been treated in vain with various remedies, Rosenberg gave one gram of salicylate of soda, dissolved in a pint of hot water, three times a day, and two injections of warm water (one quart) a day, containing five grams of the salicylate in solution. The result was surprising; already in twenty-four hours the stools contained hepatic calculi, and after two days more, during which gall stones continued to be expelled the pains had disappeared, the liver had become

smaller and the jaundice had begun to fade away. A relapse, occurring several months after, was treated in the same way and with the same happy results.

Olive oil in large doses acts in the same manner as salicylate of sodium, but more energetically. Touatre's view, that olive oil goes directly into the bile ducts and softens the gall stones, thus rendering their expulsion easier, is unphysiological, and has been shown, by experiments upon animals, to be incorrect. Contrary to what is taught in text books, viz., that during a fat diet a smaller quantity of bile is secreted, Rosenberg found that during the use of oils or fats the amount of bile secreted was remarkably increased, and that a considerable thinning of the bile took place; and, indeed, the oil acts to such a degree, in regard to both the quantity of bile secreted and the duration of its action, that Rosenberg characterizes olive oil in large doses as the most powerful of cholagogues. In consequence of this great cholagogue action of the oil, either the concretions are completely floated out of the biliary passages or else become so much changed in their resting place that the phenomena of obstruction, *e. g.*, the colic, disappear, and the road for the bile to the intestine becomes free again.

It appears, from a communication of Cantani upon the relatively small amount of cholelithiasis in Italy, that in localities in which olive oil is habitually used as a food cases of hepatic colic are very rare; though Cantani is of the opinion that the larger amount of vegetables consumed has also some influence.—*Deutsche Medizinal-Zeitung.*

COCAINE IN THE TREATMENT OF YELLOW FEVER.

Dr. James Thorington, formerly resident physician on the Isthmus of Panama, writes on the above subject in the *American Journal of the Medical Sciences*, Feb., 1890. He practiced for several years in Colon and Panama, and tried many different plans of treatment in yellow fever. He found that quinine did more harm than good, except during convalescence. Calomel is good only at the beginning of an attack, but does much harm if given later. In some cases, castor oil and orange tea do good. Pure lime-juice with small pieces of cracked ice, as recommended by the physicians in the service of the Panama Canal company, was found more satisfactory than any of the above

modes of treatment. Jaborandi and veratrium viride, so highly recommended by Ford, of St. Louis, although contraindicated, were tried faithfully in several cases, but without success. Discarding almost all drugs for a time, Thorington tried good nursing and found that some patients got well without medicinal treatment.

In looking over the notes of his cases, Dr. Thorington found, as he says, that nausea and vomiting (black vomit), and not the suppression of urine were the cause of death; and he argued that if he could find some means of quieting this nausea, the possibilities of recovery would be greatly increased. His assistant, Dr. J. E. Jennings, suggested cocaine as an anti-emetic; he tried it afterward in every case, and his success was most marked and gratifying.

At least 50 per cent of his yellow fever cases died before he commenced the use of cocaine, but he has since treated twenty cases with only three deaths, making a death rate of 15 per cent, or a difference of 35 per cent in favor of cocaine. The three patients who died had suppression of urine. In a previous case, similar in its ending, the vomiting was prevented by cocaine.

Dr. Thorington recommended his plan of treatment to his friend and colleague, Dr. F. A. Bettelheim, resident physician and surgeon of the Panama Railroad company, who wrote as follows: "Six cases of yellow; result, two deaths. I congratulate you and Dr. Jennings on the cocaine treatment; it has worked like a charm. The fact is, in three cases I gave nothing else except some enemata of chloral and potassium nitrate and baths. The febrile reaction was well controlled by the sponging and baths, and in one or two instances enemata of antipyrine were exhibited when the temperature mounted up to 104 deg. Fahr. I feel now that with cocaine exhibited vomiting is an unknown quantity in yellow fever, and in addition, using the rectum for the absorption of other medicaments, etc., we have made a decided move in advance. In all four cases that recovered, the albumin was over 50 per cent. In all the cases, however, the cocaine effectually stopped the vomiting."

When cocaine is used in the treatment of yellow fever, black vomit is not a part of the disease, and what now remains to worry the physician is the danger of suppression

of urine, but even here Thorington has seen cocaine act in some cases as a diuretic.

When it is considered how depressed and completely exhausted a yellow fever patient soon becomes after ineffectual attempts to bring up "that lump" from the stomach, one can more easily see how much strength, comfort, and perfect relief is given to the patient when this factor of the disease is removed. Before using cocaine, in 1887, black vomit occurred in nearly all his cases, but now it never appears when this drug has been used from the start, and rarely does it fail to check the vomiting and put the stomach at rest, even when the case has not been seen until the fifth day.

To avoid failure in the use of this drug, it should not be administered immediately after giving nourishment, as its effect may be carried beyond the stomach, or even rejected if the patient vomits. This result also is very apt to happen if the cocaine is given in pill or tablet; it is, therefore, always better to give it in solution and when the stomach is empty, especially ten or fifteen minutes before eating, as then the stomach is put in a condition to retain nourishment and at the same time the feeling of nausea disappears and the patient takes the milk or broth, or whatever may be offered, with confidence and relish.

It is well to instruct the patient that he must inform the nurse whenever he feels this nausea returning, so that a dose of cocaine may be given at once, even if a dose has been given only fifteen minutes before; the object being to keep the stomach quiet. Thorington has sometimes found it necessary to give as much as one-half or even one grain every half hour or hour if the vomiting is not checked after the first or second dose of ten minims of a 4 per cent solution. No toxic symptoms have ever been observed to follow the use of the drug.

After making his observations, Dr. Thorington's attention was called to two articles on cocaine by Prof. Da Costa, entitled "Observations on the Diuretic Influence of Cocaine," published in the *Medical News*, June 19, 1886, and "On the Use of Cocaine as a Heart Tonic and Stimulant in Typhoid and other Low Forms of Fever," which appeared in the *Philadelphia Medical Times* of Feb. 5, 1887.

There can be do doubt that cocaine sometimes acts as a diuretic in yellow fever, but its action in this repect is not

constant; it is chiefly as an anti-emetic that it renders such valuable services.

"In summing up the value of cocaine in the treatment of yellow fever," says Dr. Thorington in conclusion, "it may be stated to be almost a specific, in my experience doing more to cure this disease than any other drug I have ever tried, taking away or removing all nausea and vomiting, acting as a diuretic, and as an excellent and sure heart-tonic and stimulant."

[The addition of cocaine to our *armamentarium medicum* against yellow fever seems, from the above, to be of great and positive value. Its action, though, is more than a simple anti-emetic one. The black vomit is of itself not the great pathological factor to be dreaded. The hemorrhage from the mucous membrane of the stomach indicates a serious degree of degeneration of the liver, and is mechanically caused by an obstruction to the circulation in that organ; the weakened walls of the gastric blood vessels are unable to bear the strain, and give way. When the blood escapes into the stomach, it is better for it to be expelled, but when the vomiting takes place, the liver, kidneys, and other organs are so profoundly altered that restoration is the rare exception, and not the rule. From Dr. Thorington's observations, it would appear that cocaine prevents these degenerative changes (fatty) from proceeding to such a length as to render recovery well nigh impossible; and in this manner it prevents the occurrence of black vomit when given from the beginning of the disease, and kept up as the main treatment. Even as an immediate palliative of the nausea, it seems to act admirably. This nausea is due, according to Dr. H. D. Schmidt, to incipient hyperænia of the gastric mucous membrane, and not to the presence of foreign matter in the stomach; but when hemorrhage has actually taken place, it is better for the blood to be expelled. But we do not wish to find fault with well established clinical results, and we thank Dr. Thorington for increasing our resources in this frightful disease.—Eds.]

NITRO-GLYCERIN FOR ASPHYXIA DUE TO GAS.

Dr. F. X. Dooly, of Washington, D. C., states (*N. Y. Med. Jour.*, Feb. 8, 1890), that with Drs. Sowers and Burwell, he was called to a woman, æt. 47, who had received over six hours' dose of illuminating gas (from a single burner?) in a small room, and she was as nearly lifeless from asphyxia as possible without being entirely gone. A hypodermic of a fiftieth grain of nitro-glycerin was administered, which acted like a charm, and instantaneously. Three hours later a second dose was given, and in three or four hours later she had recovered. He received the information of the value of nitro-glycerin under such circumstances from a communication to the same journal by Dr. Kloman, of Baltimore, Md.—*Va. Medical Monthly.*

THE PRESENT EPIDEMIC OF INFLUENZA.

A Clinical Lecture delivered at the Pennsylvania Hospital, Jan. 11. 1890, by J. M. Da Costa, M. D., LL.D.

Gentlemen: The occurrence in our midst of an epidemic of catarrhal fever or influenza, and the fact that we have had a large number of cases of this disease in our wards, have suggested the propriety of giving you a lecture on the subject, in which the prominent groups of the disease might be laid before you, and which would serve to illustrate not simply a single case, but the varieties of this strange malady.

It is not my purpose to treat the subject historically, but rather to view it clinically. I have myself passed through more than one epidemic of catarrhal fever, and can claim familiarity with its symptoms; and comparing what I have seen in previous epidemics with what I have found in this, I shall be able, as I proceed, to point out how the present epidemic differs from those of previous years.

This widespread malady, which has committed such havoc on the continent of Europe, and which has proven itself here, in the last month, so destructive to comfort and so perilous in its secondary consequences, is of uncertain origin. It comes; it goes. It comes without warning; it disappears, leaving behind it sporadic cases, but speedily loses all trace of its epidemic form. As I have told you, however, I propose to treat the subject from a clinical standpoint, rather than view it pathologically or in its broad general aspects. I shall, therefore, introduce my

subject by showing you a few cases which illustrate different types of the malady.

Case 1.—This man, a German, was admitted to the hospital Jan. 9, 1890. His family history is good. He does not drink, and has had no severe disease. Eleven years ago he had some kind of fever, but has not been ill since then. The present illness began abruptly, Dec. 25, with chilly feelings up and down the spine, followed by headache and some cough, which occurred in paroxysms, and was especially severe in the evening. There was no expectoration. He had a general sore feeling. There was slight constipation, and soreness over the abdomen, which was thought to be due to the cough. The eyes and nose discharged freely. He consulted a physician, and in a day or two improved; all the time he continued at work. Jan. 6 he began to show signs of a relapse. All his previous symptoms returned with great severity, and he became so weak that he could not stand. On admission into the hospital he had cough, a sore feeling all over, the eyes discharged freely, the temperature was 99 deg., pulse 76, and respiration 28. A few bronchial râles could be detected. The tongue was tremulous, flabby, and slightly coated. The knee-jerk was present; the urine was of a dark amber color, specific gravity 1034; no albumin.

Examining him this morning we find that the tongue is covered with a white coat. He still has watery eyes and cough; the temperature is 98 deg.; he has harsh respiration at the base of the left chest; at the lower part of the right chest posteriorly the respiratory murmur is feeble, and on percussion the resonance is not so great as on the left side. We find the same signs anteriorly. There is, therefore, some congestion of the lower part of the right lung. The heart sounds are normal so far as murmur is concerned, but the first sound is rather feeble, which corresponds with the very compressible state of the pulse. The bowels still tend to constipation. He does not perspire except after the paroxysms of coughing.

Case 2.—This man is 33 years of age. The present attack began two weeks ago with dizziness, some vomiting, and cough. The bowels were constipated. There was sore throat and coryza. Although a strong, robust man, he rapidly grew very weak. There was profuse sweating after coughing. There was no special shortness of breath. There was general soreness, with a great deal

of pain in the bones, especially at the wrists; none in the spine. The great debility was the most marked symptom in this case, and was the more noticeable on account of the former condition of the man. A few days ago he had repeated chills and tremulousness of the hands. The constipation has, in the last day or two, been succeeded by diarrhœa. When admitted, the temperature was 98 deg., the pulse 76, and the respirations 20. The patellar tendon reflex was present. The urine was dark, with a specific gravity of 1030, of acid reaction, and contained a trace of albumin, which still persists. It is but fair to state in this connection that the man has been a free liver. He also showed signs of a good deal of catarrh. The eyes were watery. Coryza existed in the early part of the attack, with considerable sneezing.

He is still very weak. This morning the temperature is 98.4 deg.; the pulse is 60 per minute, and is extremely weak; it is absolutely thready. The first sound of the heart is so feeble that it can barely be detected. This is very much like the heart we get in an advanced stage of typhoid fever, barring, however, the difference in rapidity. Here the heart is slow, while in typhoid fever it is usually rapid. There is no murmur, but a distinct, sharp second sound. There is a harsh respiration on the left side, and some impairment of resonance below the area of harsh respiration, showing congestion. Râles were noticed, but I do not hear them this morning. The splenic dullness extends just to the margin of the ribs. The hepatic dullness is normal.

In the way of treatment he has received for the throat a gargle of salicylate of sodium with glycerin and water. He has taken twelve grains of quinine a day, and a mixture containing muriate of ammonium. This cough mixture need now be given only occasionally, and we shall order him four ounces of whisky a day and one one-hundredth of a grain of strychnine every fourth hour. He will also have turpentine stupes applied to the back of the chest, especially on the left side.

There are so many cases of this malady in the hospital that in one clinic, I could hardly exhaust them. But I will show you one more case which is of great therapeutic interest.

Case 3.—This man is 26 years of age, and has been in the hospital since December 26. When admitted, his

temperature was 100 deg., his pulse 88, and his respiration 34 per minute. His eyes were injected and his tongue coated. His heart's action was weak, and there was noticed reduplication of the first sound and a faint systolic mitral murmur. The man was very weak. The lungs were normal, with the exception of a few mucous râles. His symptoms were those of such prostration that he was thought to be in the socalled typhoid condition, and the opinion was entertained that it might possibly be a case of latent typhoid fever. Indeed, he was so drowsy that we could not get any account of his illness, and this added much to the difficulty. Watching the man, we found that there was not the least evidence of typhoid fever. There were no spots, no diarrhœa, and the splenic dullness extended only slightly below the margin of the ribs. The peculiarity of this case is that while, almost from the beginning, the temperature has been between 98 deg. and 99 deg., and the pulse extremely feeble, he was dull, his pupils somewhat dilated, and he was extremely delirious. He could not sleep at night, and the only sleep obtained was by the use of small doses of chloral. This, with the prostrated condition, suggested the possibility of typhoid fever. As his mental condition improved, it became clear that this was not the case. He told us that he had had symptoms of coryza, pain in the bones, and all the symptoms of the prevailing epidemic.

Let us see what his condition is today. He, too, has a weak first sound, but not so weak as in the preceding case. He has a compressible pulse, moderately weak. The lungs are clearer. He has had no cough since admission and the mind is clear. I think that this is an undoubted case of influenza.

What I desire particularly to call your attention to is the violent and persistent delirium which was present, and the manner in which it was relieved. When I first saw the man I was struck with the sluggish, dilated pupil; the feeble pulse, and the extreme delirium, with a temperature which was normal or slightly subnormal. It at once occurred to me that here was a case of delirium from inanition. This I have seen more than once at the end of an attack of typhoid fever, or any other depressing disorder interfering with nutrition, such as cancer of the stomach, where the brain is disturbed because it does not get a proper amount of stimulus of blood. I had the man

placed on liberal supply of food given at short intervals and associated with stimulants, and in twenty-four hours the delirium had passed away. It was clearly a case of delirium from inanition. Do not misunderstand me. Do not suppose that this is a specific delirium. As I have said, I have seen this delirium in other typhoid conditions, using this term in a wide sense, as a result of the brain being illy supplied with its proper stimulation of blood. The man is now convalescent, and simply requires a chalybeate tonic. We shall give him five grains of tartrate of iron and potassium three times daily. The stimulation with a liberal supply of food will be continued.

Leaving these cases, I shall make some general remarks upon this disease, to which, for some absurd reason, we have applied the French name "la grippe," which means nothing so far as the disease is concerned. Influenza or catarrhal fever, as is illustrated by these cases and many others that I have lately seen, almost invariably begins acutely. Nearly all of the cases that I have met with started suddenly in persons previously in good health. One case came under my notice where a physician was so abruptly seized with pain in the back that he had to lie down on a bed, and with difficulty could leave the house. In other instances, not quite so marked, the severity of the pain in the back has been great and has been the first manifestation of the disease. The pain is often referred to the middle of the back in the dorsal region, and it is quite commonly observed that starting in this position it spreads downward into the legs. As described to me, the pain is at times sharp, with a dull pain persisting. The patient is never free from pain, which occasionally rises into acute exacerbations. While many of the cases begin with pain in the back, they soon have pain in the bones, followed by headache and moderate fever, and then there are or are not catarrhal symptoms.

I have partly traced the development of the disease in these patients: let us now pay some attention to the character of the fever with which these painful sensations soon become associated. In the majority of instances the fever is moderate and lasts about three or four days. The fever is at its height in from twenty-four to thirty-six hours; then it slowly subsides, and the temperature may go below normal. In one case, it passed to 96 deg. and there was profuse sweating, something like a

crisis taking place. During the period of highest temperature lasting thirty-six or possibly forty-eight hours, there is only the ordinary variation of about 1 deg. between the morning and evening temperatures. There is really a slight continued fever, and not a fever with remissions and exacerbations as in malarial fever. As a rule, the temperature does not exceed 103 deg.; but, by way of variety, I have in this epidemic encountered a few cases in which the temperature at the onset unexpectedly shot up to 105 deg. and the next day went down to about 100 deg., and then the case ran the ordinary course, terminating in recovery. In two of these cases bloody sputum or pure blood was at first expectorated.

With the fever we have the ordinary concomitants; high colored urine of a high specific gravity, without albumin. In one of the cases before you there is a trace of albumin in the urine, but as the man is of rather intemperate habits, it is a question whether it does not belong to the individual rather than to the disease.

Another peculiarity about the disease is the occurrence of catarrhal symptoms in the eyes and nose, with cough, which is frequently laryngeal rather than bronchial. These catarrhal symptoms are, however, often absent. Some of the worst cases that I have seen have had no catarrhal symptoms whatever in the eyes, throat, or anywhere else. When the catarrhal symptoms are present they are more apt to involve the eyes, nose, throat, and larynx, than the bronchial tubes, although a fair proportion of cases have catarrhal bronchial râles, and some have even congestion of the lungs, as illustrated by the cases before you. In a few instances epistaxis comes on, and with the occurrence of high fever and debility you are irresistibly made to think of beginning typhoid.

One of the most singular features of the present epidemic is the prevalence of the nervous symptoms. As I have stated, I have passed through other epidemics of catarrhal fever, but this one seems to be stamped by the prominence of the nervous symptoms. These are shown by the violent headache, the severe pain all over the body, the pain in the spine traveling downward, and also by what I have seen in quite a number of cases, hyperæsthesia or general sensitiveness of the surface. This is something more than what might be attributed to the efforts of coughing. Then, too, in some of the

cases, there is delirium, not simply the delirium of inanition, as occurred in one of the cases before you, but a delirium with violent headache, this delirium sometimes taking strange forms. In one case, that of a most refined lady who, when well, would hardly recognize an oath, when she became delirious from an attack of influenza, swore at her doctor every time he entered the room. I have been told of instances in which patients have lost their minds from the violence of the headache and the delirium. Besides the delirium, there are in some cases convulsions. About a week ago, I was called by Dr. Rosenthal to see a young man who, while in perfect health, was seized with violent headache, severe pain in the back, pain in the limbs, slight catarrhal symptoms, considerable congestion of the lungs, but no pneumonia. Almost from the onset he had spasms in the arms.

The spasms were most marked in the left arm, although the right was also affected. He was very restless, and slightly delirious, but not markedly so. His temperature, almost from the beginning, was 97 deg. I found him with pupils somewhat dilated and head slightly rigid, and the presence of cerebro-spinal fever at once suggested itself; but further investigation showed that this was not the case. There was no eruption; the spasms were limited to the arms; there was congestion of the lungs; and, above all, there was no fever, the temperature remaining about 97 deg. The only thing that gave any relief from the spasms was chloral. Notwithstanding the fact that atropine and opium were used hypodermically this patient gradually sank under the violence of the disease. I know of one case in which paralysis of the lower extremities has followed influenza. It is slowly yielding, and the patient will recover. This case had a marked history of a preceding attack of influenza. I know several others in which convulsions occurred. The kind of cases I have just mentioned have probably given rise to the idea with some that cerebro-spinal fever and influenza are the same disease. The prostrating influence of the malady on the nervous system is also shown by the fact that patients often stagger on getting out of bed. A prominent lawyer whom I recently attended, thinking that, as he was compelled to remain in his house, it would be a good time to get up his work, sent for his papers; but a few minutes' attempt cured him of this idea, and he was glad to lie down. This debility

remains for a long time, and is often associated with considerable sweating. The pains often remain, and do not necessarily pass away on the subsidence of the rather short fever. In some cases profuse and persistent sweating is also very common during convalescence, and the patient looks anæmic and miserable. I have seen the knee-jerk absent at the height of the malady, but in the majority it is preserved. Cramps in both calves and shoulders, as well as in the chest muscles, have been reported to me by a physician as happening after the febrile stage had passed.

The main *complication* of ordinary catarrhal fever is, as you know, pneumonia, or what is called pneumonia. Looking over the records of boards of health of different cities, it will be found that the deaths from pneumonia have nearly doubled. What is called pneumonia must therefore be set down as one of the chief complications. You notice that I say "what is called pneumonia." A great many of these cases are simply heavily congested lungs, with great debility, the lungs seeming to collapse. There does not seem to be a true process of pneumonic exudation. While in many cases there is slight dullness in percussion, yet it is not absolute, and the high pitched bronchial breathing of croupous pneumonia is found in only a few instances. There is no consolidation. This has been the characteristic in most of the cases that we call pneumonia. It is probably proper to speak of these cases as pneumonia, but I want you to bear in mind the difference between this condition and ordinary croupous pneumonia.

Let me call attention to another peculiarity that I have noticed in a large number of instances. A great many persons when seized, and often during the height of the attack, complain of violent pain in the left side, but I have not found any friction sounds, save in one instance, and this may have been accidental. There is want of expansion of the lower part of the lung, usually on the left side, associated with this violent and persistent pain, which makes the patient think that he has pneumonia or some other grave condition of the lung.

We know nothing of the cause of this disease. It is epidemic, and I think myself that it is feebly contagious. It would be an admirable thing if some of our overfilled treasury could flow into the channels of science, and that

a commission be appointed to investigate this disease bacteriologically and chemically. We accept the microbic nature of its origin, but it has not been proven.

The prognosis is favorable, but the general mortality is increased by the epidemic. This is because persons previously diseased are carried off. For instance, in these two cases with feeble heart, if any unusual exertion were made the patients would probably die. If an elderly person with fatty heart contracts this disease, for it is no respecter of age, he would be in imminent danger. We call this heart failure, but these hearts are diseased and enfeebled still more by the malady. In the two cases before you, I think from the previous condition of the patients and their age that there was no feeble heart prior to the present illness.

I have mentioned relapse. I have seen few distinct examples of this. One was that of a lady who had her first attack in the country and came to town to break it up. She was well for two weeks when she was attacked the second time. Another case was that of a gentleman who was suddenly seized with the relapse while in church, two weeks after the first attack. In a third case pneumonia occurred in the relapse. The longest interval I have known was two weeks, the shortest five days. To prevent relapse, great care is necessary in not going back to work too soon, and not exposing one's self to wet and cold, and with this there should be a judicious use of tonics, and even of stimulants.

Now, a few words in conclusion with reference to the treatment. The treatment must, of course, be the ordinary treatment of catarrhal affections. For the relaxed and irritated throat I have found nothing so serviceable as a gargle of salicylate of sodium, glycerine, and water. For the nasal catarrh, which at times is very unpleasant, I have found that a 2 per cent solution of cocaine does the most good. The bronchial catarrh should be treated as any other bronchial catarrh, according to the exact seat and the number of râles. A good deal of the paroxysmal cough is laryngeal, and you will find that small doses of opium at night, or bromide and opium, or what I have employed in a number of cases, broken doses of Dover's powder, will give good results. One-fourth of a grain of codeine, repeated according to

the circumstances of the case, is often useful; it allays the cough, induces sleep, and does not cause much sweating. Let me say here, that while perhaps the routine practice of using diaphoretics in these cases is useful, yet such drugs must be used with judgment. In some cases there is a great tendency to sweating, and you do not want to increase it, as it rather adds to the debility. The diaphoretic must be adapted to the individual case, not employed too actively, and not at all where sweating is a prominent symptom.

The debility must be borne in mind, and it is good practice to give sulphate of cinchonidine or quinine, ten or twelve grains daily. Nourishment should be kept up, and the action of the bowels looked after. The patient should not be overpurged, for, in some instances, diarrhœa is associated with the malady.

For the headache and the pain in the bones I have found two remedies of especial advantage. One is antipyrine in five grain doses, with a grain or two of quinine to prevent depression, repeated every two or three hours until the headache is relieved; the other is phenacetin in five grain doses. In one instance where these two drugs failed to relieve the headache I found gelsemium to answer.

The general strength and the circulation must be looked after, and especially during convalescence the patient must receive nutritious food, alcohol, small doses of strychnine, and later, iron.

I shall not speak of the treatment of the complication pneumonia, but let me point out, in concluding these remarks, that you should keep your patients for a long time on tonics which may prevent relapse, and, indeed, it may be a question whether it would not be advisable when the disease makes its appearance in a household to place the whole family on the use of tonics, such as cinchonidine or quinine, as a preventive. My experience is that while this will not ward off the disease, it renders the attack less severe.

I have made these cases an opportunity to lecture to you upon the prevailing epidemic, and I trust that the illustrations that I have given will serve to enforce the lessons laid down and leave a clear picture of the affection upon your minds.—*Medical News.*

SURGERY.

A FAILURE IN BRAIN SURGERY.

[By Hal C. Wyman, M. D., Professor of the Principles and Practice of Surgery in the Michigan College of Medicine and Surgery, Detroit.]

James H., a rugged and robust young farmer; father of one child. About a year ago, while digging in the field, he was suddenly attacked with pain in the back of the head. At first, supposing it to be merely an ordinary headache, he went to the house and bathed his head with cold water, but the pain continuing severe, he consulted a physician four miles distant, returned home, took the medicine as directed, and was considerably relieved of his suffering. The following day he did not feel strong enough to work and sent for the physician, who diagnosed malarial fever. The attack lasted about six weeks, during which time he suffered more or less from pain in the head. Becoming dissatisfied with his medical attendant, he sought other advice, which confirmed the original diagnosis of malaria. He took many drugs, but experienced no marked relief from the pain. About four months after the beginning of the attack, he found that his eyesight was failing. He also suffered from nausea and his sleep was disturbed. He vomited a great deal, although the attacks of vomiting would not come on until some time after taking food, so that he did not lose flesh rapidly. Pain in the frontal region continued persistently. He was then placed upon potassium iodide. This drug for a time seemed to make some impression on his sufferings, and under its influence he was able to secure a few hours' sleep. However, after a few days its effects passed entirely away, and the pain returned with renewed vigor and intensity. He became still more restless and sleepless, vomited more frequently, the symptoms finally culminating in an epileptic seizure. Following this attack of epilepsy, he had divergent squint and additional convulsions, with marked muscular weakness and some fever.

Drugs of every sort were tried in vain, the pain continuing.

Dr. Mere, at my request, made an ophthalmoscopic examination of the eyes and found the condition of the retina indicating pressure upon the optic tract.

Operation.—The man became blind or partially blind within a few weeks after the attack of headache. He had

had almost no unilateral symptoms, and had but slight movements of rotation, and at times great muscular weakness. These facts led me to locate the disease in the neighborhood of the sella Turcica and in the cerebral ventricle. Therefore, I trephined the frontal bone just above the supra-orbital ridge on the right side. One button of bone was removed, and through the opening the membranes were incised. First, however, the dura mater was raised and a probe pushed along the orbital plate of the frontal bone in the direction of the optic commissure. Then the finger was introduced and the parts carefully explored, but no tumor or abnormality being detected, a small director was pushed cautiously through the anterior lobe of the right cerebrum in the direction of the anterior horn of the right lateral ventricle. But little fluid was evacuated, owing to the brain substance choking up the instrument. No sensation as of the point of the director free in a cavity was observed. During the administration of the anæsthetic the patient nearly died from failure of respiration. His respiration resembled the Cheyne-Stokes respiration, in that his breathing was at times very rapid and then slow. The opening was made at the position designated, because the symptoms pointed to disease in the neighborhood of the optic commissure and crura cerebri and to effusion into the ventricles. A brief recapitulation of the morbid phenomena presented by the case may serve to make clearer my reasons for operating. Pain, quite uniform in quantity and character; fever, of several weeks' duration, immediately after the attack of pain; impairment of sight in both eyes, varying at times in degree; nausea; movements of rotation quite indistinct in the history; general impairment of strength not unilateral. No incoördation; disturbance of sleep variable; copious nasal discharge and impairment of sense of smell. These led me to think that there was effusion into the ventricles, with disease near the optic commissure and crura cerebri which might be removed by an operation of the kind described. The operation was made in the amphitheatre of the Detroit Emergency Hospital in the presence of the students of the Michigan College of Medicine. Thorough cleanliness was observed in every detail of the work, and the autopsy revealed no evidence of wound infection.

Autopsy.—Body moderately emaciated. Wound cres-

cent-shaped on right forehead, beginning near the external angle of the orbit, ranging upward and toward the median line of the face until the root of the scalp is reached, then descending to a point midway between the eyebrows. It was closed with nine interrupted sutures and had a plastic exudate between its surfaces.

The general appearance of the body suggested a man of moderately strong physique. His head was well shaped. On removing the calvarium the dura mater was adherent by numerous Pacchionian bodies which had in several places almost perforated the bone. A wound about three-fourths of an inch in length was found in the dura mater over the anterior lobe of the right hemisphere, which corresponded to a hole in the right frontal bone made by the crown of a trephine. Incising the dura and the attachment of the falx cerebri to the crista galli, they were turned back so that the arachnoid and pia mater were exposed. Much fluid was present in the subarachnoid space. There was some ecchymosis of the arachnoid and pia mater, near where the dura mater had been divided at the time the bone was trephined. There were also present on the surface of the pia some particles of brain tissue about the size of grains of wheat.

The membranes were entirely removed, and with a sharp knife a section was made through the right cerebrum on a level with the corpus callosum. This opened the right cerebral ventricle, and allowed several ounces of fluid to escape. The left ventricle was opened in the same way, and was found distended with fluid. The third ventricle was then opened by cutting through the corpus callosum and fornix, and was found distended with fluid. The *iter e tertio ad quartum ventriculum* was distended with fluid, so that it easily admitted a lead pencil into the fourth ventricle. No other changes in the cerebrum were observed, except the shallowness of the spaces between the convolutions. The membranes were now removed and the cerebrum turned back to expose the optic commissure and the tentorium cerebelli, which was divided so that the crura cerebri, pons Varolii, and medulla oblongata could be easily examined. Nothing abnormal was noticed, except the excess of cerebro-spinal fluid. The optic nerves and commissure were normal. The spinal cord was divided after cutting the cranial nerves, and the entire brain was turned out of the skull.

The cerebellum, pons, and medulla appeared normal at first, but looking more carefully at the cerebellum that organ was found to differ markedly in the appearance of its right and left hemispheres. The left hemisphere had a swollen appearance and a peculiar elastic feel which did not exist in the right hemisphere. A cut was made into it to demonstrate the arbor vitæ, when about an ounce of fluid ran out. Separating the cut surfaces, a cavity was found to have been divided which measured one-half inch in one diameter and one inch in another. Within this cavity, which was walled entirely with medullary matter, not a point or streak of gray showing at any point, a tumor oval in shape was found. It was about three-fourths of an inch in its long diameter, and was attached to one side of the cavity by a thick, short pedicle.—*Medical News.*

A WORD ABOUT GONORRHŒAL RHEUMATISM.

[By Robert T. Morris, M. D., Instructor in Surgery at the Post-Graduate Medical School, New York.]

The normal urethral circumference in the average adult man is not far from forty millimetres.

Gonorrhœal rheumatism is a pretty common disease. It is not a generally recognized fact that the normal urethral circumference is at every point very much greater than at the meatus, and the septicæmia, which results from absorption of decomposing gleety discharges is not ordinarily diagnosed as gonorrhœal rheumatism. The two facts above stated are well known to members of the profession who have learned them, and they are important facts when we are to consider the treatment of gonorrhœal rheumatism; for this disease, when undiagnosed, will not yield to anti-rheumatic treatment, and when diagnosed will not yield to treatment which is directed toward any feature except the gleet. The gleet will not yield in my hands to any treatment which varies much in principle from the methods laid down by Otis. These methods lead to success, and if any other plans will do as well the authors have failed to impress their ideas upon my mind.

Septicæmia? Certainly! How can we reasonably ascribe the symptoms of gonorrhœal rheumatism to anything beside septicæmic demonstration? That this septicæmia is dependent upon decomposition of gleety discharges is easily proven by removing the gleety inflammation—then the "rheumatism" stops. Treatment

which deals with the symptoms is frivolous, but a method which pulls up the root will eradicate the branches.

For relieving the pain and disturbance caused by a fish hook in the finger, there are few better methods of procedure than pulling out the hook, and for gonorrhœal rheumatism there is little to be thought of except the cure of the chronic gonorrhœa.

It is true that in the hydrarthrosis type temporary relief can be given by applying extension apparatus to the joint; by drawing out the fluid with an aspirator, and giving the patient vigorous tonic treatment.

It is also a fact that in the socalled rheumatic and painful types of the disease, hot tobacco fomentations over the involved parts and galvanic currents passed through them will quiet the patient for awhile.

In the pseudo-gouty form of the affection massage will diminish the recent periarticular swellings after the acute symptoms have passed. But what right have we to give the patient the idea that his gleet is deserving of casual attention only while this is being done? What right have we to think that the patient's urethral circumference is less than forty-five millimetres when Otis's urethrometer will show that that is his size? And why should we neglect to make the urethral tube forty-five millimetres in circumference from bladder to meatus inclusive, in cases in which it can be done without harm to the patient, when we know that this condition offers us the very best opportunity to gain the upper hand of the gleet? I refer particularly to the common gleet in cases in which the vasa deferentia and seminal vesicles and prostate gland are not involved in inflammatory processes.

There are at present under my care four typical cases of gonorrhœal rheumatism. One of these patients was on crutches three months ago. He had swollen joints and tender soles and inflammation of the fibrous coats of the eyes. He had spent more than a year in Germany and France in trying to get relief, and had been treated by several physicians in New York and Philadelphia. Wherever he went his symptoms were treated extensively, but nowhere did he receive treatment aimed directly at the gleet. His strictures have now been cut, his gleet has entirely disappeared, he has gained strength and color, and

his rheumatism is gone, leaving a painless periarticular swelling of one finger joint and one ankle joint, which may or may not be permanent. Two of the other cases have "gone the rounds" of the profession within the last two years, and on no occasion had definite action been taken toward the management of the gleet which lay at the bottom of all their trouble. The gleet is now disappearing in both of these cases, and with it the symptoms of septicæmia.

I am in the habit of upholding the physicians who have treated such cases unsuccessfully as a matter of policy on general principles, but it is very difficult to make patients believe that they have not been neglected when they observe the results of treatment directed toward curing the gleet.

Concerning nomenclature—the term gonorrhœal rheumatism is a misnomer, and the name is objectionable as forcing out of classification a form of the urethral septicæmia, which is frequently diagnosed as "some kind of malarial affection." In this disease there is usually a certain degree of periurethral cellulitis following a diminution or sudden stoppage of the gleet. The patient has slight rigors at different times during the day, and a remittent temperature running between 100 deg. and 102 deg. Fahr. (in some cases reaching 104 deg. Fahr.) There is usually a diarrhœa accompanying the other symptoms, and the tenesmus with this diarrhœa adds to the marked unrest of the patient.

In the midst of the disturbance the tongue may remain quite free from coating. The symptoms become less marked after three or four days, but relapses are to be expected. During these attacks the commonly recognized symptoms of gonorrhœal rheumatism do not manifest themselves in a marked degree, but subsequently the patient may be attacked by any one of the types of the disease which is called gonorrhœal rheumatism.

In the urethral septicæmia, which is known as "some kind of malarial affection," the patient may not be aware of the fact that his urethra is in any way responsible for the symptoms, and a careful search into the habits of his other organs will leave the examiner in the dark as to the real cause of the disturbance.—*International Journal of Surgery.*

SNAKE BITES.

There is perhaps no member of the animal kingdom which is so grossly misjudged and misunderstood as the snake. Popular fallacies concerning the snake are very numerous, even among well informed people. There is a widespread idea that snakes are slimy creatures capable of springing great distances. In truth, the snake is smooth and dry and can not spring farther than two-thirds of its own length. Again, the pugnacity of the snake is greatly overrated. Non-poisonous snakes are most timid, and will scurry out of sight as soon as they are discovered. Poisonous snakes are, as a rule, more sluggish; and when disturbed, or hurt, will generally show fight. Careful inquiry of persons who have been bitten by reptiles will, however, elicit the fact that they either stepped upon, hurt, or surprised the animal that injured them. Stories of snakes chasing people for long distances are of very questionable veracity.

There are two questions which are frequently asked by travelers in countries where snakes abound: 1. How can one tell the difference between the bite of a poisonous and that of a non-poisonous snake? 2. What is the best immediate action if bitten by a poisonous reptile, and far away from medical attendance?

The first question is easily answered. Poisonous snakes bite, and then let go; non-poisonous snakes retain their hold. The wound inflicted by a poisonous snake is very slight, and consists merely of two fang-punctures, thus: . .

On account of its apparent insignificance it is frequently referred to as a "sting." The wound inflicted by non-poisonous snakes is much more severe, and would look something like this:

As the short, but lance-like, teeth of harmless snakes are set backward in the jaw, they become caught in the wound, and if the victim pulls the reptile forcibly away, the flesh is torn and an ugly laceration is inflicted. Still, such a wound heals wonderfully quickly and without any unpleasant symptoms. Another, and almost distinctive feature between poisonous and harmless snakes is their form and appearance. Harmless snakes are generally slim, and bright in color; whereas poisonous ones are thicker, heavier looking, and more neutral in hue, and are fre-

quently mistaken for twigs or small branches when lying in the road.

Regarding the treatment of snake bites a great deal has been said and written. In the *Reporter*, July 20, 1889, Dr. L. J. Jones, of Moscow, Mo., in an article on this subject, refers to the socalled "Bibron's antidote," a mixture of iodide of potassium, corrosive sublimate and bromine. Although excellent results are said to have been obtained with this mixture, Dr. Weir Mitchell regards them as apocryphal and the remedy as worthless. Again, in the *Reporter* for July 23, 1889, Dr. C. R. Early, of Ridgway, Pa., writes of the efficacy of pure olive oil. Lately, also, the hypodermic use of a weak solution of carbolic acid injected directly into the punctures has been spoken of most highly.

Whatever the vaunted efficacy of these and other antidotes may be, it is seldom that they are at hand at the time of the bite, and the necessity for immediate action is most evident. Regarding the best procedure in such cases, if far away from help, Dr. S. Weir Mitchell, in an article entitled "The Poison of Serpents," in the *Century*, August, 1889, says: "If the wound be at the tip of a finger, I should like to get rid of the part by some such prompt auto-surgical means as a knife or a possible hot iron affords. Failing these, or while seeking help, it is wise to quarantine the poison by two ligatures drawn tight enough to stop all circulation." Dr. Mitchell further says that, on account of the heart weakness, which is made worse by motion, the patient may need some stimulus to enable him to get home, and that as soon as possible some one should thoroughly infiltrate the seat of the bite with permanganate of potash or some other agent. By working and kneading the tissues, the venom and the antidote may be made to come into contact, and the former be destroyed.

To our mind, courage shows itself in the wrong direction, in chopping off the bitten finger or toe, which is a very foolish and dangerons proceeding. The most sensible and most efficacious procedure seems to be as follows: Immediately after having been bitten, and after convincing one's self that the bite is that of a poisonous snake, tie one or two tight ligatures at some distance above the punctures. For this purpose a string or cord tied around the arm, and then twisted up tightly with the aid

of a small stick, answers admirably. Then thoroughly lacerate the wound, fully as deep as the punctures, with a knife or a sharp stone. Wash the parts with water or, in an emergency, with urine. Keep moving, and do not despond. The ligature should be loosened in about fifteen minutes to prevent gangrene, but may again be tightened until help is obtained. On reaching home, a stiff glass of hot whisky or rum punch should be taken, or any other stimulus, if this is not at hand. The subsequent treatment depends upon circumstances. In the majority of cases stimulants and rest are all that is needed. Locally, hot fomentations or poultices may be applied. If necessary, carbolic acid solution or other antidotes should be injected into the wounds; this is, however, rarely required. —*Medical and Surgical Reporter.*

THE REPRODUCTION OF LIVER TISSUE.

Ponfick (*Ctbl. f. d. Med. Wiss.*, No. 31, 1889), has for several years studied the behavior of the liver in certain abnormal conditions of the blood, and he has collected some astonishing facts.

The animal organism shows itself tolerant to very considerable removal of liver-tissue. Under strict antisepsis, it is possible to remove three-fourths of the organ—either in several operations or in one—without affecting injuriously the animal's well-being other than making it less active. Among the hundreds of experiment-animals, in which pieces of the liver have been successively removed, not a small number remained healthy and active for months, and even a year after losing so considerable a part of the liver.

Pathological anatomy shows us that, in spite of destruction of the larger part of the liver, health and normal nutrition can be maintained, as in echinococcus and moderate fatty infiltration. Here we have to deal with processes that develop gradually, and only destroy the function of a large part of the liver after a long time has elapsed. It is all the more remarkable that the system is able to bear the sudden removal of a considerable part of the liver tissues.

The enigma is solved when the animals are examined at different intervals after the operation. It is then seen that the removal of the tissue is followed with surprising

rapidity by an energetic new formation of young liver-tissue, which shows, it is true, certain peculiarities of structure, but in the main resembles the old tissue. This new formation, or renovation, begins during the first days after the operation, and reaches its maximum in a few weeks. In some instances, the lost tissue is almost completely restored, even when this is more than twice as much as what was left.

These experiments have not merely a theoretical interest, inasmuch as they show an almost unlimited power of reproduction of a remnant of tissue during extra-uterine life, especially of such a highly organized tissue as liver tissue. This will give the surgeon greater confidence in operating on the organ than he would otherwise have.—*Hospitals-Tidende.*

Publications Received.

Transactions of the American Ophthalmological Society, Twenty-Fifth Annual Meeting, 1889.

Manual of Skin Diseases. By W. A. Hardaway, M. D.

Transactions of the Medical Association of the State of Missouri, 1889.

Transactions of the State Medical Society of Arkansas, 1889.

Syllabus of Obstetrical Lectures. By Richard C. Norris, M. D. Philadelphia: W. B. Saunders.

The Year-book of Treatment for 1890. Philadelphia: Lea Brothers & Co.

Transactions of the American Association of Obstetricians and Gynecologists. Vol. II.

Spinal Concussion. By S. V. Clevenger, M. D. Philadelphia: F. A. Davis, 1889.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland, 1889.

A Treatise on Fractures. By Armand Desprès. Detroit: Geo. S. Davis, 1889.

Medical News and Miscellany.

DANGER OF STROPHANTUS IN RENAL DISEASE.

On examination of sections of the kidney after experimental poisoning with extract of strophantus, Dr. Ergasse invariably found the kidneys hyperæmic—partly in the cortex, partly in the medullary zone, but chiefly at the tips of the pyramids. He therefore warns us that clinically we must bear in mind that where there is coincident

nephritis, preparations of strophantus are contra-indicated, otherwise an increase of the renal trouble may readily supervene. There is pretty general agreement that the action of the drug is most satisfactory in mitral disease, care being always taken that the degeneration of the myocardium has not proceeded too far. Hence it is best not to prescribe it in advanced stages of heart disease, especially when this is accompanied by arterio-sclerosis and interstitial nephritis.—*Practitioner, December, 1889.*

COMEDONES.

For the removal of "black heads" or comedones, Dr. Unna used the following application:

China clay	4 parts.
Glycerine	3 parts.
Acetic acid	2 parts.
Perfume, sufficient.	

The parts affected should be covered with this ointment in the evening, and, if necessary, during the day. After several days, all the comedones can be easily expressed, most of them coming out on washing the parts with pumice stone soap.

Another entirely different treatment is proposed by Dr. McCasey, who, having noticed that comedones were easily pressed out of the skin of a patient who had been under the influence of ether, devised the following mixture which he used in several cases with success:

Ether	fl. oz. j
Carbonate of ammonium	gr. xx
Water to make	fl. oz. ij

The liquid was applied to the affected parts twice a day. —*Druggists' Circular, January, 1890.*

WHAT'S IN A NAME?

First Medical Student—"Have you been reading up on the prevailing epidemic of mal del castrone, schaffhusten, ziep, anguinalgia, burzel, coqueluche, Spanischer pips, la-dendo, huhner-weh, or genser, commonly called la grippe?"

Second Medical Student—"No; but I've heard a great deal about another epidemic disease known as rheuma epidemicum, tac, baraquette, blitz-katarrh, schaffkrankheiten, grenade, modefieber, horion, quinte, cephalalgia contagiosa, cocotte, follette, or petite paste, commonly called the influenza."

THE OPHTHALMIC REVIEW

Begins its new volume with an American editor, Dr. Edward Jackson, of Philadelphia, who succeeds Dr. James Anderson, of London.

It will, hereafter, contain original papers from American as well as English Ophthalmic Surgeons, with a list of all papers on ophthalmological subjects, published in this country or in Europe, and full reviews of the most important of them.

COMPOUND WINE OF CREASOTE.

℞. Creasote..... 15 grams.
Tr. of gentian..... 30 "
Alcohol..... 255 "
Sherry wine..... enough to make one litre.

M.—Sig.: Two or three tablespoonfuls a day to tuberculous patients, in whom the temperature does not exceed 38° C., and the bacilli are no very abundant.

The Virginia board of medical examiners received the following answers to questions put to graduates of medical colleges, who, under the Virginia law, applied for licenses to practice medicine in that state:

Describe the larynx. A.—The larynx is composed of cartilage. The œsophagus passes through the larynx.

What is the function of the liver? A.—Do not know.

Give tests of arsenic. A.—Sulphuretted hydrogen is one. Don't know rest.

Give test for mercury. A.—Do not remember.

Give dose of tartar emetic. A.—Ten grains.

Give dose of sulphate of atropia. A.—Hypodermically, ten grains; by mouth, sixty grains.

Give dose of corrosive sublimate. A.—One grain.

How would you treat placenta prævia? A.—I don't know what it is.

Give dose of powdered cantharides. A.—Forty grains.

What is the source of iodine? A.—It is dug out of the earth in blocks like iron.

Describe dengue or breakbone fever. A.—By four applicants: A fever that comes on soon after the bones are broken. By one applicant: The patient should be cautioned against moving, for fear the bones should break.

Describe the peritonæum. It is a serious membrane lining the belly, and extending into the chest, covering the heart and lungs.—*Brooklyn Medical Journal.*

MORTUARY REPORT OF NEW ORLEANS

For January, 1889.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	1	5	1	5	3	3	6
" Congestive	4	2	4	2	2	4	6
" Continued,	.....	.....	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....
" Remittent	2	1	3	.....	2	1	3
" Catarrhal	2	2	.....	4	1	3	4
" Typhoid	5	2	4	3	6	1	7
" Puerperal	.....	.....	.....	.....	.....	.....	.....
" Typho-Malarial	2	.....	1	1	2	.....	2
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	4	3	2	5	.....	7	7
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	6	2	5	3	2	6	8
Pneumonia	23	16	27	12	29	10	39
Bronchitis	10	19	11	8	7	12	19
Consumption	30	32	41	21	61	1	62
Congestion of brain	7	2	5	4	4	5	9
Diarrhœa	11	9	13	7	15	5	20
Cholera infantum	7	1	3	5	.....	8	8
Dysentery	5	2	5	2	7	.....	7
Debility, General	1	.....	1	.....	1	.....	1
" Senile	18	10	13	15	28	.....	28
" Infantile	6	4	5	5	.....	10	10
All other causes	175	106	162	119	188	93	281
Total	319	208	306	221	358	169	527

Stillborn children—White, 21; colored, 17; total, 38.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for city — White, 20.75; colored, 35.91; total, 24.90.

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY — JANUARY.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	P c'p. in inches and hund.
1	70.0	78.0	62.0	.....
2	72.0	76.0	67.0	.....
3	68.0	72.0	65.0	.03
4	68.0	75.0	62.0	T
5	69.0	76.0	62.0	T
6	71.0	78.0	64.0	.11
7	75.0	82.0	68.0	.....
8	72.0	76.0	67.0	T
9	64.0	71.0	58.0	.....
10	70.0	79.0	61.0	.....
11	71.0	81.0	61.0	T
12	74.0	81.0	68.0	.....
13	56.0	60.0	52.0	.23
14	58.0	69.0	46.0	T
15	66.0	77.0	54.0	.14
16	46.0	51.0	40.0	.01
17	48.0	60.0	36.0	.....
18	61.0	72.0	50.0	.....
19	64.0	77.0	52.0	.....
20	71.0	80.0	62.0	.02
21	62.0	67.0	58.0	T
22	51.0	59.0	43.0	.....
23	68.0	80.0	56.0	.....
24	52.0	55.0	50.0	.....
25	62.0	72.0	52.0	T
26	70.0	79.0	62.0	.....
27	70.0	78.0	62.0	.....
28	64.0	68.0	60.0	.....
29	70.0	77.0	62.0	.12
30	66.0	71.0	62.0	.....
31	68.0	76.0	60.0	T
Sums	...	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.242.
Highest barometer, 30.518, 16th.
Lowest barometer, 30.048, 10th.
Mean temperature, 65.1.
Highest temp., 82.0, 7th; lowest, 36.0, 17th.
Greatest daily range of temp., 25.0, 19th.
Least daily range of temperature, 5.0, 24th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..53.6	1876..60.3	1881..50.3	1886..45.5
1872..48.1	1877..53.5	1882..62.4	1887..51.4
1873..49.3	1878..50.9	1883..56.8	1888..55.6
1874..55.8	1879..53.1	1884..47.1	1889..53.4
1875..54.3	1880..63.0	1885..52.1	1890.. —

Total excess in temp. during month, 3.41.
Total deficiency in temp. since Jan. 1, 3.41.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 36 miles, S. E., on 1st.
Total precipitation, 0.66 inches.
Number of days on which .01 inch or more of precipitation fell, 7.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875..... 8.44	1880..... 1.02	1885..... 9.70
1876..... 4.43	1881..... 11.15	1886..... 7.53
1877..... 5.30	1882..... 4.54	1887..... 4.26
1878..... 5.36	1883..... 10.63	1888..... 3.29
1879..... 2.34	1884..... 4.35	1889..... 6.51

Total deficiency in precip'n for month, 5.18.
Total deficiency in precip'n since Jan. 1, 5.18.
No. of clear days, 8. No. of partly cloudy days, 17. No. of cloudy days, 6.
Frosts, ——.
Thunder storm on ——. Excessive rainfalls, ——; Mean Max. Temp., 72.7; Mean Min. Temp., 57.5.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

APRIL, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

Syphilitic Cyclitis with Gummata.*

By LYMAN WARE, M. D., Chicago, Ill.

Syphilitic cyclitis, not extending from the iris nor the choroid, is an exceedingly rare disease, and it is only within the past few years that it has been fully recognized and described. The position of the ciliary body may have something to do with its having been so long overlooked, as unless the gumma points forward it is not to be observed by the naked eye, nor much better with the ophthalmoscope. It is only exceptionally, when the gummatous proliferations point backward and are of unusual size and the iris widely dilated, that they can be detected ophthalmoscopically. Virchow (Dr. Loring Bumstead and Taylor, p. 778) was fortunate enough, however, to see a gummy tumor of the ciliary body, which, ophthalmoscopically and by oblique light, was seen and mistaken by others for a sarcoma. That syphilis was the cause of the tumor was demonstrated by the fact that it disappeared under specific treatment.

*Read before the thirty-ninth annual meeting of the Illinois State Medical society, at Jacksonville, May 23, 1889.

I desire, particularly, to call attention not only to the *importance of early and correct diagnosis*, but also to the great importance of *prompt and heroic anti-syphilitic treatment*. Heretofore the prognosis has been considered most unfavorable, a result dependent more, I think, upon inefficient or delayed anti-syphilitic treatment than the severity of the disease. It has been altogether too common a practice to consider every venereal sore as syphilitic, and to commence treatment before it is clearly and definitely determined that the case is one demanding constitutional medication. The consequence then is, that all treatment is soon abandoned. In such a case the symptoms may rapidly disappear, as fog before the rising sun, and doctor or patient will think there may have been some mistake in the diagnosis, and that continued treatment for two or three years will be wholly unnecessary. Subsequently, in the course of two to twenty years, according to the duration of the primary treatment and the severity of the disease, other symptoms will manifest themselves a hundredfold more severe than the first.

Of the following four cases, which are the only ones I have ever observed, one was kindly referred to me by Dr. Truman Miller, Surgeon United States Marine Hospital, while I was connected with the polyclinic; two occurred in my own practice, and the other I had the pleasure of seeing with Dr. W. T. Montgomery, to whom I am under obligations for notes of the case.

Case 1.—Had only been treated a few weeks, then all treatment had been abandoned. Gummatous protuberance appeared in the sclero-corneal region eighteen months subsequently.

Case 2.—Anti-syphilitic treatment had been employed with considerable irregularity for several years, then wholly discontinued. Cyclitis showed itself about fifteen years after the primary symptoms.

Case 3.—The treatment had been continued only a

short time, then altogether given up. Gummata made their appearance in about eighteen months.

Case 4.—Treatment had been very irregular and soon quite discontinued. Specific cyclitis occurred about two years subsequent to the primary symptoms.

Case 1.—Referred by Dr. Miller. William T., sailor, æt. 25, came under observation Feb. 3, 1887. During the latter part of the winter of 1885, patient contracted syphilis. He had a hard chancre which rapidly healed under internal medication; then all treatment was discontinued. The duration of treatment certainly did not exceed six weeks and was not again resumed. He had no trouble of any kind until about September, 1886, about eighteen months after primary lesion, when he began to have pain in his right eye, more particularly at night or toward morning; did not notice any special impairment of vision until a month or six weeks later, when the pain became constant and almost unbearable. When he first came under observation he could barely distinguish light. Iris contracted and discolored, tension much increased and eyeball exceedingly tender to touch. Near the upper outward sclero-corneal junction was a smooth bluish colored protuberance of the size of a small pea; eyeball unusually prominent and almost immovable. The left eye was somewhat injected, pupil sluggish, with considerable photophobia and lachrymation.

Long before vision became impaired he noticed a small ulcer situated on the exact spot of the above protuberance, and from which all the pain seemed to radiate, indicating clearly that the morbid spot at first was exceedingly limited.

The treatment consisted in rubbing in a different flexure each night one drachm of a 20 per cent strength of oleate of mercury, giving also iodide of potash in large doses. We began by giving five grains, three times daily, which was gradually increased to forty grains. Locally duboisin, five grains to the ounce of vaseline, was applied to the eye four or five times daily, and hot fomentations fre-

quently used. Within three days the violent and painful symptoms had all disappeared, and within a week he could count fingers. The inunctions were now discontinued and the potash given in the largest possible doses. The largest dose given was forty grains, three times daily. In the course of a month vision had improved to 10-20. A few weeks later his condition was so improved that he resumed his occupation as sailor.

Case 2.—Mr. R., æt. 40, capitalist, came under observation early in March, 1887. At first, and for ten days or two weeks subsequently, the disease presented more the appearance of phlyctenular conjunctivitis than anything else. At the upper and outer sclero-corneal junction a small pustule was observed, which terminated in an ulcer accompanied by pericorneal injection and slight photophobia. I applied to the ulcer a very small quantity of yellow oxide of mercury ointment of the strength of 2 per cent, and used a 2 per cent solution of boracic acid and cocaine, a few drops of which were distilled into the eye two or three times daily. There was no appearance whatever of syphilis, either in the eye or in the patient's physique, and such a complication was not for a moment mistrusted. The iris dilated moderately even with the above weak solution of cocaine. The patient was not confined to the house, had little or no pain, except when exposed to a very bright light, and the only thing that really troubled him was the appearance of a reddened eye. The middle of March the patient was no better, and calomel was now daily lightly dusted into the eye, and anti-malarial treatment directed, thinking it might be of a malarial origin, as he now began to feel worse every afternoon and night. In the latter part of March he was worse in every way. There was more or less constant pain in the eye, but more at night, and especially toward morning; iritis was fully developed, and in place of the ulcer a small bluish protuberance gradually made its appearance and soon attained the size of a large split

pea. The eye became exceedingly sensitive to the touch tension increased, supra-orbital pain, photophobia and lachrymation. The vision rapidly became greatly impaired—could scarcely count fingers, and the left eye also began to be sympathetically affected. In addition to the severe local symptoms, his general health began to suffer—was feverish, appetite poor, and at times had "dizzy turns," which caused him much alarm, and suggested cerebral trouble. Fifteen or sixteen years had already elapsed since he had contracted syphilis, and ten or twelve years since he had had no syphilitic manifestations or had been subjected in any way to anti-syphilitic treatment. As April is always a most variable month with us, and as he had great trouble in taking large doses of potash, I strongly advised him to visit the Hot Springs of Arkansas at once, not only on account of the mild climate, but also that he might have the full benefit of a thorough anti-syphilitic treatment without any further delay. I have never been able to give anything like the large doses of potash that are given at the springs. In this case, even with the greatest of care, it was impossible to give over thirty or forty grains daily. There they could give that much in a single dose. He followed my suggestions and immediately placed himself under the care of Dr. Algernon Garnett, who at once recognized his condition and the great importance of thorough anti-syphilitic treatment. I had been using a 1 per cent solution of duboisin as mydriatic, which was continued, with the regular course of baths, mercurial inunctions and potash. His eye began to improve from the very first; within a week he could count fingers easily, and when he returned to the city, after two months' treatment, vision was 10–20, which gradually improved to normal and perfect vision and has so remained.

Case 3.—Mrs. H., colored, æt 29, primary syphilis, October, 1887, secondary symptoms six weeks or two months later. Anti-syphilitic treatment did not exceed one month, then wholly discontinued. Iritis occurred in the right eye

July, 1888, and a few weeks later the left became involved, and patient was admitted to the Illinois Charitable Eye and Ear Infirmary on the 20th of August. Pupil of right eye occluded, iris firmly agglutinated to lens. Left eye, pupil much contracted, but adhesions not so firm as to resist a 1 per cent solution of duboisin. Mercury was at once given in the form of the protoiodide, and when the inflammatory symptoms had sufficiently subsided an upward iridectomy was made upon the right eye. Latter part of October, 1888, patient was discharged much improved and emphatically told to continue medicine and occasionally to report at the infirmary, in order that any unfavorable condition might at once be noted. Patient was not again seen until the 8th of April, 1889. Advice as to continued medication given the previous October had been very imperfectly followed. When she appeared upon the 8th of April, right eye was much inflamed and presented all the symptoms of an acute iritis, the entire ball much injected, great photophobia and much lachrymation. Vision, though imperfect in consequence of the previous neglected iritis, was still more impaired. She was at once placed upon the protoiodide of mercury (one-quarter grain, three times daily) and a 1 per cent solution of duboisin was used locally. On the 8th she was again seen. All of the previous symptoms above given were much aggravated: pain was so severe that she had scarcely slept for forty-eight hours. Anterior chamber was narrowed, tension increased, and when the ball was touched, however slightly, she would involuntary throw the head backward in a manner so characteristic of those who are afflicted with cyclitis. At the upper and inner sclero-corneal junction a protuberance as large as a pea had made its appearance within four days. The mercury was at once discontinued, and she was placed upon the iodide of potash, beginning with ten grains, which were rapidly increased to thirty grains. No anodynes were given, and yet within forty-eight hours she was relieved of all pain, and the gummatous projection was as rapid in vanishing

as it had been in appearing. Within a week all the inflammatory symptoms had disappeared, and although tension was somewhat diminished, vision was as good as before the attack.

Case 4.—J. T. W., æt. 37; admitted to Illinois Charitable Eye and Ear Infirmary Feb. 6, 1889; assigned to Dr. W. T. Montgomery. Right eye had been much inflamed for six weeks or two months; vision in right eye had been wholly lost several weeks previously; pain was most excruciating; tension much increased and the eye seemed ready to "burst," as he expressed it. There were two distinct projections as large as small beans, one at the inner, the other at outer upper sclero-corneal junction. Feb. 13 the eye was enucleated. Within a week the left eye, which had heretofore remained perfectly clear, was attacked similarly to the right. Patient had been taking full doses of mercury without having the least favorable effect upon the eyes. The bulging in the upper ciliary region became very marked and the patient became almost blind. Mercury was discontinued, and potash was given in as large doses as possible. All pain and unfavorable symptoms rapidly subsided, the ball soon assumed its natural size, and vision again became good. In consequence of cerebral symptoms, particularly cephalalgia, patient was transferred to general hospital.

I will give a brief synopsis of two cases, one reported by Mr. Watson (Ophth. Soc. Gr. Brit., 1886, p. 56, Knapp's Ophth. vol. 16, p. 245) and the other by the late Dr. E. G. Loring (Trans. Amer. Ophth. Soc., 1874), as illustrative and confirmatory of my own experience as to the necessity of an early and correct diagnosis and heroic treatment. Mr. W. describes a case of intra-ocular gumma in a child aged 6, the subject of inherited syphilis, whose right eye first presented the appearance of a scrofulous keratitis. Subsequently a small hypopyon formed, and, as the aqueous and cornea became clearer, a yellowish deposit was seen to occupy the pupil, and a

prominence the size of a small split pea had formed on the upper and outer ciliary region of the sclerotic. This was twice punctured, and a yellowish, cheesy, semi-solid substance presented in the wound. The child had a serpiginous ulcer on the thigh and chronic laryngitis, and the mother gave a history of having suffered from secondary symptoms after the birth of the child. The child was put on mercurial treatment, which was followed by marked improvement, but the eye was evidently shrinking. Watson emphasizes the following points in the case:

1. The difficulty of diagnosis in the early stage.

2. The rarity of the lesion in connection with inherited syphilis.

Dr. Loring's patient appeared in perfect health, no syphilitic cachexia; æt. 30. Five years previously had had chancre, for which she had been treated in the regular way. (Particulars of treatment not given, whether of a few weeks, as sometimes happens, or a few months, is not stated.) Three years subsequently, and two years before the present attack, patient had suffered from an attack of iritis in both eyes. The present attack was ushered in by similar symptoms, and the attending physician believed it to be a second attack of iritis. The trouble, however, was confined to the left eye, and for a week or ten days was accompanied by either much pain or much impairment of vision. The patient was, however, shortly after awakened at night by a sudden and very violent attack of pain with a rapid loss of sight, which in a day or two resulted in total blindness. The right eye at this time was perfectly normal in every respect. A week or ten days later, in consequence of the severe and violent pain, the right eye, which up to this time had shown no trace of trouble, began to be somewhat sensitive to light and to show other symptoms, which seemed to be of a sympathetic nature. The left eye was enucleated, and for a time the right seemed better as far as sensitiveness to light was

concerned, but a few days subsequently it manifested all the appearance of the left when the patient first came under observation, and in a short time fingers could be barely counted at a distance of a foot and a half. Anti-syphilitic treatment was vigorously pursued. The severe symptoms subsided, vision immediately rose, and the eye made a steady and rapid recovery.

The inferences I particularly wish to deduce from these cases are:

1. Greater care in the diagnosis of primary symptoms. However difficult it may be to diagnosticate primary or secondary syphilis, it is generally far more difficult to diagnosticate tertiary. It is much too common for a physician to say to his patient, "I do not think you have syphilis, but yet a little constitutional treatment will do no harm."

2. Mercury is unquestionably the remedy *par excellence* in the primary and secondary stage, while potash in large doses is *the remedy* in the tertiary stage, and gummata certainly belong to the last.

3. Large doses of potash can only be tolerated when given in gradually increasing doses, preferably one-half to an hour after meals, in much water. The freer the perspiration, the larger the doses of potash.

SELECTED ARTICLES.

TETANUS-INOCULATIONS IN DOMESTIC ANIMALS.

By Prof. TH. KITT, of Munich.

[Translated from the *Centralblatt fur Bakteriology und Parasitenkunde*, by A. MCSHANE, M. D.]

The doctrine concerning the etiology of infectious traumatic tetanus has recently been made complete by the pure cultures of the tetanus-bacillus, obtained by Dr. S. Kitasato and Dr. H. Buchner. The presence of the pin-shaped bacilli (of Nicolaier and Rosenbach) was demonstrated in many cases in men at the place of entry of the virus: their presence in various spots of earth, the con

nection of the so-called earth-tetanus with the spontaneous outbreaks, the toxic action of the bacilli, the transmissibility of the infection through earth, wound secretions, mixed and pure cultures, to small experiment animals, were clearly shown, and many peculiarities of the disease revealed by bacteriological investigation. Much light has been thrown by recent publications on the lockjaw of domestic animals, especially horses, many of which succumb yearly to this disease. Two inoculations—experiments in particular, with hay-dust, wound secretions, etc.—cleared up the subject a great deal, and produced effects similar to those of lockjaw in man. As I have already given a lengthy summary (*Monatshefte für prak Thierheilkunde. 1890. Heft 5*) of all the more important works on tetanus, and have given due credit as to priority of authorship, it will be unnecessary here to give the bibliography of the subject, but I will merely give the results of my own investigations, which had for their object the effect of pure cultures of the tetanus-bacillus upon horses, sheep, and dogs.

In May, 1888, I had the good fortune to observe the specific tetanic properties of a quantity of pus which was taken from an abscess in the hoof of a horse that had died of tetanus; a large number of white mice and one guinea-pig, which had been inoculated with minute drops of that pus, succumbed with classical tetanic symptoms. In this connection, I have already called attention (*Bakteriologische Uebungen für Thierärtzte, 1889*) to the peculiar *seal-like* posture in which the affected dragged their hind legs after them.

A part of this pus was allowed to dry in a glass bell jar, and in four months, and again in sixteen months, particles of the incrusted matter were inoculated into white mice. It was evident, from the results of these experiments, that the dried matter had preserved its virulence all this time. A horse was inoculated with the four months old pus.

On Sept. 21, 1888, a portion of the pus dried on May

27, 1888, was diluted with ten cubic centimeters of sterilized water, and two c. cm. of the thin, cloudy liquid were introduced subcutaneously into the neck of a horse.* As control experiments, one-fourth c. cm. was injected subcutaneously into four mice, and particles of dried pus as large as the head of a pin were shoved under the skin in three mice. The mice into which the fluid had been injected, fell sick one or two days sooner than those inoculated with the dried matter, with one exception, however, namely, a mouse (inoculated with dry matter) which had evidently retained only a trace of the dry powder in the hip, the symptoms appeared between the third and fifth day. That mouse had, after an incubation of three days, severe cramps in one hind leg, and this limb dragged like a rudder, as the animal moved toward the side of the affected limb. The mouse finally recovered.

The horse appeared to be healthy until Oct. 9, on which day he began to chew badly, kept his food in his mouth, rolling it around feebly and for a long time, and finally letting it fall with an abundant flow of saliva. During the night he became very sick, and on the morning of Oct. 10, he presented the aspect of a horse with beginning tetanus, but with some slight modifications in the symptoms. The temperature in the rectum at this time was 37.6 Cent.; respiration, 20 to 24; pulse, 60. The animal rested on his breast and knees, the head was drawn to the left side, the nostrils rigidly opened, the lips held stiffly, and also the ears, so that when the ears were drawn to one side or bent, they would immediately return to their former position when the pressure was relieved. Trismus did not come on, as the animal could still drink when water was offered to him, but the movements of the jaw were slight and feeble, as was ascertained by holding the hand be-

* When the platinum loop (or ladle) can not be used in the inoculating fluid, I always use a Pasteur syringe, which can be sterilized in hot water, a current of steam of the capacity of one cubic centimeter, and marked off with eight lines, so that one section corresponds to one-eighth cubic centimeter.

tween the horse's jaws. The most striking symptoms were the lateral deviation of the neck and the turning of the head toward that side; when the head was forcibly brought into the normal position and then let go, it would immediately return to its former position. Later on, when the horse was suspended in a hammock, the posture so changed that the occiput was directed toward the floor and the nasal orifice toward the back, and thus, when the neck was bent, the head was parallel with the long axis of the trunk. The trumpet-like rigidity of the nares persisted for days, and not the slightest play of the nostrils could be observed, although the respirations increased in the evening to 40 or 50 per minute. In the afternoon the rectal temperature rose to 38 deg. Cent., the pulse to 140 or 150. Slight trismus was noticed toward evening, when the bending of the neck was extreme. When the horse was transferred to the hammock, stiffness of the extremities was apparent, and the tail was stiff and directed a little to the right. At about 8 P. M., a profuse sweat occurred, and, after increasing dyspnœa, the horse died at midnight (between Oct. 10 and 11).

I must thank Docent Schlampp for noting these clinical symptoms, after the horse was removed from the experiment station to the clinic and suspended in a hammock.

The horse manifested symptoms which belong to the tetanic group, and these were the peculiar facial expression presented by horses with lockjaw and the dilation of the nostrils. But the horse was old and worn out, and the disease ran such an acute course, that it was necessary to have more proof that the horse had succumbed to inoculated tetanus and not to something else. The autopsy furnished this proof. This was performed on Oct. 11, in the morning. No special organic lesion could be found to account for death; the only changes found were those characteristic of tetanus: lac-colored, dark, uncoagulated blood, bloody transudation into the pericardium, diffuse hyperæmia of the lungs, œdema of the anterior lobes of the lungs,

and œdema of the submucous tissue of the pharynx. There was no trace of pus at the point of inoculation, but a finely ramifying and also diffuse redness as large as the palm of the hand in the subcutaneous tissue, accompanied by slight œdema of the cellular tissue. Some liquid was scraped from the place of inoculation with an aseptic knife, and nine white mice were inoculated with it, each mouse receiving one-eighth to one-fourth grain in the subcutaneous tissue of the hip. All of these animals had tetanus by Oct. 14, and two of them died on the 15th, five on the 16th, and two on the 18th of October. Immediately after the autopsy. blood from the heart and œdema-liquid from the pharynx were inoculated into mice; these animals remained healthy. Obviously, then, the horse died of undoubted tetanic infection, introduced on Sept. 21; the occurrence of prolonged periods of incubation does not invalidate the above facts, since a period of incubation lasting for several weeks has been observed after wounds of the hoof. Although the inoculation was successful, I could not find, either in the juices at the point of inoculation in the horse or in the pus from the hoof of the first horse, bacilli provided with terminal spores, which is in accord with Kitasato's statements. That pus contained masses of cocci, also single bacilli of the shape of the sporeless form of the tetanus infection (vegetative stage); in the mice, however, I found several times at the point of inoculation the last named germ pin-shaped and partly provided with spores.

Culture experiments with different media, various examinations of the air at first gave me no definite results, but when Buchner's simple and practical method of cultivating anaërobic fungi became better known I repeated my investigations, and succeeded in obtaining mixed cultures in blood serum of material taken from points in mice inoculated with dried pus from a horse. These cultures were virulent to the third generation. After longer experimentation and oft repeated sowings (of virulent material in cul-

ture media), I finally succeeded, by extreme dilution with sterilized water and linear inoculations in blood serum from the horse and sheep, in obtaining pure cultures without the aid of the heating process. In another series of inoculation of horse-blood-serum, in which only small drops of the water of condensation were used, the continual anaërobic culture had always the same result, namely, the tetanus-bacilli predominated, and finally crowded out every other organism. It was even fortunate for the culture that in this case there were three sorts of anaërobic bacteria present in the inoculation material (taken from mice inoculated with pus from a horse), namely, a coccus, a bacillus almost as large as the bacillus of splenic fever, and a pretty, facultatively anaërobic clostridium, the growth-energy of which, as shown by control experiments, was very slow and feeble, thus permitting the tetanus-bacillus to get the upper hand. The aërobic bacteria were weeded out even in the course of the inoculations. To confirm the fact, control inoculations were made in gelatine (linear and plate cultures), agar, and blood serum, the air being allowed to come in contact with them, and in the presence of pure tetanus cultures nothing thrived; but, on the other hand, in the cultures prepared in the same way with pyrogallol, the exclusion of contaminating anaërobes was apparent.

The morphology and growth of the tetanus-bacillus occurring in the horse agree, on the whole, with what I have read in Kitasato's valuable work (*Zeitschrift für Hygiene, 1889*), concerning the bacilli of human tetanus and earth-tetanus, which were illustrated in his article and in Frænkel and Pfeiffer's Atlas. In regard to cultures in blood-serum, Kitasato remarks this was not liquefied. The tetanus-bacilli from the horse, however, as well as those from the pure cultures from the soil, which I obtained through the courtesy of Dr. Enderlen and Dr. Buchner, for purposes of comparison, effect in a uniform manner an alteration of the blood-serum, accompanied by partial liquefaction.

At 34 deg. or 38 deg. Cent. in the incubator, the serum, usually in from one to three days, presents shallow recesses (pits), in which a translucent, soft, colorless deposit can be seen on careful examination. Before these depressions appear, the deposit is, for a brief space visible as minute, isolated drops. The shallow pits with their deposit are circular, and separated so far from one another by stretches of solid serum, free from bacteria, that it would not be hazardous to call them isolated colonies; microscopic examination and the inoculation of mice show that this is the case. It is easy to obtain pure cultures from these colonies.

In tubes standing vertically, the well defined edges of the depressions disappear, and give place to an undulating appearance of the surface of the serum, and at the same time the quantity of the water of condensation increases. Frequently, the growth on the oblique surface of the serum is lacking, and the increase takes place only in the water of condensation; and when this takes place, the watery portion is perfectly clear, and only a whitish sediment is present. When such cultures are allowed to remain in the heating oven for six or ten days, a division (splitting up) of the solid serum always takes place, the lower part peeling off or separating, as though cut obliquely with a knife in several places, which then slide down and cause the already swollen serum still further to increase in bulk. The serum is usually halved, the upper part clinging (dry) to the test tube; then follows an empty air-space, and in the layer of liquid serum (two or three centimeters in height) lie the solid fragments of the broken mass. The precipitation of the last named naturally explains the increase of the watery serum, although this actually also increases previously. Total liquefaction does not take place, as occurs with various other kinds of bacilli, but there is a decided departure from the behavior that is usually described as serum remaining solid. I have several times inoculated older blood serum, from which the water

of condensation had entirely evaporated, with tetanus bacilli, and have observed the formation of fresh watery serum. The growth of equine tetanus-bacilli is also attended with the formation of spinous, radiating processes, such as Kitasato has described. The cultures have a repulsive odor.

In regard to the shape of the bacillus of equine tetanus, there are two forms in the cultures—namely, the characteristic pin- or pot-ladle-form, with the terminal spore (visible in great numbers in cultures lasting several days, at 37 deg. Cent.,) and the vegetative form of sporeless bacilli with rounded ends, which occurs in groups of two or four, separated by clear spaces, and form slightly undulating (apparent) threads. Both forms are of equal thickness. The length of the ladle-shaped bacilli is six or eight micro-millimetres, rarely ten; that of the sporeless form chiefly from four to six mmm., and that of the bundles ten mmm. The spores in their perfect condition are circular, are not stained by fuchsin, but are enclosed by a broad border, stained by the fuchsin, so that it looks as if the end of the bacillus containing the spore had been blown out like a bladder. This spore-laden part is sharply defined from the body of the bacterium cell, and is certainly twice as thick (1½ mmm.) as the latter. The cell-body of the bacilli containing ripe spores, frequently absorbs but feebly the coloring matter (I always use Lœffler's aniline-soda-fuchsin), so that the border which surrounds the spores appears more deeply tinged than the rod-shaped part; and this, on the other hand, stains as well as in other bacilli. Furthermore, other forms are found, which have only small, totally colorizable, knobby thickenings at one end, and in these the cell-body always stains normally. I regard this as the form in which the spore-formation is just beginning, and, in respect to the proportion between the cell-body and the terminal knob, they correspond to the pin-shape, while the full grown bacilli are ladle-shaped. In cultures, which

have remained in the incubator for more than eight days, involution forms are found, which are distinguished by enlargements at various parts of the cell body and imperfect staining, as well as by free spores.

I have never seen any coccus-forms. The virulence of the cultures described, in connection with the symptoms produced in affected animals, makes a gloomy impression. I recently mixed a single platinum loopful of fluid serum with sixteen c. c. of sterilized water, and with this dilute material so inoculated eleven white mice that seven of them received ⅛ c. c., and four received ¼ c. c., subcutaneously. All these mice, in the course of twelve hours had tetanus, and died in a few days. (If the inoculations had been continued until the whole sixteen c. c. of the dilute liquid had been used, each mouse receiving the small quantity that adhers to a platinum loop that would scarcely reach around a hempseed, 128 mice would have been killed.)

Moreover, when the platinum loop was so slightly moistened that the naked eye could detect nothing, and the loop then scratched over small pockets made in the skin of the hips, tetanus promptly occurred just as surely as when a visible drop was pushed under the skin. Even when a dilution of a loopful to sixty c. c. of water was used, the injection of ⅛ c. c. into mice promptly brought on a fatal attack of tetanus.

A full grown rabbit which received, in the right thigh, on Jan. 2, 1890, ⅛ c. c. of the undiluted serum-water, was still comfortable on Jan. 3, but on the 4th had tetanus. It was very distressing; whenever his cage was opened, or whenever he was touched, he went into violent spasms, holding his inoculated leg rigidly outstretched, his head drawn backward. He lay in such marked convulsions that I took pity on him and killed him.

From the same culture, which had been tried on a pair of mice as control-experiments, I inoculated, on Jan. 2, 1890, at 10 A. M., a healthy horse. He received ½ c. c. in the right shoulder.

On the evening of Jan. 6 he was quite comfortable and eating well. On the morning of the 7th he showed the first symptoms of tetanus: incipient trismus, stiffening of all the limbs, rigidity of the tail, trumpet-like rigidity of the nostrils, profuse sweating. The animal was transferred to the clinic of Prof. Friedberger for therapeutic purposes. According to the observations of assistant veterinarian Proels, the horse was free from fever (37.8 deg. Cent. in the rectum, pulse 60), he breathed more rapidly (thirty-six per minute), walked awkwardly, stood like a sawhorse, held his head stretched out, the ears were stiff and narrowed, the nostrils dilated and immovable, the tail raised and drawn to one side, the spinal column presented the sinking in of opisthotonos; the trismus, which, in the beginning, permitted the incisors to be separated two finger-breadths, increased and became so complete that the jaws could not be separated; the extensor muscles of the neck and rump were contracted and as hard as a board; eating and drinking were already, in the morning, almost impossible; the reflex excitability was increased, and consciousness was not affected. Prof. Friedberger designated this case as a "complete picture" of tetanus, and when the animal was taken from his hammock on account of increasing dyspnœa and danger of suffocation, he remained on the floor in a condition of extreme opisthotonos. He died on Jan. 8, at 1 P. M. At the autopsy, at the point of inoculation there was nothing abnormal except a few small hemorrhagic spots; there was no trace of suppuration. The anatomical causes of death were: œdema and congestion of the lungs, as also the well known alteration of the blood (dark, uncoagulated, lac-colored blood), such as is found in diseases ending in toxæmia and suffocation.

As various investigators have stated that dogs were not susceptible to tetanus on account of failure to inoculate the disease in these animals, and also as veterinarians have very rarely observed the disease to arise spontaneously (see Friedberger and Fröhner, *Specielle Pathologie und Ther*

apie der Hausthiere), I inoculated two dogs with tetanus-bacilli that I had cultivated, and obtained positive results in both cases.

On Jan. 9, 1890, a brown dog (Pinscher) received in his left hindquarter ¾ c. c. of the fluid part of a serum culture, and a white dachshund received likewise ½ c. c. subcutaneously. On Jan. 11, forenoon, the brown dog began to have stiffness in his hind leg and to walk limpingly. This stiffness increased in the course of the afternoon. The white dog seemed still to be well on the morning of Jan. 11, but in the afternoon was affected like the other dog; but more rapidly. Whilst he had previously been very agile, he now showed no desire to rise from his place, but sat in a peculiar, stiff posture upon the straw. When raised up and urged to walk, he held his spinal column in a rigid condition, walked very stiffly with his hind legs, which were scarcely lifted from the ground. The dog could turn his head but little; he rather held his head and neck rigidly in the axis of the rest of the spinal column. The eyes had a fixed, anxious look, and the ears, resting on the neck, were immovable. When anyone tried to make the dog walk or change his position, he easily fell over, and stretched out his legs. In the other dog the tetanic symptoms increased in the same way toward evening, but the trismus was not well marked. Both dogs died during the night of Jan. 11 and 12. Whilst the tetanus ran such a rapid course in the horse and the two dogs, due apparently to the quantity of undiluted virus used, two sheep which I inoculated with a smaller quantity and with diluted virus, had an attack of tetanus that was not so acute, and presented more typical symptoms.

One sheep received on Oct. 31, 1889, ¼ c. c. of fluid serum in the right hindquarter; the second sheep received ½ c. c. of a remnant of serum from the same tube of pure culture, diluted with an equal volume of sterilized water. Both animals were well nourished, as I had kept them in

the stalls for several weeks. Up to Nov. 5 they showed no morbid symptoms. On the morning of Nov. 6 the first animal was seized with typical tetanus. The animal laid on the floor on his left side, the legs standing out stiffly from one another. The stiffness was so marked that the hoof of the foreleg, when flexed with the hands on the carpus, immediately sprung back to the stiffened position when released; but the hind legs could not be bent at all. Extreme opisthotonos set in; touching him caused him to draw himself together; trismus was fully developed; but, as usual, there was no fever. (Temperature, 38.4 deg.) Death took place on the morning of Jan. 7.

The second sheep appeared on the morning of Nov. 6 somewhat more timid than before, and had a stiff gait together with a rigid position of the head. In the afternoon he laid in the stall just as the other one had done. His pitiable condition lasted through Nov. 7 and 8, on which days he laid in such advanced opisthotonos and general muscular contraction that the animal could be lifted like a piece of wood, when one placed a hand back of the head and tried to bend it forward (just as a man's whole body can be raised from the floor by lifting the head, when he makes his body rigid). The sheep spread his legs in such a sawbuck fashion, that they could not, as in comatose animals, lie down relaxed on the straw, but stretched out in the air stiffly, and the body could be turned by pushing the legs, like a frozen body or a cadaver with *rigor mortis*. (In order to prevent hypostatic congestion, the body was frequently so turned.) When one leg was lightly touched, all four legs became convulsed. The jaws could not be separated at all. The contraction of the muscles of the limbs was so great that the toes (hoofs) were flexed and resembled a finger with the terminal phalanx flexed. The temperature in the rectum varied between 38.1 and 38.9 deg. Cent. In the afternoon of Nov. 8, the animal died asphyxiated. At the autopsy, neither of the animals showed more than some œdema and small ecchymoses

at the point of inoculation; death was caused by œdema and congestion of the lungs.

Of three doves, which I inoculated with a pure culture, two remained alive, and on these only a loopful was applied to denuded skin; the third received, on Jan. 8, 1890, ⅛ c. c. with the syringe into the pectoral muscle. This last one fell sick on Jan. 10; she could neither walk nor fly. She laid stretched on her belly, and extended her wings, trembled much, drew her legs in convulsively, drew the tail and rump toward the abdomen, the head and neck were actively moved. During the night of Nov. 10 she died. The point of inoculation on the cadaver was somewhat swollen, the subcutaneous areolar tissue infiltrated with serum, and stained yellow; this serum contained only tetanus-bacilli, some bearing spores; the blood, etc., were free from bacilli; the internal organs were normal.

The demonstration of *the tetanogenic action of the wound secretion from nail injuries of horses* has been made by me in four other instances, of which mention is made in the general collection referred to above. According to a series of other experiments with earth and pure cultures obtained from the soil by heating, there appears to be very little differences in point of virulence, which must be due to the heating or the origin of the material, and which are accompanied by certain slight modifications of the growth in gelatine (for example, formation of threads or bundles forty mmm. long, partially oblong spores, whetstone forms, in which both spore poles of the cell body are colorizable). Possibly the last may depend upon the composition of the gelatine and the then existing temperature of the room. Earth-tetanus (soil-tetanus) produces in mice just the same symptoms as that caused by matter obtained from a horse, but a larger quantity of material is required to produce the same effect.

From the experiments above described, it follows that the *traumatic infectious tetanus of the horse is caused by bacilli which resemble the bacilli of human tetanus and*

soil-tetanus described by Nikolaier, Kitasato, Buchner, and others; that it is possible to obtain pure cultures without heating when the primary material is not too seriously contaminated with various bacteria, and Dr. Buchner's admirable method of cultivating anaërobes is employed; further, that dried pus, which contains spore-bearing tetanus-bacilli, retains its virulence for four or sixteen months, and at first seems to be a transfer of pure cultures to the horse, sheep, and dog, resulting in a typical attack of tetanus.

Hospital Reports and Clinical Notes.

DEATH FROM CHLOROFORM.

[Service of Dr. Sam'l Logan. Reported by Wm. Elliott Parker, R. S. C. H.]

The patient was a man, laborer, aged 41 years, a native of Ireland. He was admitted to Ward 7, Nov. 18, 1889. He gave the following history: He had never had syphilis; no hereditary history. His tongue commenced to swell about a year ago, and has been ulcerated for about six months; the ulcer extending from the tip of the tongue downward to the floor of the mouth, and being about the size of half a dollar. The cervical glands were enlarged. There were fetor of the breath and marked salivation. The swelling was thought to be an epithelioma, and at the time an operation was refused; but the patient was anxious for an operation, and it was decided to operate. He had been a hard drinker for many years.

The patient was taken to the amphitheatre and put under the influence of chloroform. The chloroform was administered by one of the internes, under the supervision of Dr. Logan. He took it badly from the start. The glands were first removed, and then the submental incision was made. The diseased tissues had been dissected up, and the écraseur applied around the tongue, when the patient became very much cyanosed and ceased breathing.

His head was lowered and his feet raised, and artificial respiration performed. He was given six hypodermic injections of 1-150th grain of sulphate of atropia. His pulse could be felt for a time after the breathing had ceased. His heart, lungs, and kidneys were in good condition, as shown by examination after his admission into the hospital. It was learned on the morning of the operation that the patient had gone on a spree the day before, having left the hospital under pretext of seeing his relatives.

At the autopsy all the organs were seen to be normal, except the right lung, in which there were a few calcified masses (tubercles). There was no blood in the trachea.

The man had taken about two and a half ounces of chloroform, and death occurred about three-quarters of an hour after he began to inhale it. His respiration seemed to fail gradually, at one time stopping, but commencing again after artificial respiration. He did not take any chloroform after the first symptoms showed themselves.

A CASE OF COMPOUND COMMINUTED DEPRESSED FRACTURE OF SKULL, COMPLICATED WITH FRACTURE OF PETROUS PORTION OF TEMPORAL BONE—RECOVERY.

[Reported by E. A. Robin, R. S. Service of Prof. Samuel Logan, M. D.]

Jas. Johnson (colored) laborer, is a native and resident of Mississippi. Gives no history of syphilis or of any inherited disease. While cutting down a tree in Plaquemines parish it fell on his head, fixing him to the ground, where he was found a few hours later in an unconscious condition. Was sent immediately to the hospital, where he was examined by the house surgeon, who found a compound comminuted and depressed fracture of the vault of the cranium, complicated with a simple fracture of the petrous portion of the temporal bone. Patient was in a comatose condition; he was found to be suffering from right hemiplegia, the injury being situated on the left side of the skull over the fissure of Rolando. The fragments of bone were overriding and a V-shaped piece forced through

the membranes, causing protusion of cerebral matter through the wound. There was considerable bleeding, apparently coming from the posterior temporal. After cleansing the wound and arresting hemorrhage, the house surgeon removed the small piece of bone which had been driven into the brain, and afterward raised the depressed fragments, placing them on the same plane and sutured the wound under strict antiseptic precautions, drainage being secured with a small sized drainage tube. The symptoms indicative of fracture at the base—namely, bleeding from the ear followed by escape of cerebro-spinal fluid—lasted for two days after the operation, when they gradually disappeared. On day following operation patient could move his right leg and thigh, but his right arm was still completely paralyzed.

On the third day, the oozing which had taken place from the wound called for a change of dressings. He was taken to the amphitheatre where this was done under antiseptic precautions. The wound was clean, healthy, and not a drop of pus to be found. Drainage tube removed. Washed carefully with the acid sublimate solution 1 to 2,000 and dressed antiseptically as before. Patient's temperature chart showed no rise above 99 deg. F. during his entire stay in the hospital. Dressings were not removed until one week later, when the entire length of the wound was found to have healed. Patient, though still unconscious, was now noticed to adduct the arm, but could perform no other movement. Gradually motion in his arm grew better, so that when discharged patient could perform the six kinds of movement without any difficulty.

The medical treatment consisted of the following: Patient's bowels were kept open by the daily administration of a dessertspoonful of sulphate of magnesium, and he was given every four hours a tablespoonful of the following, viz.:

℞. Potassii Bromidi ..... ℥iv.
Ext. Ergotæ Fl..... ℥vj.
Syr. Simplicis..... ℥ij.
Aquæ q. s. ad..... ℥vj.
M. S.—As directed above.

On twelfth day patient was noticed to show signs of intelligence, and on questioning him he made efforts to speak, but was unable. It was then, for the first time, that our attention became attracted to the fact that he was suffering from aphasia. For a few days afterward the only word he was heard to utter was "yes." On Feb. 15th, patient for the first time spoke in a plain manner, and requested that he be allowed to leave his bed. This was granted him, and patient was discharged from the hospital Feb. 24, 1890, thoroughly cured.

This case is interesting from several points of view. It is one of the worst cases I have ever seen of this class of injuries, from which recovery so seldom occurs that they are usually regarded at first sight as hopeless and left to fare as such. This case demonstrates that no case should be despaired of before all that antisepsis and surgical assistance can effect.

CORRESPONDENCE.

VIENNA LETTER.

[Our Regular Correspondent.]

A CASE OF CONGENITAL STENOSIS OF THE AORTA.

At a recent meeting of the Vienna Medizinisches Doctorien Collegium, Dr. C. Hochsinger showed a case of congenital stenosis of the aorta. The patient was a boy, aged 6 years, and the following symptoms were found: A diastolic murmur was heard all over the chest, and particularly toward the lower part of the sternum. The left ventricle of the heart was hypertrophied, and the apex of the heart was deep and directed outward. In the region of the "jugulum" a strong pulsation was felt, which pointed to an enlargement of the arch of the aorta.

The stenosis could not thus be in the orifice of the aorta. A murmur was, moreover, heard over the carotid arteries, and it became thus evident that the stenosis had to be

located at a place where the duct of Botallus made its entrance into the aorta and where the most frequent congenital stenosis were met with. The symptoms were first noticed in the very first weeks of the life of the boy.

The prognosis in this case was not so favorable as in similar cases, as the left ventricle already showed considerable hypertrophy.

THE REMOVAL OF FOREIGN BODIES FROM THE TYMPANIC CAVITY BY THE DETACHMENT OF THE CONCHA AURIS.

At a recent meeting of the Society of German Physicians, of Prague, Prof. Zaufal read an interesting paper on this subject. The lecturer first discussed the mechanism as to how foreign bodies reached the tympanic cavity, and then tried to answer the question as to when such foreign bodies should be removed by means of the detachment of the concha auris, or by chiseling the posterior wall of the auditory canal. Prof. Zaufal neither shared the opinion of those who believed that in the case in which the foreign body could not be conveniently removed through the external auditory meatus one had to wait until the conditions were more favorable, and not to perform an operation until there was imminent danger of death; nor did the author admit of the opinions of those who said that each foreign body which reached the tympanic cavity should at once be removed, even by the means of the detachment of the concha auris.

If there were dangerous symptoms an operation should at once be resorted to, and the same had to be done when there was no doubt that the foreign body, owing to its properties (size, form—for instance, cherry stones, glass-beads, stones, etc.), could not be removed through the external auditory meatus. The same was the case when the patient could not be under continual observation of the aural surgeon. As to the other cases, Prof. Zaufal pleaded in favor of the method of expectation until the diagnosis became quite certain, and the mechanical conditions

favorable for an operation through the external auditory meatus. The patient's temperature had to be ascertained each day, and the ophthalmoscopic examination to be made frequently. As to the latter, Prof. Zaufal laid much stress on it, just as in the case of indication for trephining the mastoid process in otitis media. The lecturer, owing to his vast experience, arrived at the following conclusions: If the fundus oculi, in the commencement of the observation of the patient (otitis, foreign body) be normal, and hyperæmic appearances were observed on repeated examination of the fundus; if the hyperæmic symptoms increased or there were other symptoms of a beginning neuroretinitis, and no other explanation of these symptoms could be given than the suppuration in the ear, operation should at once be resorted to (trephining or removal of the foreign body by detachment of the concha auris). The complete development of the neuroretinitis or the congestion of the papilla oculi should not be waited for, but one had to operate when an increase of the neuroretinal hyperæmia had been ascertained.

The lecturer now mentioned some interesting cases from his own experience. On the 20th of last October a boy, aged 5 years, was admitted into his clinic, owing to a foreign body in the tympanic cavity. A small stone had been introduced into the boy's ear during his sleep. The attempts at extraction by the attending physician were fruitless. The auditory canal was much excoriated, and its layers much swollen, so that no clear view of it could be obtained. There was profuse purulent secretion, and the bacteriological examination could only prove the presence of the "streptococcus pyogenes" and the "staphylococcus pyogenes albus." The ophthalmoscopic examination which had been made at Prof. Sattler's clinic was normal. Temperature also normal. On sounding, a hard and smooth body was felt, but the feeling was quite the same as that of a promontory of bone denuded of its mucous membrane. Sounding was also

performed in such a way that the sound was brought into connection with the otoscope for examining at the same time, the touching and the hearing sense. They could, nevertheless, obtain the conviction that a stone was present.

The temperature was taken each day, the "fundus oculi" was repeatedly examined, and Eustachian tube frequently washed. The tumefaction of the cutis of the auditory duct showed a gradual decrease, and the formation of prolificating granulations took place, as it were, under the eyes of Prof. Zaufal. The last symptom was considered by the lecturer as a sign that they had to deal with a foreign body, and operation was resorted to on the 11th of November. A horizontal section of the skin was made two centimetres above the aural concha, as far as the middle of the root of the mastoid process, and, perpendicular to this section, another section was made through the cutis and the periosteum, starting from the top of the mastoid process and reaching as far as the posterior margin of the first section. The triangular lobe thus formed was now detached from the aponeurosis of the temporal muscle as far as the zygomatic process. The periosteum, together with the concha auris, and the layers of the posterior wall of the osseus auditory canal as far as the membrana tympani, were then detached; the cutis of the auditory canal was cut through at the spot where the osseous and cartilaginous parts of the auditory canal become connected with each other. The rests of the cutis of the posterior wall of the osseous auditory canal were removed. After stopping the hemorrhage, masses of granulations became visible in the deep layers of the osseous part of the external auditory meatus, and the tympanic cavity, which were removed by means of the sharp spoon. The foreign body, which lay in the posterior part of the tympanic cavity, was thus laid bare, and removed by means of the forceps of Mathieu. It was a smooth flint stone, which was so large, and formed in such a way, that

it would not at all have been possible to remove it through the external auditory apparatus by means of instruments. (The stone was exhibited.) Eight sutures were applied, and drainage of the lower angle of the wound was performed. Up to the present date there was perfect healing of the wound, except the lower angle. The mucous secretion from the tympanic cavity was slight.

In order to illustrate the importance of the ophthalmoscopic examinations in the case of foreign bodies of the tympanic cavity, Prof. Zaufal cited the following case: A boy, aged 6 years, introduced a metal shirt button into his ear which, at the attempts at extraction, was, in part, pushed through the membrana tympani. At the time of the patient's admission into Prof. Zaufal's clinic, the button lay in the "sinus" of the external auditory meatus, and there was slight purulent secretion. Tremors of perforation could be heard, when the "air douche" ("Luftdouche") of Politzer was used. No pains. Sense of hearing much impaired. Careful attempts at extraction had repeatedly been made, but without success. Ophthalmoscopic examination, at Prof. Sattler's clinic, proved normal conditions at the time of the patient's admission into the hospital. Temperature, normal. On the 19th, the ophthalmoscopic examinations revealed the following conditions: Slight intergrowth of the margins of the papillæ, increase of the venous hyperæmia, and a temperature of 37.9 deg. C. On the same day the patient was put under the influence of chloroform, and the foreign body was removed by means of Prof. Zaufal's instrument. On the third day after operation, the ophthalmoscopic examinations showed quite normal conditions. No hyperæmic papillæ; the margins of the papillæ were quite sharply limited. The appearances, in the "fundus oculi," in this case were really dependent on the presence of the foreign body; this fact was proved in this case almost with the certainty of an experiment. The foreign body was a shirt button, which possessed a round head and a pe-

dicle one centimetre in length; the pedicle had penetrated the membrana tympani.

TUBAL PREGNANCY WITH HÆMATOSALPINX.

At a recent meeting of the Obstetrico-Gynæcological Society, of Vienna, Prof. Gustavus Braun reported on an interesting case of tubal pregnancy with hæmatosalpinx. A woman, aged 30 years, who had been twice confined, complained of severe pains in the abdomen, and stated that she was suffering from severe hemorrhages which were usually interrupted by certain free intervals, and occasionally also by intervals of six weeks' duration. As no certain conclusions could be derived from the patient's statements, and the vaginal examinations revealed the presence of a rather soft swelling, of about the size of a lemon, in Douglas's pouch, they doubted whether they had to deal with pyosalpinx, hæmatocele, or tubal pregnancy. Laporatomy was resorted to. After opening the abdominal cavity, the "fundus uteri" was pushed into the lower angle of the wound, and the left oviduct, which represented a large cyst-like swelling, became visible. Upon attempting to bring the extended oviduct into the abdominal wound a rupture of the tubarian sac occurred suddenly. The largest part of the sac was now immediately extirpated, and care was taken not to injure the oviduct and the broad ligaments.

After removing the blood clots, six metres of iodoform gauze, were introduced into Douglas's pouch, and the hemorrhage was thus stopped. The ends of the gauze were extracted through the lower angle of the abdominal wound, and the abdominal wound was closed, and the typical dress applied. Only in the first three days after operation the temperature reached 38.7 deg. C., and from that time it only amounted to 37.5 deg. C., and from the eighth day after operation when the ends of the iodoform gauze were removed, the temperature was invariably under 37 deg. C.

When the ends of the iodoform gauze strips were removed, half a litre of a sanguinolent fluid escaped. The present condition of the patient, three weeks after operation, is good.

BACTERIOLOGICAL AND ANATOMO-PATHOLOGICAL INVESTIGATIONS ON THE INFLUENZA AND ITS COMPLICATIONS.

At a recent meeting of the Imperial Royal Society of Physicians, of Vienna, Prof. Weichselbaum read a paper on his bacteriological and anatomo-pathological investigations bearing on the subject of the influenza. The blood and the catarrhal secretions from the bronchi, in the living subject, and the morbid products found at the post mortem examinations of patients who had succumbed to the epidemic, were examined. The examination of the blood, though large quantities of blood obtained by artificial arterial bleeding were availed of, microscopically as well as by cultures, showed a negative result. The sputum was examined in fifteen cases of uncomplicated influenza, in one case of broncho-pneumonia, and in two cases of croupous pneumonia, hence in eighteen cases altogether.

As to the sputum, a capsulated coccus was invariably, and in a great number, observed in it; according to the results of culture and animal experiments the coccus proved to be the diplococcus of pneumonia. With reference to the virulence of these capsulated cocci, it had to be remarked that they manifested that degree of virulence which was proper to the diplococcus of pneumonia only in the third part of the respective cases. In six cases of influenza the examination was also made in the later stages of the disease, and it became evident that the number of the pneumonia cocci had decreased, and the virulence of the cultivated cocci had become less. Prof. Weichselbaum could, on no single occasion, discover the bacillus of pneumonia of Friedlander.

Prof. Weichselbaum, moreover, mentioned a case which had a particular interest, viz.: The case of a girl who had

suffered from influenza, and in the course of which much albumen was found to be present in the urine. When the sediment of this urine was examined, the "diplococcus pneumoniæ" was detected in it microscopically as well as in cultures. This case was so much the more interesting as it was the first in which the diplococcus of the pneumonia was found in the urine.

The number of the respective post mortem examinations amounted to ten, of which some showed certain complications. Prof. Weichselbaum wished to emphasize that the accessory cavities of the face, viz., the maxillary and frontal cavities were very frequently the seats of inflammation; much pus was invariably detected in them. The diplococcus of pneumonia was always found in this pus, and it even manifested unusual virulence. Also in three cases of "otitis media," which had occurred as a kind of complication of the influenza, Prof. Weichselbaum was able to cultivate the diplococcus of pneumonia; the streptococcus pyogenes and staphylococcus pyogenes aureus were found on only one occasion, each in the accessory cavities of the face.

Taking into account the results of all his investigations, Prof. Weichselbaum arrives at the following conclusions:

1. Either the pneumococcus is the real cause of the influenza; or 2, the influenza is produced by another hitherto unknown micro-organism, and the pneumococcus only gave origin to a secondary infection. Both these opinions could be justified. As to the first opinion, it could be justified by the fact that the pneumococcus was to be found in all the cases of influenza; furthermore, that it could also be met with already in the beginning of the disease, whereas the pneumococcus became more and more rare as the disease was progressing. With reference to the opinion that the pneumococcus only played a secondary part, Prof. Weichselbaum cited the cases of measles and scarlet fever in which the staphylococcus pyogenes aureus and the streptococcus pyogenes were found constant-

ly without being able to attribute to them any other part than that of a secondary infection. The diplococcus of pneumonia could find a favorable soil for development in the case of influenza, and, therefore, it spread very rapidly.

Prof. Weichselbaum is of the opinion that the diplococcus of pneumonia rather plays a secondary part in influenza.

NINTH CONGRESS FOR INTERNAL MEDICINE AT VIENNA.

The Ninth Congress for Internal Medicine will be held in Vienna (instead of Wiesbaden), from the 15th to the 18th of April of this year, under the presidency of Prof. Nothnagel, of Vienna.

Vienna, March 28, 1890.

Proceedings of Societies.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Special Meeting, Feb. 19, 1890, W. S. Foster, M. D., President, in the Chair.

TRACHEOTOMY FOR FOREIGN BODY.

Dr. Murdoch: A little boy was brought to the West Penn Hospital recently, who, five days before, was lying on his back with a grain of corn in his mouth; he took a violent paroxysm of laughter, suddenly gave a very long inspiration, and immediately was seized with a paroxysm of coughing and strangling. The parents, who knew that the boy had the corn in his mouth, surmised it had gone "the wrong way" and into his windpipe, and commenced, as is customary with people in such cases, to slap him on his back, and, not succeeding in relieving his paroxysms of coughing, they sought assistance from their family physician, who came and gave the child an emetic; the child vomited profusely but was not relieved. He continued to cough, had violent paroxyms that night and all the following day, and then still further relief was sought, and every

effort was made to dislodge this grain of corn from the windpipe. The child was inverted, shaken, and slapped violently on the back; still other emetics were given, but no relief came, and the father brought the little fellow to the hospital. He then presented every appearance of a child suffering from œdema of the lungs. The skin of the face was livid. The child was evidently in great distress, breathing with considerable difficulty, and every few moments he would be taken with violent paroxysms of coughing. On examination of his chest I was unable to detect any abnormality in either lung by auscultation or percussion. But from the history of the case, and from the other symptoms, I thought we were warranted in opening the windpipe. Before putting the child under an anæsthetic I inverted him and shook him, but the corn was not dislodged from its position. He was then anæsthetized with chloroform, and that procedure was repeated without good effect.

An incision was then made into the trachea; the second, third, and fourth rings of the trachea were divided, and when the forceps were introduced into the trachea, the child gave a violent inspiration and then a violent expiration and at once the corn came up from below and appeared at the opening. I made an effort to grasp it with the forceps, but failed, and it went back into the trachea. Then by introducing a pair of narrow-bladed forceps to try to get the corn, the irritation of the forceps seemed to excite another paroxysm of coughing; the boy made another inspiration and after it an expiration, and the corn was thrown away across the room, lodging some eight or ten feet from the boy. It was picked up and found to be a very large grain. It must have been three-fourths of an inch in length by half an inch wide and a fourth of an inch thick, and it was it in a swollen condition, and evidently had it remained much longer in the boy, it would have commenced to germinate. The case demonstrates the value of the operation of tracheotomy. I believe that if this body had been larger and more spherical, it would have probably lodged in the larynx That is the usual way children choke. If it is a spherical body, or a body like a piece of meat, it will be impacted in the larynx, and unless the child is relieved at once he necessarily perishes. When the body is angular, as a grain of corn, if lodged in the larynx, sufficient air can pass to sustain life. In all cases we are not so successful

as I was in this one. Frequently, when the windpipe is opened, the surgeon is unable to get the foreign body. It may be impacted in one of the bronchial tubes, and even if it does not escape at the time of the operation, the chances of its escaping from an opening in the trachea are much greater than they would be for it to escape through the larynx.

DEAFNESS WITHOUT APPARENT LESION.

Dr. Allyn: A man in a mill was assisting a man much larger than himself at a roll; a link of a chain swung around and struck the larger man, breaking his nose and crushing his face, but simply pushing the smaller man to one side. This man showed no symptoms of prostration and presented all the appearances of being uninjured with the one exception that, as he was taken up, he was absolutely deaf to all noises. Going over all the points, I failed to elicit one point further than the fact that he could not hear. He had no aphasia; there was no paralysis of any of the muscles of the body, of the eyes, or face. There was no paralysis of taste. The ear drums were intact, the membranes being perfectly translucent and of the proper color, and no hemorrhage known in the case at any time. It possesses the simple fact of there being absolute deafness in both ears, caused by merely being knocked over and falling on the side of his head. I do not know what progress the case will make; it is of recent origin.

TREATMENT OF COMPOUND FRACTURES INVOLVING JOINTS.

Dr. McCann: I would like to talk about the treatment of compound factures involving the joints, such as are attended by more or less destruction, not only of the bony tissues, but also of the soft parts in the vicinity of the injury. Such injuries result commonly, as they have fallen under my observation, from two causes: first, accidents which happen to brakemen in coupling cars in which the elbow is caught between the "drawheads" or "deadwoods" of a pair of cars. In putting in the link to make the coupling or attempting to drop the pin, the elbow is caught directly between either the drawheads or the deadwoods. The result of this is an extensive fracture, involving the elbow joint with extensive laceration and bruising of the soft tissues.

The second form of accident is that which involves the ankle joint, and in which the foot is caught either beneath

the wheel or pinched by the brake block. In one case, still under my care, the man fell between the trucks, his foot falling so that not the crown of the wheel, but the flange passed across the outer and dorsal surface of the foot, opening the ankle joint, but not cutting through the tendo Achillis, though tearing the skin as far as the inner edge of that tendon. In another case, the accident involved the limb a little higher up, also opening the joint and crushing the astragalus. In the past, efforts to save such limbs usually resulted in a secondary amputation or in the death of the patient. The method of treament is certainly a very important element in the history of these cases. Under the old regime, the treatment usually adopted consisted in a sort of perfunctory cleansing of the wound, the application of carbolized oil or carbolic solution; the limb was placed in the position deemed most favorable in the eyes of the surgeon, and the reparative powers of nature were trusted to either cure the foot or to demonstrate the utter impossibility of saving it, if the patient did not die in the effort to find out whether his foot should be cut off. Within the past few years this has been modified, and the practice now (and I presume it is so all over the world) is to be guided by the extent of the injury. If the blood vsssels and nerves are not involved, even if the bones be extensively crushed, an effort should be made to save the part, and this effort is comparatively simple, or rather the principles upon which it should be carried out are simple. First, cleanse the wound thoroughly, remove everything, fragments of bone, of devitalized skin, of wood or iron, everything foreign or liable to be septic. Then the limb should be thoroughly dressed antiseptically after being carefully washed in some solution, and the one I resort to is bichloride of mercury, 1 to 1,000 or 1 to 2,000; the limb is then carefully put up in an antiseptic dressing, carefully but loosely applied so as not to constrict but to protect the wound. If there is any tendency for the tissues to fall into such a shape that there will be pockets, I have no hesitancy in making counter openings and introducing whatever number of drainage tubes may be necessary to secure proper discharge for the wound secretions. Now, having done this, the limb is placed on a splint, care being taken that there is no constriction of any part, that there is no tight bandage, no application which can in any way interfere with the arterial circulation or obstruct

the return or venous circulation. The limb is elevated so as to favor the return circulation, and then dry heat is applied externally to all the dressings. The first dressings should be of sublimated or iodoformed gauze; borated or carbolated cotton is also applied simply to protect the wound by placing around it a sufficient amount of asorbent material to exert a very moderate degree of elastic compression and to prevent constriction. Now, under this treatment you will either discover at the end of twenty-four hours that your limb is saved or absolutely lost, and in the meantime you have protected your patient in the event of gangrene attacking the limb as a result of the traumatism. You have protected your patient against sepsis; and even if gangrene does occur, it does not spread with the rapidity it invariably assumes when the wound becomes septic. You have nothing to fear from the occurrence of that acute, spreading gangrene, the "gangrene of inflammatory sepsis" which has been the curse of surgery in the past. Usually at the end of twenty-four hours the first dressing should be changed, and it has been my habit again to cleanse the wound thoroughly to pass a stream of some antiseptic fluid, usually the 1-2000 bichloride solution, through the drainage tubes. Usually you will find one or two of them filled with coagulated blood. This should be removed, and if the opening is large enough it need not be replaced. The second dressing should be applied just as the first. After this second dressing, it is usually unnecessary to replace the dressing for seventy-two hours or longer. A finger or toe should always be left uncovered, by which you can ascertain the condition of the extremities. If the toes or fingers continue warm when you expose them, and the capillary circulation perfect, you have nothing to fear. Now, under this treatment, if infection does not occur, the wound surfaces are not irritated by septic material. Suppuration does not occur. The discharges which flow from the wound are trifling in amount. The wound itself is comparatively painless. If there be dead portions, and usually there are, dead fragments of bone, dead shreds of skin or of bruised muscle remaining in the wound, of course, they are foreign bodies; but the process of separation between the dead portion and the living goes on kindly and without suppuration. Without going further into the details of treatment, I may state that this plan should be carried on until the whole surface

of the wound is cicatrized. The dressing does not require changing more than once in four or five days. Now, to close this matter, I may state that of all the cases I have treated, five have involved the ankle joint, two of them were complicated by fracture of leg bones, one of them with the splitting of the tibia for eight inches. In all, the joint was widely laid open, extensive damage had been inflicted upon the bones with great laceration and contusion of the foot and of the tissues around the ankle. In another instance, one in which the foot was caught under the flange of the wheel by the patient falling between the trucks, the flange traveled up along the outer surface of the foot opening the ankle joint, crushing through the bones of the foot so that when the stitches which had been injudiciously applied were cut, the crushed portion of the foot dropped apart.

Now, under the method of treatment which I have advocated, thorough antiseptic cleansing, thorough draining, the use of loosely but thoroughly applied antiseptic dressings, this foot has been saved, and the man will soon be able to walk upon it.

Dr. Buchanan: I think the society is under an obligation to Dr. McCann for the practical and excellent manner in which he has laid down the rules for the treatment of these injuries. I believe the general principles he has enunciated are the accepted ideas on the subject, and they are very well established today; and for that reason I think we are disposed to take for granted that because Dr. McCann and certain other men who see a very great amount of railroad and other surgery, do adopt these rules of conduct, their adoption is universal. I think this is a mistake, and I think we can very profitably stop and repeat these rules as Dr. McCann has done for us this evening. The most unexpected results, I think, can frequently be achieved by careful, systematic and methodical repair of injuries. I exhibited to this society some time ago a case of complete excision of the ankle with excellent motion, in which there had been extensive laceration and crushing of the joint. Since that time I have attended another case in which the ankle, and indeed the whole posterior and middle part of the foot, were so crushed that I hardly felt justified in asking the man to allow me to attempt to save it, but the man was urgent in his desire and would not permit the subject of amputation to be discussed; he knew

the foot could be saved, and he gave me no option in the matter, and somewhat against my judgment I excised the ankle joint, put the foot together, and the result is that today the man walks very well with a cane, and will soon dispense with it. The astragalus, a portion of the os calcis, the lower extremities of the leg bones, and some pieces of the other tarsal bones, were lost. The lower end of the tibia was wired to the lower part of the os calcis, and the soft parts of the foot were stitched together and dressed, as Dr. McCann has so well described. The patient recovered without a bad symptom. The wire was removed some weeks afterward. I have also treated a case lately with Dr. Huselton and my father, in which there was a laceration of the tissues about the ankle joint, fractures of both malleoli, and complete disarticulation and projection of the leg bones, which plowed into the earth. This patient had his joint cleansed and articulated; the inner malleolus was fixed into place with a buried wire, and there was no reaction whatever; afterward the man made an uninterrupted recovery.

TRAUMATIC SECTION OF BOTH TENDONES ACHILLIS.

I have also recently treated a case of injury to one ankle joint, and to the leg on the opposite side, by a mowing machine. The man who subsequently became the patient stepped in front of the cutting bar of a mowing machine and struck the horses, the animals responded immediately; the cutting bar of the machine cut off the tendon Achillis, passed directly through the ankle, cutting off both malleoli, both posterior arteries, and the tendon of the posterior tibial muscle. On the other side the section was higher up; it passed through the tendon of Achillis and cut a piece of the tibia. Both the tendones Achillis were sewed with catgut, four stitches; the other stitches were put in place, and the usual antiseptic dressings applied without drainage. The man's wounds healed without any reaction or discharge whatever, and he walks well today without support. The union of the tendons was perfect. I think it is well to emphasize the fact that so long as there is circulation in a limb an effort should be made to save it, and I think also that such an effort will unsually be successful. In one particular only I would make some difference in the treatment from that laid down by Dr. McCann. I think that as time goes on I see less use for drainage tubes. When I first commenced to em-

ploy this treatment, I used a drain wherever I had a chance. There might have been some fluid, and there probably was some fluid blood running during the first twenty-four hours, but afterward it was coagulated; after the primary dressing of the wound, I never washed it out, and in three or four days removed the tube with the clot in it, and have never seen any reason to change that practice: but I can believe that drainage tubes are more used than is necessary, and that if we succeed with our antisepsis and apply proper pressure, we need not be afraid of any accumulation of fluid in a wound. I have also seen that if, in a soft cavity, there has been a serous accumulation because proper pressure has not been applied, such accumulation gives rise to no serious inconvenience, and when evacuated the walls of the cavity collapse and unite without further discharge. I would therefore think that, instead of endeavoring to use all the drainage tubes possible, I would limit them as a matter of convenience. The tube does no harm if properly used, but I think it is as usually applied unnecessary.

Dr. Huselton: In the main, I agree with Dr. McCann. I want to say that the amount of damage done to the skin in the case of a crush wound, is no criterion of the amount of damage done to the interior parts—bones, muscles, nerves, and vessels—and in accordance with my experience I think that where a hand, a wrist joint, an arm or an elbow joint, is caught between the bumpers of a car, the couplers, or the deadwoods, sufficiently to produce a fracture, even if not compound, the best thing to do is to take that limb off; if you do not, you will regret it, and have to do it afterward. I have had considerable experience with injured ankle joints in railroad accidents. One of them was produced by the flange of a wheel; the joint was open so that I could put my fingers in. This I dressed antiseptically, cleansing it of all foreign material, washed it out, put it up antiseptically with a splint, without a drainage tube. I do not use drainage tubes very often, and I think I shall use them less often hereafter. This man got well and left my care before he had perfect locomotion in the joint; it had entirely healed; there was considerable motion; he was making a pretty good stagger at walking. In another case in which the right limb was crushed from the knee to the ankle joint, the left ankle was open so you could see into it also. In this case

I amputated the right leg. I treated the ankle joint as in the case previously described, and the man today has a perfect ankle joint and a good wooden leg, and is walking around as well as any of us. I do not change the dressing so frequently as does Dr. McCann; sometimes do not remove the dressing for a week. I am governed entirely by the condition of the part and by the patient's condition as to temperature and pulse. If there are symptoms indicating the necessity of removing the dressing, I remove it, otherwise I leave it alone.

Dr. Rigg: I would like to say a word in reference to the class of wounds spoken of by the gentlemen who have preceded me. In 1882 I treated my first compound fracture of the elbow. It was caused by an accident to a young man at work in a coal mine; he fell in front of a wagon, his foot caught in a frog, throwing the wagon off the track, the wagon running over his arm and elbow joint about the middle third. The superficial veins were lacerated, the arteries intact. The bleeding was controlled with little trouble. Since it was my first case of the kind, I took two physicians with me when I went to see the case a second time. They insisted on amputation. I removed at that time, I think, a half dozen small pieces of bone; the young man insisted on leaving the arm as it was, believing there was a fairly good arm left. My plan was to treat it antiseptically, strictly so, and I placed it on an incline, put no tight dressings to it at all, and had my dressings laid in such a way that I could at my own pleasure remove a portion of them to see what was going on beneath. I might say that the shortening, as nearly as I could make it out, was three and a half inches. I continued on this plan of treatment, and I may say without drainage tubes, until the arm was well and there was fair motion. There was never perfect motion. The humerus was very much thickened by reason of the fragments of bone not being adjusted closely. As to drainage tubes, I have used few. The last two cases of amputation I had no drainage tubes were employed; they were amputations of the breast, and I believe them to be fairly good cases to test the value of a drainage tube, there being much surface made bare; and in both cases there was primary union throughout, something I have never seen where a drainage tube was used, and I feel that if the antiseptic treatment is followed out strictly, a drainage tube in the majority of cases is of little or no value, and oftentimes a little disadvantage.

Dr. McCann: I want to say a word in regard to two or three of the criticisms. In the first place, I do not think that because a limb, elbow, or wrist has been caught between a deadwood or drawhead it necessarily requires amputation. I can show any one who is curious enough to come to the West Penn Hospital instances where not only the bones were crushed, but the soft parts also, that were saved.

As to drainage tubes: I do not like to introduce a foreign substance into a wound—would rather get along without it if I could; but for a crush involving the tissue of the joint or the muscles there must necessarily be a large amount of fluid secretions.

Now, I do not care whether they are pent up underneath the skin without any access to air, they are likely to generate poisonous and irritating leucomaines, which cause local irritation and constitutional infection. We all know that before the days of antisepsis the tight closure of wounds was far less favorable in its results than the open method. Who can be sure when he closes his wound that he has rendered it aseptic? And if he has accomplished this, there may be floating in his patient's blood germs capable of infecting the wound.

Dr. Buchanan: There are two points on which I wish to speak. The first is the possibility of saving a limb that has been fairly and squarely caught between the bumpers, with fracture of the bones. I believe it can often be done, and I will cite a single instance. About six or eight months ago, I was called with my father to see a little girl whose arm had been caught between the bumpers of two freight cars; the arm was crushed, wholly crushed from the wrist to the elbow. The vessels were not injured, but there were multiple fractures of both bones and considerable pieces of bone had to be taken out. I think it safe to say more than half the muscular tissue was crushed off. The skin was entensively lacerated. The arm was shapeless. I do not think any injury could deserve the name of crush better than this one. It was so evidently a serious injury that her parents and friends and all persons who saw it thought the arm must be amputated. This arm was not amputated; it was thoroughly cleansed and put together, dressed with a straight splint; on no other kind of splint could the arm be kept in the semblance of an arm. It united without any suppuration, as is usual in such cases

when antiseptically dressed, and while the child has not a beautiful arm, nor a very straight arm, she has a hand and a wrist and an elbow joint that are almost as useful as before. Now, as to drainage tubes: I think it is hardly fair to bring up the surgery of ancient times to prove that the drainage tubes are good things. We will all admit that the essential object of a primary drain is to eliminate fluids which might become the breeding place for micro-organisms. And I am further satisfied that if we can exclude local infection of the wound we need have no fear of its infection through the general circulation.

Dr. Green: As I understand Dr. McCann in regard to drainage tubes, in applying an antiseptic dressing it is true, of course, that nobody can be positive that he leaves the wound without any danger of sepsis; I care not how carefully a wound may be washed, it is simply impossible to remove all the putrescible matter, a portion of it is bound to remain in the wound. It seems, therefore, the part of wisdom to provide means for its discharge.

Leading Articles.

A STATE BOARD OF MEDICAL EXAMINERS.

In accordance with our promise in the last issue of the Journal to mention matters calling for legislative action this spring, we have two subjects which are of such vital interest to the profession, that we shall, for the present, confine ourselves to these.

The first is a State Board of Medical Examiners.

A reference to the pages of Volume XVI will show that we made two suggestions in connection with this matter. One was that, as in England, where there is one, we establish in the United States four or perhaps five "colleges," similar to the College of Physicians and Surgeons of London, which alone shall have charge of the examination and licensing of graduates or students of the various medical schools of the country. Thus, a board appointed by the president from men recommended by the American Medical association would have charge of New York and the

contiguous states, and be known as the New York College. In the same manner there would be colleges in, say, Chicago, San Francisco, New Orleans, and Atlanta. These colleges should hold stated sessions, and *full* sessions, and no man be allowed to practice medicine or surgery unless he held a diploma from one or the other of these colleges. The only objection to a number of colleges is that the standard of the several boards might differ, but in such a large country one college could not possibly suffice.

Such an arrangement as this would, indeed, be cause for great rejoicing, but it is scarcely likely that it will be attained for years, if at all, so that we naturally look to something to take its place. And this is a State Board of Medical Examiners, a body more local in its influences, but none the less effective in the community where it operates.

It is not necessary to enlarge upon the usefulness of state examining boards. They have been too well tested in Virginia, North Carolina, and Alabama to admit of any doubt. The only question is whether there should be only one or more than one. We answer unhesitatingly, There should be one and one only. In Alabama each county has a board, and the result is almost as many standards as there are boards.

To quote from a former editorial, "we, therefore, would advocate one single State Board, composed of at least twelve members, and holding monthly, quarterly, or semi-annual (just as were required) meetings. We mean by the word *full* that all members should attend the stated or called meetings, and not simply send a list of questions to the president, who would thus alone be responsible for the results. Moreover, applicants should be subjected to written examinations upon the main, if not all the branches, and then examined orally by each member before the *full* board."

It is useless to talk of "raising the standard of medi-

cal education," of "elevating the profession," and other such chimeras, so long as the teaching and licensing functions reside in one and the same body. Too many schools strive for numbers of students only, and purchase them with lowered and lowering standard and fees and cheap diplomas. Any school which tries to act otherwise, or raises its requirements, soon finds its "usefulness," as measured by its attendance, rapidly diminishing.

If, then, a bill covering the points indicated in this editorial is brought before the Society, we hope it will meet with the hearty and unanimous endorsement which will gain for it the support and attention of the legislature necessary for its passage.

We would urge that the Society be especially careful in its recommendations concerning the manner of selection or appointment of the personnel of the Board, for, if it becomes a body changing with each administration, and built up as the result of much wire pulling and political scheming, then it were better that there be no Board at all. It appears to us that the Examiners should be recommended to the Governor by the Society from men of established reputation, and not necessarily connected with the Society thereof. Then, again, the position should be one for life, or for a very long period of time. If for a term less than life, then the terms of the individuals should differ, so that at no time would there be a Board composed completely of new men. These points are here mentioned that they may be well discussed and digested by the date of the meeting. At the meeting, however, a full bill will be presented, including these and other points, for the Society's approval or emendation.

The second matter meriting early legislative action is the present law compelling physicians to pay a license. In the first place, it does seem to us that physicians are the last persons in the state that should be called upon to pay such a tax. They labor to restore the wealthy man to health and productiveness, and for this they get a fee:

but they labor just as hard to restore the poor man (and the poor are always in the majority) to health and productiveness, but for this they get nothing—the state gets it all. And furthermore, no one can compute the number who, through the enforcing of the laws of hygiene by physicians, are kept, year in and year out, adding to the riches of the state. And the hospitals: who attend to those? and how much are they paid?

These grounds alone are, we think, sufficient to exempt physicians from the payment of license; but we truthfully represent ninety-nine medical men out of a hundred when we assert that they would willingly pay double the present onerous charge, if its payment presupposed and secured some little relief from the army of quacks and charlatans who prey upon the very life blood of the people and render it so hard for the honest physician to make his bread. It is strange, but none the less true, and has been since the beginning of time, that people fall so easily into the snares of the dishonest and unscrupulous.

The reputable physician with a diploma obtained by years of patient and hard study and at great expense, registers his diploma, pays his license, and then sits in his office starving, while the arrant quack with a $2.50 Philadelphia or Cincinnati bogus *diploma* (?) comes upon the scene with double column advertisements and flaming posters, laughs at the impotence of both tax collector and registrar, and proceeds to fill the stomachs of the deluded with his nostrums, the graveyard with their bodies, and his pockets with their money. This is no overdrawn picture. Go ask, if you will, the Board of Health, why it does not prosecute the violators of the law. You will be told that the law is such that no convictions can be obtained, and the State must pay the costs.

No fairminded person will contend that this is right. Give us some protection in our *business*, if so you call it, and like every other calling, where license means protection or carries protection with it, we will cheerfully pay our tax, and visit the poor free gratis besides.

THE ASSAULT ON VIVISECTION.

It is an exceedingly good trait in one's character to acknowledge and respect the rights of others; and it is an evidence of a well advanced humanity to recognize and insist on the rights of the lower animals. These dumb beasts are unable to plead their own cause, and none but a tender heart could demand for them a due amount of kind treatment. We honor the sympathetic members of the Society for the Prevention of Cruelty to Animals for the noble work they have done in ameliorating the condition of our domestic animals. But these pure-minded people are, after all, mere mortals, and, like the rest of their kind, they are apt to allow their devotion in a good cause to carry them to unwarranted and illogical lengths.

This unfortunate failing in human nature was made apparent in the action recently taken by the S. P. C. A. in having Dr. Benjamin Shimwell, of Philadelphia, arrested for performing a certain experiment upon a living dog; which experiment, the society claimed, was unnecessary and cruel, and violative of existing laws. Dr. Shimwell had operated on the animal before a class of medical students for the purpose of demonstrating a new modification of Senn's operation for wounds of the intestine. The dog was etherized, and after the operation was carefully attended. As far as the operation itself was concerned, it is not disputed that as much care was taken to spare the dog unnecessary pain and to save its life as with a human being; still the S. P. C. A. thought it proper to arrest Dr. Shimwell under an act which provides that if "any person who wantonly or cruelly ill treats, overloads, beats, or otherwise abuses any animal, whether belonging to himself or otherwise, shall be deemed guilty of a misdemeanor."

The prosecution summoned a large number of witnesses, among them Dr. Owen Wister and Dr. Garrettson, who acted as experts. Dr. Wister confessed that he was not an expert, but an ordinary physician, and acknowledged that vivisec-

tion was of value, but only when resorted to for the establishment of a fact, and not to demonstrate an operation that has already been performed. In the case in point, he would not say if any pain had been inflicted, because he knew nothing about the case. The S. P. C. A., before the trial ended, no doubt, prayed to be saved from its friends, for the two experts, on whom they placed most of their hopes, wrecked their cause beyond repair.

Dr. Garrettson, the second expert, was Dr. Shimwell's chief at the hospital; and in allowing his subordinate to perform the operation on the dog, was an accessory to the crime(?). In reply to the questions of the attorney for the defense, Dr. Garrettson, said: "If the operation was performed twenty times a day for the benefit of the students at a college, it would not be too much. Though," he added with a smile, "I would rather drop through the floor than say so, as I am opposed to the practice of vivisection." *(Medical News.)* Nothing more was needed to damn the cause of the S. P. C. A.

In commenting upon the "Legal Aspects of Vivisection," James M. Beck, Esq., attorney for the defense, says: "Applying the same principle [*i. e.*—the beneficial or useful end sought to be attained must be reasonably proportionate to the suffering caused] of these cases to vivisection, it may be safely affirmed that the distinction sought to be made in the Shimwell case between original research and class demonstration is untenable. If vivisection substantially adds to the ever growing fund of human knowledge (and who can question it?), or, if it enables the professor to demonstrate more thoroughly the value or danger of particular operations to his class, or, if the practitioner substantially adds to his dexterity and skill by its use, it is, on either of these grounds, legally justifiable, and is not 'cruelty' in the legal meaning of the word. If, to add to the pecuniary value of sows and other cattle, it be justifiable to mutilate them, how unjustifiable is a prosecution that seeks to bring within the pale of the criminal law a scientist who, for the good of his fellow men,

and with every precaution to spare the animal unnecessary pain, sacrificed it upon the high altar of science!" (*Medical News.*)

As might easily be predicted, the prosecution fell through. We hope that this rebuke to zeal gone wrong will not be without good fruit, but will cause a humane body of men and women to exercise their energies only in the circle to which they belong.

DR. A. W. DE ROALDES.

We take pleasure in chronicling the election of this gentleman to the chair of Diseases of the Ear, Nose, and Throat, in the New Orleans Polyclinic, made vacant by the resignation of Dr. Wm. C. Ayres. We are informed that Dr. de Roaldes will use the very abundant material afforded by the out-clinic of the City Eye, Ear, Nose, and Throat Free Hospital for the instruction of his classes. We also learn that a number of special tables, lights, etc., such as are found in every well equipped school of laryngology, sufficient to accommodate twelve or more members of the class at one time, have been provided for the use of the students.

While the Polyclinic lost a valuable instructor in Dr. Ayres, it is to be congratulated on having been so fortunate as fully to repair the loss.

ERROR.—MEETING OF THE LOUISIANA STATE MEDICAL SOCIETY.

We are under obligation to our worthy president, Dr. C. D. Owens, for calling our attention to a serious *lapsus plumæ* in the March issue. In article headed "The State Society," it was stated that the next meeting of the State Society would take place in April, 1890; whereas, the meeting will take place on the second Tuesday in May, 1890 (May 13). We trust this correction will come in time to prevent any embarrassment to the members of the State Society.

Abstracts, Extracts and Annotations.

MEDICINE.

ELECTRICITY IN A CASE OF FÆCAL IMPACTION—WITH NOTES ON SOLVENTS FOR FÆCES.

[By Guy Hinsdale, M. D., Assistant Physician to the Presbyterian Hospital, and to the Orthopædic Hospital and Infirmary for Nervous Diseases.]

In a case of constipation with periodic impaction that about eighteen months ago came under Dr. Weir Mitchell's care, such gratifying results were obtained that the following account of it may be of use to the profession:

The subject, a lady, about 50 years of age, for nearly fifteen years had been greatly annoyed by impactions of fæces. No very alarming symptoms had ever been brought on, and it was found that the hardened lumps would come away if the patient remained in bed several days. Many of these lumps showed evidences of having been weeks, and even months, in the intestine.

There seemed to be a particular place where these masses became lodged—side-tracked, as it were—for upon their final passage they could be readily distinguished from the accompanying excretion, the latter being comparatively soft.

A physician who had been previously consulted at one time introduced his hand and a portion of his forearm into the bowel, but did not discover any stricture. Dr. Mitchell considered the difficulty to be due to atony of the muscular coat of the intestine, and advised the use of electricity locally applied, and massage of the abdomen and of the body generally, In addition, the patient was to take a laxative pill and a tablespoonful of glycerin internally three times a day.

I had a special form of electrode made, consisting of a polished steel bougie, two inches long and five-eighths of an inch in diameter, with blunt convex extremities. This was screwed to a flexible copper rod, which was plated and insulated, and provided with a screw for attachment to a handle. This made an instrument, sixteen or seventeen inches long.

About eighty applications of the faradic current were

made, in which the instrument was usually introduced sixteen inches. As a rule, no great difficulty attended its passage, although it was not easy to pass the flexure of the rectum, especially if the fæces had collected, and it was generally possible to tell when the bulb passed by these lumps, which were lodged usually eight or nine inches from the anus.

Not the slightest injury was done to the intestine by the passage of the instrument. Sometimes flatus was forced backward along the bowel, causing momentary distress like colic, but otherwise no pain was experienced. A broad electrode, 6x5 inches, was applied at different places over the abdomen, and a moderately strong faradic current used for about half an hour daily. The internal electrode was withdrawn gradually, so as to influence directly the entire calibre of the bowel within its reach.

Injections of glycerin were tried without giving a satisfactory result; only mucus came away. Laxatives were abandoned later in the treatment of the case, and strychnine internally and hypodermically was resorted to, together with belladonna. Both Dr. Mitchell and the patient, however, were confident that the greatest improvement was made by the electricity, and at the end of treatment she found herself able to go about with freedom, without the least inconvenience from impactions, and is now in a better state of general health than for many years.

At Dr. Mitchell's suggestion, I made some experiments with the scybala passed from the bowel that I think are worth recording. Some of the smaller lumps of fæces, about ¾x½ inch, selected as nearly alike as possible, and in a state as when passed from the bowel, were put into several different fluids, to test the readiness with which they might soften, viz.:

I. Pure water. At the end of one week showed softening of the fæcal mass and discoloration of the water, the lump being at the bottom of the glass. In two weeks it was broken down and the water much discolored.

II. Pure glycerin. In one week no discoloration; the lump floated. In four weeks no perceptible change, excepting very faint discoloration of the fluid.

III. Aromatic sulphuric acid ʒj, water ʒvij. In one week considerable softening, great discoloration; lump sank; offensive. In two weeks great discoloration and softening.

IV. Cod liver oil. In three weeks little if any change. In ten months no change beyond slight hardening of the mass and diffusion of the coloring matter.

The following experiments were made with a large egg-shaped mass, which was squared so that its surfaces were perfectly fresh. It was then cut into sections, each about ¾ inch by ½ inch by ½ inch.

V. Pure water. On the first day the mass was at the bottom of the glass, and some tendency to discoloration and softening was noted. The softening was greater in one week. In two weeks it was crumbling, and fell to pieces on being disturbed.

VI. Lime water. In one day more softening and discoloration than in V. In one week it was quite soft, and in two weeks it crumbled, and on shaking was thoroughly disintegrated. This solution seemed to have the greatest softening action.

VII. Glycerin. In two weeks the lump seemed hardened. The color was diffused through the glycerin.

VIII. Tartaric acid, gr. v, water, ℥j. In the first day discoloration of the solution was noted. In two weeks the lump was still intact.

IX. Tartaric acid, gr. x, water, ℥j. In one day this showed the most discoloration of any of the fluids. No softening in two weeks; its shape was intact, but it could be disintegrated by pressure.

X. Glauber's salt, gr. xx, to f℥j of water. In one week the color was diffused and softening had commenced. After eighteen days the mass still retained its shape.

XI. Glauber's salt, gr. xl to f℥j of water. Result the same as in X.

XII. Rochelle salt, gr. xx to f℥j of water. In one week more softening than in X and XI. In eighteen days well disintegrated.

XIII. Rochelle salt, gr. xl to f℥j of water. Still more softening than in XII, and thoroughly disintegrated in eighteen days.

XIV. Soap solution, gr. xx to f℥j of water. Not so much disintegration as in XII and XIII.

XV. Soap solution, gr. xx to f℥ij of water. About the same result as in XIV.

The conclusion from these trials would seem to indicate

that an alkaline solution like lime water, or solution of Rochelle salt, would be most likely to soften scybala; that oils and glycerin harden them, and that a weak acid solution chiefly affects the coloring matter.—*Medical News.*

INTRA-TRACHEAL INJECTIONS OF CREASOTE OIL IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

From a theoretical point of view, the discovery of the cause of a disease is the first step toward its specific treatment; but, practically, this is far from being the case. The causes of the very few diseases for which we have specifics have been ascertained long after the latter had been universally employed. Such well known facts might have moderated the therapeutic expectations that were raised by Koch's discovery of the tubercle-bacillus, and doubtless did so in the minds of many thoughful men who had felt the irony of the maxim: *Sublata causa tollitar effectus.* The search for specifics, however, is still pursued; and the failure of one investigator seems only to incite another to greater and more daring activity. The latest example of this tendency is found in the treatment of pulmonary tuberculsosis by intra-tracheal injections, as pursued by Dor, of Lyons, and described in the *Revue de Médecine*, Nos. 10, 1889, and 2, 1890. This method is a modification of that employed by Beehag in the treatment of laryngeal phthisis. The latter, by means of a specially constructed syringe, injected mentholated oil into the larynx, whereas Dor, after slightly altering the instrument, injects creasote oil into the trachea, with the object of causing it to penetrate into the lung parenchyma. That this object may be thus accomplished is proved by experiments on animals, undertaken by Dor before the application of the treatment to man.

If a guinea-pig be killed immediately after the intra-tracheal injection of one cubic centimetre of creasote oil, the latter will be found to have reached the smaller bronchi, and after the lapse of from twelve to twenty-four hours numerous alveoli will be filled with the medicament, which may be found in the pulmonary parenchyma during the period of fifteen days.

In view of the tardiness with which creasote oil disappears from the lung tissue, Dor experimented with two other vehicles for creasote—vaselin and glycerin—but

found them both inferior to olive oil, the former giving rise to numerous hæmorrhagic extravasations, and the latter causing intense dyspnœa, marked symptoms of asphyxia, and, in some instances, hæmoptysis.

Dor's solution is composed of 5 grammes of pure creasote to 100 grammes of olive oil, sterilized by boiling, and the quantity injected varies from 0.50 to 2 cubic centimetres.

The immediate effect of the injection varies with the individual susceptibility, from paroxysms of cough to well marked laryngeal spasm. In one instance Dor performed intubation after the injection, although he says the demand for it was not urgent. Very soon after the injection all disagreeable sensations disappear, and a tolerance for them is soon established; so much so that some patients are said to continue talking until the moment of injection, resuming the thread of their discourse or completing an interrupted sentence immediately thereafter. One patient, after leaving the hospital, administered the injections to himself.

Dor characterizes the injection of medicinal substances into the lung tissue by puncturing the subclavicular tissues or the trachea as a barbarous proceeding, and in this we are inclined to agree with him. The criticism to which all intra-pulmonary injections are exposed is the absence of certainty as to their direction. With Dor's method there can be little doubt that the injected material must invade and occlude a certain number of sound alveoli, every one of which is needed for the function of the crippled lung. He endeavors, it is true, to direct the injection toward one side or the other by advising a left lateral decubitus when the left lung is affected, and *vice versa*, and no doubt with a certain amount of success.

This method of treatment has been followed systematically in twenty cases which, so far as their progress is concerned, may be divided into three classes: 1. Those exhibiting marked improvement. 2. Those whose improvement was slight. 3. Those whose condition remained the same or grew worse.

The first class numbered seven and the improvement was manifested principally by diminution or cessation of cough, and increase in weight. In these cases, with one exception, the treatment lasted more than fifty days, from three to ten grammes of pure creasote in from 60 to 200 cubic centimetres of oil having been injected.

The second class numbered eight, and was characterized by diminution of the expectoration, slight increase in weight, and reappearance of appetite. As a rule the cough persisted. The treatment in these cases lasted from seventeen to sixty-eight days.

Of the remaining five cases, the treatment was imperfectly carried out in three, and the remaining two were complicated with pleurisy.

Dor advises that the treatment be continued for at least one month, during which two cubic centimetres of creasote oil are injected twice daily. In cases with large vomicæ, he recommends the employment of a more powerful antiseptic than creasote, and suggests a solution of camphorated naphthol.

The results reported by Dor, although based upon a small number of cases, seem to warrant a further trial of this mode of treatment. The chief obstacle in its way is that it calls for a degree of manual skill possessed by few, and this fact may be used either as an argument for the reference of phthisical cases to the throat specialist or the cultivation of the use of the laryngoscope by the general practitioner.—*Medical News.*

ELECTRIC ILLUMINATION OF THE ANTRUM OF HIGHMORE.

At the International Congress of Otology and Laryngology, held at Paris, Dr. Heryng, of Warsaw, read a paper on "The Diagnosis of Empyema of the Antrum of Highmore by Means of the Electric Light, and the Treatment of this Affection and of Empyema of the Sphenoidal Sinus."

Dr. Heryng said that empyema of the maxillary sinus is an affection which, if not common, is more frequent than is generally believed, often passing unrecognized for a long time and possibly being confounded with empyema of the frontal sinus, ozena, or chronic purulent nasal catarrh. According to Heryng, the cause of the confounding of this affection with others is that in the majority of cases the symptoms are not well marked, and at times direct exploration, even with the stylet, does not suffice to establish the diagnosis.

After passing in review the works of different writers upon the means of diagnosticating this affection, and especially those of Ziem and Schmidt, he spoke more particularly of the exploration by transparency of the maxillary sinus by means of the electric light, recommended by Voltolini.

This procedure consists in introducing into the patient's mouth an Edison lamp, by means of which the jaws and the maxillary sinus are made translucent. In the normal condition, the transparence is complete. If there be pus in the antrum of Highmore, the light is not perceived, but, on the contrary, dark points are seen. Heryng says that Voltolini believed that he could diagnosticate cysts of the antrum by this method, but this can not be, since the cyst permits the light to pass through, whilst the points at which the cysts take root remain dark.

For the purpose of making the cost of instruments for diagnosis little, Dr. Heryng uses an Edison lamp of five volts, mounted at the end of a spatula. Heryng has evacuated the pus in seven cases by Cooper's method, and has tried to dilate the aperture either with the galvano-cautery or with an instrument concealed in a sheath, which he had had constructed, by means of which it is easier in certain cases to perforate the wall of the maxillary sinus through the inferior meatus of the nose.

In concluding, Dr. Heryng touched upon the difficulties of diagnosis in empyema of the sphenoidal sinus, the clinical symptoms of which—pain in the occiput, hemicrania, abundant periodical outflow, not fetid and unilateral—are not very clear and are inconstant. Heryng has operated on three cases according to Schaffer. After breaking the anterior plate of bone, he penetrated the sinus, evacuated the pus, the granulations and the remnants of small polyps, and cauterized the hypertrophied mucous membrane of the middle turbinated bone and of the septum with chronic acid or the galvano-cautery. Injections of salicylate of soda, and insufflations of iodoform and iodine completed the cure.

Dr. Cozzolino said that he desired to have it on record that he was the first to present a communication on the illumination of the nose and naso-pharynx by means of small Edison lamps; in the Congress at Brussels, in September, 1888, he exhibited these lamps and demonstrated the advantages of his new method of exploring the naso-pharynx and above all the posterior nares, both for diagnostic purposes and for the application of medicines to the nasal cavity. Cozzolini called this procedure "Anterior rhino-tubo-pharyngoscopy with posterior electric illumination."—*Revista de Laringologia, Otologia y Rinologia.*

TREATMENT OF EPILEPSY—CHOREA*

By E. C. Seguin, M. D.

Whilst a knowledge of general therapeutics is easily obtained from text-books and didactic lectures, the practitioner must have recourse for information, as to the therapeutics of special diseases, to the medical journals of the day, new works, and special lectures. In this field of special therapeutics caution must be exercised, for so much of the knowledge is premature, so much of the material raw, so many of the remedies simply due to turns of the wheel of fashion. Diligent search should always be made for the unsuccessful cases. Time and repeated tests will settle the status of any new remedy.

In epilepsy, when due to encephalic, peripheral or toxæmic causes, treatment must be directed to the cause of the condition, not to the condition itself. Under the name of idiopathic epilepsy are included cases in which there is no gross lesion or toxic condition. Such idiopathic cases demand treatment of the condition. It must be remembered, however, that many cases, seemingly idiopathic, are eventually found associated with a gross lesion. This lesion may have been the starting point of the disease, or may have been inter-current. The wife of a physician, who had been declared the subject of idiopathic epilepsy by such a competent observer as Brown-Sequard, has come under my observation. She had for ten years attacks of both grand and *petit mal*. Suddenly the attacks increased in frequency and severity, and death resulted. Autopsy showed a glioma, which, doubtless, had been present since the primary epileptic manifestations; at first growing slowly, and then more rapidly.

Heredity predisposed to epilepsy. Alcoholic excess, sexual excess, and syphilis in the parents rendered the child more susceptible. Injuries during delivery to the cranium and its contents predisposed. There might be a history of asphyxia at birth, with or without convulsions.

In the patient himself, a weak heart, masturbation, or sexual excess, the abuse of alcohol, or any severe acute disease might excite an attack.

As to infantile eclampsia, the hereditary tendency was

*Abstract of a lecture before the University of Toronto Medical Society.

an important thing to consider, for epilepsy might or might not date from such infantile convulsions.

Too much importance should not be attached to such supposed causes as defective eyes, disordered digestion, and dysmenorrhœa. These conditions should, of course, be remedied, but one need not expect to cure the epilepsy in this way.

Stevens, of New York, has laid great stress upon eye strain as a cause of epilepsy. Treatment of the eyes, by lessening the irritation, may reduce the sum total of predisposing causes, but will not cure the epilepsy. The report of the committee of investigation shows this clearly. The hope of curing epilepsy by the removal of the ovaries, or the foreskin, is equally chimerical. It is true that some few cases of hystero-epilepsy have been cured by removal of the ovaries, but this should be undertaken, not as a last resort, but only when the diagnosis was most certain. The lesson specially impressed was, to search your patient, and by careful examination discover the seat of irritation, remove, if possible, the cause, and, at the same time, attend to secondary conditions.

Personally, I am a pessimist. I have never reported cases of epilepsy as cured. I have had a patient, after treatment, go without an attack for eleven years, another one for seven, and yet the epilepsy recurred. For a case to be reported as cured there must not be any convulsion, nor any epileptic manifestation. I must state that I believe ordinary cases of epilepsy can be cured by long continued use of bromides, but such cures are very rare. The treatment in medical cases must be continued for five years. In fourth year, dose may be gradually diminished; in fifth year, dose may be discontinued. Surgical cases may be regarded as cured, if there is no recurrence in two years. Great skill is needed in finding the right dose, for if the dose be too small, there is no effect; if too large, severe bromism is excited. From one to two months are often needed, before the proper dose is ascertained, and during this time the patient must be seen frequently. The capacity to resist bromism varied greatly. In some cases, 30 grains daily produced it, while in others 150 to 250 grains daily had no effect.

Little children bear much larger proportionate doses than adults, because the drug is more quickly absorbed,

and more quickly excreted; 40 to 60 grains daily were needed by a child of 2 years.

The weight of the adult, and the condition of the general health, affect the size of the dose. Feeble heart, disease of arteries, or cardiac organic disease, lessen the resistance to bromides, and, hence, digitalis is useful in such cases.

Organic cerebral disease increases the susceptibility to bromide.

Unhealthy conditions of the skin and other excretory organs demand lessening of the dose. The appearance of acne is no guide as to the size of the dose. This acne may be avoided by the administration of the bromide in alkaline waters, and an occasional dose of arsenic.

It is sometimes objected to the bromide treatment, that it predisposes to dementia and insanity.

That is to be met by the fact that, in former days, before the bromides were used, epilepsy had these same sequels, and indeed it is probable that now there are fewer cases of dementia.

A single bromide, administered in water, not in syrups or bitters, is preferable to any combination of bromides, such as that of Brown-Sequard. Personally, I prefer bromide of sodium, because it is comparatively tasteless, and less apt to disorder digestion.

℞.—Bromide of soda, ℥iss.
Water ℥vij.

So that a teaspoonful of the solution represents 15 grains of the salt.

I insist on great dilution—up to 30 grains I give in a half glass of water, 30 to 60 grains in a full glass of water. In my experience, gastric irritation has been due to the use of concentrated doses. If it be advisable to use arsenic, belladonna, or digitalis, they should be given separately.

Any ill effects which may result from the bromide can be controlled or avoided by the use of the alkaline waters, such as the artificial vichy, Buffalo lithia, or the lithia water manufactured by the Hygeia Company, of New York, which contains a known quantity of lithia. For poor patients almost as good effects may be obtained by adding a little bicarbonate of soda to the water, or the bromide may be given in milk.

The chronology of the attacks must be carefully studied,

and the time of administration regulated accordingly. As few doses as possible should be given.

Just as quinine is given 4 to 6 hours before the malarial paroxysm, so the bromide before the epileptic fit. In the nocturnal epilepsy occurring between 12 and 2, the drug should be given early in the evening. If the attack comes on about daylight, the patient should be wakened up some hours before and given his dose. If the attacks are irregular, the doses are given three times a day, as a rule, after meals.

When there seems to be a special predisposition to attacks at the menstrual period, the dose should be increased for the four or six days of danger. The dose should be increased as children grow older and larger, as puberty approaches, and when the patient is about to be exposed to unusual excitement or fatigue, such as theatres, balls, concerts, or railroad journeys.

The dose may be reduced after three years, if the patient continues well. I am accustomed to lessen it by seven and a half grains every three months. During the autumn and winter, the dose should be increased; in summer, decreased.

During temporary ill health, *e. g.*, colds, diarrhœa, etc., the dose may be decreased, but never omitted entirely. In very severe illnesses it may be discontinued.

I insist on the medicine being given by some other person than the patient himself, thus making some one else responsible, for the peculiar mental condition of the patient may cause him to forget it altogether, or he may take an extra dose.

As a rule, it is better to tell the patient he has epilepsy, especially in cases between 16 and 30 years of age, because no engagement of marriage should be entered into.

I always leave written directions, especially when patient is not under constant observation.

Can anything be substituted for bromide? I believe that chloral hydrate may be combined with or may be substituted for it. I have had better success, however, with a combination of them. There is a severe confluent form of acne, affecting the legs especially, and producing deep ulcers, which can not be got rid of unless the bromide be discontinued, and then chloral may be substituted. Unusual debility and mental dullness, mania, are indications for chloral. Rarely chloral causes ocular irritation.

In chorea, arsenic is the standard remedy, given in ten

to fifteen minims of Fowler's solution after meals. This will produce symptoms of arsenical poisoning, and force you to discontinue it for some days. When the drug is recommenced, it should be with the dose at which it was discontinued. This point I wish to specially emphasize, for I believe that many cases of unsuccessful treatment are due to the error of recommencing with the original dose. The dose may then be increased up to thirty minims. It is peculiar that after the arsenic is thus recommenced, symptoms of arsenicism do not recur. I would also lay stress upon the free dilution of the arsenic. It need not be taken at one draught, but may be sipped during the hour after the meal.

But once have I seen a herpes result from its administration. From time to time the urine should be examined for casts.

Rest, absolute rest, in bed is essential. The child should be put in a room by himself, and the other children kept out. But one adult at a time should be allowed into the room. The child should be kept recumbent in bed and should not be allowed to have toys, pictures, or books, and should not be allowed even to move his hands. For the first few days there will be trouble, but he soon yields and becomes contented. One difficulty in this rest treatment is that insomnia is apt to occur. This may be treated with chloral or hyoscyamia. The patient is to be kept in bed till every trace of the chorea is gone—usually, six to eight weeks.

When he is allowed to get up, I insist that every afternoon for two hours he shall rest upon a lounge.

Chorea may be due to muscular weakness of the eye, or to errors of refraction, or to both. It is folly to say that all cases of chorea are of this origin, but patients should have their eyes examined. It may be that in this ocular condition we find an explanation of the value of rest, and of the injury caused by school work.

My experience is that exercise does harm. Regulated gymnastic exercises might be of use, if they were performed only in the presence of a single adult, and with all exciting elements excluded. After an attack, attention should be given to the eyes, and they should be examined each year before the beginning of school work.

Any anæmia will demand appropriate treatment.—*The Canadian Practitioner.*

TREATMENT OF CHRONIC CYSTITIS IN WOMEN.

By Hunter McGuire, M. D., Richmond, Virginia.

The successful treatment of chronic cystitis in women requires an unusual amount of patience, skill, and tact on the part of the surgeon.

In the first place, functional bladder trouble has to be eliminated from true cystitis. Pain about the pubic region and pelvis generally, frequent and painful micturition, tenesmus, the sensation that the bladder is never emptied, going on day and night for weeks, producing emaciation, exhaustion, and a life of wretchedness, may be due to a great variety of causes. It may be purely functional; piles, fissure of the anus, an ulcer of the rectum, or thread worms in this organ may cause reflex bladder symptoms. Malaria may provoke vesical irritability; sometimes this happens without serious disturbance of the organs of digestion and alterations in the character of the urine; under such circumstances the only explanation that can be given is the effect of malaria on the nervous system.

We can not help believing true vesical irritability is occasionally a pure neurosis; certainly there are cases which can be explained no other way. As our knowlege of pathology, however, increases, these cases of neuroses of the bladder as well as of other organs, will become less frequent; improvement in our knowledge of the pathological changes which take place in the female urethra will surely contribute to this end. Masturbation is another source of vesical disorders; congestion of all the pelvic organs and irritation of the meatus urinarius follow its prolonged practice. Diseases of the uterus, especially of the cervix uteri, and displacements of the womb are common sources of functional vesical disorders. Pelvic abscesses and tumors frequently provoke this trouble. One of the most persistent and painful cases of functional vesical trouble that I have ever seen was in a woman who still menstruated regularly at 47 years of age. She had constant but not very severe pain until the monthly period came on, when the pain became very severe, and morphine was frequently given to relieve it. I removed, in this case, the left ovary and tube, finding upon the latter a neuromatous growth, about as big as a marble; she went home in a month entirely well.

It is pretty safe to conclude, when the urine is normal or nearly so, that the disorder is functional and not true

cystitis; again, as a rule—with, of course, exceptions—when a woman has to void her urine frequently, and suffers pain in the act, but is relieved when the viscus is empty; or, if she attempt to hold the water too long, spasm of the bladder comes on and the urine is involuntarily ejected in spurts, then the trouble is functional; but when there is great and prolonged tenesmus, with pain and straining after the water has all come away, as a rule there is real disease of the bladder or urethra.

The only way to treat functional bladder trouble is of course to correct, if possible, the cause. A displaced womb must be replaced and retained in its proper position; a diseased womb must be cured, rectal trouble relieved, a foreign body in the bladder removed, etc. It is of the treatment of true cystitis, chronic in character, uncomplicated by other disorders, that I wish to speak.

Generally, in chronic cystitis, the urine is loaded with phosphates, and muco-purulent matter; it is also more or less alkaline. Before any operative interference is undertaken, the urine should be made normally acid; this can generally be accomplished by the free use of citric acid in the shape of lemonade, or lemon juice and water; the mineral acids act more slowly, and benzoic acid is not often well borne by the stomach, if administered for too long a period of time. I have seen the use of citric acid in one day remove a thick phosphatic crust on the edges of a vesico-vaginal fistula, or on the wound through the perineum in lateral lithotomy.

The first step in the surgical procedure is to dilate the urethra far enough to temporarily paralyze the sphincter muscle. This should be done while the patient is under the influence of an anæsthetic. I use for dilatation a three bladed urethral speculum, and after the expansion has been continued far enough, the speculum is removed, and the finger introduced into the bladder. The dilatation should be done slowly, twenty or thirty minutes being required before the process is complete; after this a short piece of drainage tube is introduced into the bladder, and the urine allowed to drip into a cup betwen the legs of the patient, if she lies on her back, or close to the hip if she is lying on her side. The latter is preferable, as in that position the tube is more easily retained. The tube should be introduced into the bladder only far enough to drain the organ, and the free end should be just long

enough to drip the water into the cup. If too long, it will be pulled out of the bladder by its own weight. The object of the treatment is to give the bladder complete rest. The tube should be kept clean by occasionally washing or changing it. It is a good plan to wash the bladder out through the tube once or twice a day with hot water. I published an account of the treatment of obstinate chronic cystitis by drainage in 1874. Since that time I have repeatedly resorted to it, and with great success. For the last three or four years I have added dilatation of the urethra to the drainage, in this way making physiological rest of the organ more complete. If the paralysis of the canal and sphincter pass off before the cure is effected, dilatation must be repeated.

SIMPLE MEANS OF OBTAINING RELIEF IN WHOOPING COUGH.

A Swiss physician claims to have found a means of relieving the paroxysms of whooping cough which is purely mechanical, and so simple and harmless that it seems worthy of trial. It can be carried out by mothers and intelligent attendants. The method is thus described:

During the paroxysm the operator, standing in front of the patient, firmly catches with his forefinger that part of the lower jaw between its angle and ear, places the ends of the middle fingers just in front of the lobes of the ear and the thumb upon the chin, and by strong and steady traction and pressure pulls the jaw downward and forward.

The procedure may be very conveniently modified by making traction with the right thumb and forefinger placed on the hard gum behind and below the lower middle incisors, and the remaining fingers under the chin, while the left hand is fixed on the child's forehead for the purposes of counter pressure.

If the patient stands with his back to the operator, the latter places his thumb just above the lower jaw in front of the ears, the forefingers on the ridges which run from in front of the ears to the prominences of the cheeks, the remaining fingers on the chin; and then pushes the jaws forward and downward. Traction may be made still more rapidly by putting the forefingers into the patient's mouth on the hard gums behind and below the back molars. No force should, of course, be applied to the child's teeth.

As soon as the jaws have been moved in the way indicated, the patient is told to take a deep breath. The procedure is said to cut short the spasm almost instantly.

The effect is explainable on physiological grounds. It is claimed that the systematic employment of this method not only stops the paroxysms, but diminishes the severity of the symptoms, such as vomiting and expectoration, as well as the duration of the disease, and further that, as it is entirely painless, children do not object to it, and after experiencing its benefit try to perform the manipulations upon themselves. Of course, greater success would be expected if the child operated upon were of sufficient age to assist or at least not to resist the operator.—*Babyhood—Dixie Doctor.*

CONTAGIOUSNESS OF PNEUMONIA.

From a long article by Netter on "The Contagiousness of Pneumonia," these conclusions are drawn:

1. Pneumonia is a contagious disease of parasitic origin, and is transmissible either directly or by the intervention of a third person, or by inanimate objects, such as wearing apparel, etc.

2. The pneumococci are not destroyed by desiccation, and are diffusible through the air, but not to great distances, at most the interval between three hospital beds. They maintain their virulence for a period which has not been definitely determined, but probably never more than three years.

3. Contagion is possible through the entire course of the disease, and even after recovery.

4. The period of incubation averages from five to seven days, but may vary between one and twenty.

5. Patients who have passed through pneumonia are dangerous both to themselves and their neighors, as living micrococci may be found in their saliva many years after. Thence, in part, the epidemic appearances of the disease in certain families during long periods, and also its frequent recurrence in certain individuals who have once survived it.

6. Rigid quarantine seems hardly necessary, but other persons should avoid too intimate relations with them. The sick room should be ventilated and disinfected as thoroughly as possible and every precaution taken to prevent the spread of the disease as in other contagions.—*Times and Register.*

THE BACILLUS TUBERCULOSIS AS A DIAGNOSTIC ELEMENT IN LARYNGEAL TUBERCULOSIS.

Dr. Ricardo Botey, of Barcelona, has examined the sputa of ninety-seven cases of tuberculosis of the larynx, and he says that while the bacillus is found in the sputum always, or almost always, in pulmonary tuberculosis, it is very rarely found in laryngeal tuberculosis. From his observations he drew the following conclusions:

1. The presence of the bacillus in secretions from the larynx does not necessarily indicate tuberculosis of this organ, but may be due to pulmonary phthisis.

2. The absence of this bacillus from these secretions does not imply the non-existence of laryngeal tuberculosis in doubtful cases.

3. The tubercle-bacillus is very seldom found in tuberculous larynges when there are no serious concurrent pulmonary lesions, although the bacillus is almost always found in sputa from phthisical persons.

4. The bacillus of Koch is, therefore, of little assistance in diagnosis of tuberculosis of the larynx, and can hardly be of any use except in acute miliary tuberculosis of the pharynx and larynx.

5. It is probable that the inoculation of the secretions of a tuberculous larynx into rabbits is really the best method of removing the difficulties of diagnosis.—*Revista de Laringologia, Otologia y Rinologia.*

CONTRA-INDICATIONS TO USE OF ANTIPYRIN.

Dr. Humphreys, in *The Practitioner*, thus sums up the contra-indications to the use of antipyrin:

1. In all cases of cardiac weakness.

2. In diphtherial affections in which there is evidence of myocarditic lesion.

3. After exhausting hemorrhages.

4. During menstruation and dysmenorrhœa.

5. In catarrhal pneumonia generally, and lobar pneumonia when there is œdema of the lungs—heart failure.

6. In the latter stages of tuberculosis.

7. In cases of great debility and exhaustion and the latter stages of long-continued fevers.

It is believed that the foregoing contra-indications with regard to the administration of antipyrin and similar medicaments will receive the approval of physicians generally. —*Col. and Clin. Record.—Dixie Doctor.*

THE BROWN-SEQUARD'S ELIXIR AGAIN.

Carswell Sconce, in the *Medical World*, says he has felt the need of something to tone up the life principle in him, being 71 years old. He believes in the elixir, but thinks it too difficult to get and use it properly. So he investigated the subject. As a result he used the following: "Procure a sound, fresh egg and break it in a saucer. Then with the aid of a pair of small forceps separate the cytoblast (semen) from the ovum. One egg will be sufficient for one application. Use the hypodermic syringe, or apply the mass to a blistered surface, and in five minutes you will feel the characteristic thrill and warmth, with increased action of the heart.—*Dixie Doctor*.

SURGERY.

THE LOCAL TREATMENT OF SYPHILITIC PHENOMENA.

By G. Frank Lydston, M. D., Chicago.

The knowledge of syphilis possessed by the average practitioner appears to be embraced in the aphorism, "Pox is syphilis, syphilis is pox, and mercury and potash are good for it." Comparatively few are disposed to take pains in allaying or removing as far as possible the immediate and unsightly results of the disease. In this respect it is perhaps unfortunate that mercury and iodine are such faithful servants, even to the routinist. If these remedies were less potent, even when applied in a haphazard fashion, the physician would *nolens volens* take more pains in the study and management of his cases. Nothing is so markedly neglected as the local management of the lesions of the disease. This is the more reprehensible because of the readiness with which they may often be controlled and the patient rendered less unsightly and more comfortable. It may not, therefore, be a gratuitous task to present the therapeutical measures which have done me ten years' faithful service in a by no means inconsiderable number of cases of syphilis. I desire to state, however, in this connection, that obstinate lesions are exceptional in my own practice in cases coming under treatment at the time of development of the primary lesion, unless the patient wilfully neglects himself. So mild is syphilis under modern rational treatment that one is compelled to patronize a dispensary clinic, else he is not apt to see much of a variety

of lesions unless he is a veritable tyro in the management of the disease.

As I realize the value of space, and, moreover, as I intend to present a complete dissertation on the subject in the near future, I will be brief and to the point.

LOCAL TREATMENT OF THE CHANCRE.

First principle, avoid caustics.

Second principle, avoid grease.

Third principle, keep the part dry as a rule and perfectly clean.

The only exceptions to the rule regarding caustics are mixed sores, with a minimum of induration, and exulcerated sores, which become sluggish and refuse to heal after induration has nearly or quite disappeared. In the first instance pure carbolic followed by fuming nitric acid is admissable, but the galvano-cautery, preceded by cocaine, is better.

The exception to the second principle is the application of iodoform ointment to sluggish or painful sores. The following formulæ will be found to be excellent, the odor of the iodoform being completely disguised. I attribute this property to the menthol, which, as far as I am aware. has not been elsewhere recommended for this purpose, Oil of mirbane may be used in lieu of menthol, but is more irritating and less effective. Where there is considerable pain, cocaine and extract of belladonna may be added.

R.—Mentholis ..... gr. v.
Iodoformi ..... dr. iv.
Cetacei alb ..... dr. ij.
Cerati ..... q. s. ad. oz. j.
M. Sig.—Apply on lint.

R.—Ol. mirbane ..... M. iv.
Bals. peru ..... dr. ij.
Iodoformi ..... dr. ij.
Vaselinæ ..... q. s. ad. oz. j.—M.

The old time black and yellow washes are not objectionable for cleansing purposes, provided the part be well dried thereafter and packed well with some absorbent powder. I prefer, however, a solution of the bichloride 1:500. A plan recommended for this application is to wash the part with a weak solution of common salt. Calomel is now sprinkled upon the part, and a small amount of nascent and active bichloride is thus formed. I have used

this plan for condylomata quite successfully. The best absorbent is the powdered oleate of zinc—not Merck's, which is abominable, but Parke, Davis & Co.'s, which is really excellent—a useful combination is the following:

R.—Bismuthi subnit..... dr. ij.
Ac. salicyl.....gr. v.
Zinci oleat.....q. s. ad. oz. ij.—M.

Simple calomel is useful, but not so good as the above. Turpeth mineral is a very desirable method of applying a mercurial in a dry form. Oxide of zinc and lycopodium are also very good, used in equal parts. The part may be kept dry by absorbent cotton. Cumbersome dressings must be avoided, especially such as require for their retention constriction of the penis.

Pronounced indurations often persist for months without ulceration, or after it has healed. Bathing in hot water, with frictions of hydrarg. oleat., 5 per cent, will dissipate them after a time. The easiest and best method is excision. I would recommend excision of all clearly-cut chancres upon the prepuce or integument. *Care should be taken, however, never to excise them until they have become stationary, else recurrence is almost certain.*

The roseola seldom requires attention; should, however, pigmentation be marked and lasting, hot baths, with frictions of 20 per cent oleate, will be serviceable. In ordering the oleate always specify Squibb's. There may be others as good, but not to my knowledge, and I know there are none better.

Papules, tubercles squamæ and other dry lesions can be controlled and rapidly resolved by applications of the following formulæ. Care should be taken in the selection of the proper strength—blistering may result, and, although beneficial sometimes, causes the patient to lose confidence; there is great variation in integumentary susceptibility. The collodion preparation is the most likely to blister.

R.—Hydrarg bichlor.....grs. v.—xx.
Collodionis..... oz. j.
M. Sig.—Apply with hair pencil.

R.—Hydrarg. bichlor ....grs. v.
Tr. benzion co..... oz. j.
M. Sig.—Apply.

Tincture of tolu is also an excellent vehicle.

The results obtained by these preparations are often remarkable. They are of especial value in removing facial blemishes—they hasten removal of pigmentation very markedly. Their efficacy is easily tested by contrasting the course of facial lesions treated by them with that of other integumentary lesions upon the same subjects.

Crusts and squamæ, if thick, are benefited by applications of ung. hydrarg. nitrat. The ammoniated mercury ointment is useful in some instances, but is not often sufficiently strong. Where the lesion is very obstinate, an occasional application of the pure acid hydrarg. nitrat. will hurry it up.

Ulcers require some care. Ointments of iodoform, hydrarg. oleat., ung. hydrarg., the citrine and white precipitate ointment, are all of service in different cases; one failing, another should be used. Occasional stimulation with argent nitrat., or even the acid nitrate of mercury, may be required. Should ulcerations be attacked by phagedæna, Ricord's paste or the actual cautery may be used. My own preference is for the pure bromine. Applications of the potassio-tartrate of iron are useful in some cases—twenty grains to the ounce.

Nodes and diffuse osteo-periosteal swellings may be benefited by frictions of ung. hydrarg., hydrarg. oleat., and ung. iodinii co. I have obtained good results from hypodermics of a solution of the bichloride immediately contiguous to the swelling. A blister, followed by ung. hydrarg., is often efficacious in disposing of obstinate nodes. The tincture of iodine is also useful.

The obstinate headaches of both late and early syphilis, whether associated with cranial bone lesions or not, are benefited by frictions of the scalp with the hydrarg. oleat.—10 per cent. In obstinate cases a blister to the nuchia, followed by mercurial plaster, is quite effective. There are occasional cases of cephalalgia associated with the cachexia syphilitica where the galvanic current is of great service.

Syphilitic iritis is greatly benefited by frictions of the brow and temples with the oleat. Care is necessary lest the ointment get into the eyes, as it is extremely irritating. Occasional bathing of the eye in a solution of the bichloride, 1:20,000, is of service. In case it becomes necessary

to blister the temples, mercurial ointment should be applied to the raw surface.

Mucous patches and fissures of the mouth, if very painful, should not be cauterized until their irritability has been in a measure allayed; they then require cauterization. The best application is the acid hydrarg. nitrat.; in some cases, however, the nitrate of silver is better. Obstinate tubercular lesions and post-ulcerative thickenings should be destroyed by the galvano-cautery, as transformation into cancer is possible.*

Ichthyosis of the tongue requires complete destruction of the epithelium of the organ. This condition occasionally follows syphilis, and is due to (1) the disease, (2) over-treatment with mercury and iodine, and (3) alcohol and tobacco.

Tertiary and destructive ulcerations are made cleanly and induced to heal by thorough application of tr. benzoin co., with or without the bichloride—grs. ii. to the ounce.

In irritable oral, lingual, and pharyngeal lesions, the following is the best thing I know of:

R.—Ac. carbol.....gr. x.
Iodinii resub.....gr. v.
Menthol.....gr. x.
Ol. eucalypti.....dr. ij.
Glycerite tann.....dr. ij.
Boro-glyceride.....q. s. ad. oz. j.
M. Sig.– Apply with a brush.

If the practitioner doubts the healing properties of this formula, let him increase the strength of the iodine and carbolic acid a little and try the efficacy of the mixture in cervical endometritis; it is my routine application, and is very successful.

Condylomata and mucous tubercles disappear like dew before the sun under the collodion or benzoin and bichloride mixture. Remember that the parts must be kept clean and dry. Condylomata and mucous tubercles mean local irritation and filth, both of which are in great measure avoidable. Calomel and oleate of zinc are the best dusting powders for these lesions.

Concomitant herpes progenitalis is an occasional feature of syphilis; indeed, I regard syphilis as a frequent cause

* Vide Lang, Langenbeck, Weir, and a case of my own reported to the Mississippi Valley Medical Association, September 13, 1889.—*N. Y. Med. Rec.*

of herpes. The oleate of zinc is as near a specific for this condition as may be.

Alopecia is greatly benefited by the following:

R.—Hydrarg bichlor.....grs. xvj.
Tr. canthar .....dr. iv.
Tr. capsici.....dr. ij.
Glycerinæ.....oz. ij.
Ol. ricini.....oz j.
Sp. colognensis .....q. s. ad. oz. viij.
M.—Ft.—Lotion. Sig.—Rub in scalp night and morning.

R.—Hydrarg. biniodidi.....grs. xx.
Ol. verbanæ.....m. x.
Vasalinæ.....oz. ij.
M. Sig.—Rub well into the scalp at bed time.

I trust that this hasty and by no means comprehensive survey of the local management of syphilis may contain items of value to some who have neither time nor material for experimentation to determine independently the best methods for treatment. The items are, it is hoped, suggestive, to say the least, and, therefore, capable of being built up clinically.—*Cincinnati Lancet-Clinic.—Western Medical Reporter.*

Book Notices.

Ophthalmology and Ophthalmoscopy for Practitioners and Students of Medicine. By Dr. Hermann Schmidt-Rimpler, Professor of Ophthalmology and Director of the Ophthalmological Clinic in Marburg. Translated from the third German revised edition. Edited by D. B. St. John Roosa, Professor of Diseases of the Eye and Ear in the New York Post-Graduate Medical School, Surgeon to the Manhattan Eye and Ear Hospital. 183 wood cuts and three colored plates. New York: William Wood & Co.

Diseases of the Eye. A Practical Treatise for Students of Ophthalmology. By George A. Berry, M. B., F. R. C. S. Ed.; Ophthalmic Surgeon, Edinburg Royal Infirmary; Senior Surgeon, Edinburg Eye Dispensary; Lecturer on Ophthalmology, Royal College of Surgeons, Edinburg. With colored illustrations from original drawings. Philadelphia: Lea Bros. & Co.,

1889. Armand Hawkins, 194 Canal Street, New Orleans, La. Price, $7.50.

A Text-Book on Diseases of the Eye. By Henry D. Noyes, A. M., M. D.; Professor of Ophthalmology and Otology in Bellevue Hospital Medical College; Executive Surgeon to the New York Eye and Ear Infirmary; recently President of the American Ophthalmological Society, etc. Royal octavo, 733 pages, richly illustrated with chromo-lithographic plates and 236 engravings. Price, bound in extra muslin, $6; in sheep, $7. New York: William Wood & Co.

These three comprehensive works upon the eye have recently appeared, that of Schmidt-Rimpler being the earliest in the field, while that of Noyes bears on its title page the scarcely three-months-old date, 1890. Within the limit by necessity drawn around the consideration of such works in a journal like ours, so extensive a criticism as any one of these volumes deserves is out of the question and must be left to the journals devoted to this special branch. Our "notice" must confine itself to the information a general practitioner might expect from us as to any important contribution to the knowledge of any particular department of our art.

In the very first place, then, neither the volume of Schmidt-Rimpler, nor of Berry, nor of Noyes is the work the practitioner will add to his library for consultation in such cases of eye disease as in his opinion do not demand the attention of an oculist; nor are these the books which he will choose to give him that polite knowledge of the subject which should be possessed by the physician of finely finished education. For these purposes he would prefer the compact and definite little treatise of Nettleship, the clear and well arranged text of Juler, and the philosophical and profoundly interesting work of LeConte. On the other hand, none desirous or deserving of the name and fame of particular learning in this department can afford for one hour to be without them; the knowledge, the one choice hint, contained in one or the other may be "the one thing needful" to the successful treatment of some case he may have in hand. Each work has its strong points—Schmidt-Rimpler's is very methodical, he speaks from a large experience and wide acquaintance

with the literature, and the notes of Prof. Roosa possess a high value. Particularly to be commended is the attention paid to morbid histology and pathology. Berry's style is terse and clear, and the innovation made by the introduction into the body of the text of a vast number of *colored* pictures of the external and ophthalmoscopic appearances of the eye can not be too highly praised. These pictures almost make an exception in favor of Berry's book from what we have said of the suitableness of the three to the needs of the general practitioner, and were he about to make choice of one, they would and should weight the balance in favor of Berry. Of course, not all of these pictures are above criticism, and unfortunately one or two are beneath it ("external appearance of glaucoma!") but the majority are excellent. Wood engravings of these subjects seem to us almost useless, and how very bad they may be can be seen by consulting Schmidt-Rimpler's cut of retinitis pigmentosa on page 241. Noyes's book is the most encyclopædic, and his citations of authorities very numerous. His views on treatment are set forth at length, and are sound and practical. Perhaps he shows a tendency to quote too extensively from the German to the exclusion of other authorities; but have not we Americans —especially those of us in "the east"—a slight squint Europeward? For instance, in no one of these three books, neither the English, nor the German with an American editor, nor the American, is a word said about *malarial* retinal hemorrhage—a disease not uncommon in many parts of our country. The great fault of all these works seems to us to lie in the article on the physics of refraction. In Schmidt-Rimpler's and Berry's it is treated from an entirely too mathematical standpoint, though Berry has a very good diagram of the refracted light-wave at page 396. Noyes's sketch, on the contrary, is entirely too sketchy. The paper, printing, press work, etc., of Berry's book are up to Lea's always high standard; but Woods's books (as is too often the case with this publisher) fall just short of first class as to paper and engraving. The plates showing the arrangement of Tenon's capsule are, however, well executed and very useful. H. D. B.

Examination of Water for Sanitary and Technical Purposes. By Henry Leffman, M. D., Ph. D., Professor of Chemistry in the Woman's Medical College of

Pennsylvania, in the Pennsylvania College of Dental Surgery, and in the Wagner Free Institute of Science; Pathological Chemist to the Jefferson Medical College Hospital, and William Beam, M. A., Demonstrator of Chemistry in the Pennsylvania College of Dental surgery; Associate of the Society of Public Analysts of Great Britain; formerly Chief Chemist B. & O. R. R. Philadelphia: P. Blakiston & Co., 1889. New Orleans: Armand Hawkins, 194 Canal street. Price, $1.

This is a useful work for reference to any one who desires to study what constitutes impurity in water.

The chemical side of the question is fully and satisfactorily given by the authors, both of whom are competent authorities, and, although several pages are devoted to the study of living organisms in water, the information given is insufficient for practical purposes.

The subject of the pollution of cisterns, wells, lakes, and rivers by pathogenic organisms is one which is just now attracting a great deal of attention, and in a book of this sort all known results should be recorded. We want to know the character of the bacteria, for instance, that pollute drinking water, and how they are most easily detected and destroyed, whereas here we are given only vague generalizations. This is just the sort of work from which we would naturally expect such information, and it is a disappointment to find the treatment of the bacterial side of the question so incomplete. H. W. B.

P. Blakiston, Son & Co., Philadelphia, will publish, about March 15th, a new medical dictionary, by George M. Gould, A. B., M. D. It will be a compact one-volume book, containing several thousand new words and definitions, collected from recent medical literature, while the total number of words is beyond that in any similar book. It includes also elaborate and useful tables of the bacilli, leucomaines, ptomaïnes, micrococci, etc.; of the arteries, nerves, etc., and of the mineral springs of the United States, together with other collaterial information.

Left at this office a "grip," marked "E. P. Demic"; material, Russia; has evidently seen much travel and is the property of an uncommercial and influenzial traveler.

Publications Received.

The Medical Annual and Practitioner's Index. 1890. Eighth year.

Monthly Nursing. By A. Worcester, A. M., M. D. Second Edition.

A Text-book of Animal Philosophy. By Wesley Mills, A. M., M. D., 1889.

The Neuroses of the Genito-urinary System in the Male. By R. Ultzmann, 1889.

Essentials of Gynecology. By Edwin B. Cragin, M. D. Saunders Quiz compends.

Diseases of Women and Abdominal Surgery. By Lawson Tait. Lea Bros. & Co., 1889.

A Text-book on Diseases of the Eye. By Henry D. Noyes, A. M., M. D. Wm. Wood & Co., 1890.

Anomalies of the Ocular Muscles. Third Paper. By Dr. Geo. T. Stevens, New York. Reprint.

A Handbook of Obstetrical Nursing, for Nurses, Students, and Mothers. By Anna M. Fullerton, M. D.

Through the Ivory Gate: Studies in Psychology and History. By Wm. W. Ireland, M. D. Edin., 1889.

A Manual of Obstetrics. By A. F. A. King, A. M., M. D. Fourth Edition. Lea Bros. & Co., 1889.

Transactions of the Medical Society of the State of North Carolina. Thirty-Sixth Annual Session, 1890.

Practical Electricity in Medicine and Surgery. By G. A. Liebig, Jr., and Geo. H. Rohé. F. A. Davis, Publisher, 1890.

Massage and the Original Swedish Movements: Their Application to Various Diseases of the Body. By W. Ostrom, 1890.

Text-book of Medical Chemistry. For Medical and Pharmaceutical Students. By Elias H. Bartley, Second Edition, 1890.

Diseases of the Eye. A Practical Treatise for Students of Ophthalmoscopy. By Geo. A. Berry, M. B., F. R. C. S. Edin. Lea Bros. & Co., 1889.

Eine Krankheit welche ausser dem Patienten beinahe zwei behandelnden Aertzten den Kopf kostete. Von Dr. C. Hafen. Dritte Auflage. Kaiserslautern, 189-

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Ayer s Cherry Pectoral is stated to have the following composition; Syrup wild cherry, 6 drams; syrup squills, 3 drams; tr. blood root, 2 drams; sweet spirits of nitre, 2 drams; wine of antimony, 3 drams; wine of ipecac, 3 drams; syrup, 1½ ounce; morphia acetate, 2 grains; spirit bitter almonds, 1 ounce.—*Doctor.*

A committee has been formed in Paris with the object of raising a monument to the memory of Philippe Ricord.

MORTUARY REPORT OF NEW ORLEANS

For February, 1890.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	6	3	6	3	3	6	9
" Congestive	5	.....	3	2	3	2	5
" Remittent	6	1	3	4	5	2	7
" Typho	5	3	2	6	6	2	8
" Typhoid	3	3	3	3	4	2	6
" Puerperal	.....	.....	.....	.....	.....	.....	.....
" Typho-Malarial	.....	.....	.....	.....	.....	.....	.....
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....
Diphtheria	6	.....	2	4	1	5	6
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	6	3	7	2	1	8	9
Pneumonia	20	15	21	14	32	3	35
Bronchitis	6	4	6	4	4	6	10
Consumption	29	32	37	24	57	4	61
Cancer	9	1	2	8	10	.....	10
Congestion of brain	3	.....	2	1	1	2	3
Bright's Disease, Nephritis	17	8	14	11	25	.....	25
Diarrhœa (Enteritis)	24	5	18	11	17	12	29
Cholera infantum	12	3	10	5	.....	15	15
Dysentery	6	1	6	1	7	.....	7
Debility, General	2	.....	.....	2	2	.....	2
" Senile	11	7	8	10	18	.....	18
" Infantile	10	5	9	6	.....	15	15
All other causes	183	87	168	102	168	102	270
Total	369	181	327	223	364	186	550

Stillborn children—White, 25; colored, 12; total, 37.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for city — White, 24; colored, 31.25; total, 25.98.

DIPHTHERIA RECORD FOR FEBRUARY, 1890.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	6	.....	6	3	.....	3
2	5	.....	5	2	.....	2
3	1	.....	1	.....	.....	.....
4	4	.....	4	1	.....	1
5	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	.....	.....
7	.....	.....	.....	.....	.....	.....
	16	.....	16	6	.....	6

Two cases of Scarletina were reported during the month, and no deaths.

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—FEBRUARY.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	P. in inches and hund.
1	66.0	74.0	58.0	.....
2	64.0	75.0	54.0	.....
3	66.0	75.0	58.0	.03
4	66.0	75.0	58.0	.01
5	66.0	75.0	58.0	.....
6	72.0	78.0	65.0	T
7	71.0	77.0	65.0	.....
8	52.0	57.0	48.0	.68
9	48.0	56.0	40.0	.....
10	50.0	60.0	40.0	.....
11	56.0	65.0	47.0	.....
12	56.0	65.0	47.0	.....
13	58.0	67.0	50.0	.79
14	60.0	74.0	45.0	.....
15	62.0	72.0	53.0	.....
16	62.0	75.0	50.0	.....
17	64.0	78.0	50.0	.....
18	66.0	79.0	54.0	.....
19	67.0	80.0	54.0	.....
20	70.0	81.0	58.0	.....
21	58.0	60.0	56.0	.....
22	67.0	78.0	56.0	.....
23	71.0	80.0	62.0	.....
24	72.0	79.0	66.0	.....
25	76.0	82.0	70.0	.....
26	76.0	81.0	70.0	.....
27	75.0	80.0	70.0	.....
28	52.0	62.0	42.0	.76
29	....	....	....	.....
30	....	....	....	.....
31	....	....	....	.....
Sums	....	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.093.
Highest barometer, 30.347, 21st.
Lowest barometer, 29.702, 7th.
Mean temperature, 64.0.
Highest temp., 82, 25th; lowest, 40, 9th, 10th.
Greatest daily range of temp., 29.0, 14th.
Least daily range of temperature, 4.0, 21th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..60.5	1876..59.0	1881..56.0	1886..53.2
1872..55.3	1877..55.6	1882..62.5	1887..65.2
1873..60.3	1878..55.4	1883..62.9	1888..58.6
1874..58.9	1879..55.8	1884..60.7	1889..53.4
1875..55.8	1880..60.4	1885..53.1	1890.. —

Total excess in temp. during month, 158.
Total excess in temp. since Jan. 1, 499.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 48 miles, S. W., on 13th.
Total precipitation, 2.27 inches.
Number of days on which .01 inch or more of precipitation fell, 6.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875.....13.85	1880..... 4.62	1885.... 2.39	
1876..... 8.20	1881..... 5.80	1886.... 1.96	
1877..... 0.98	1882..... 4.04	1887.... 5.58	
1878..... 3.50	1883..... 1.59	1888....11.21	
1879..... 2.13	1884..... 3.16	1889.... 2.78	

Total deficiency in precip'n for month, 1.53.
Total deficiency in precip'n since Jan. 1, 6.71.
No. of clear days, 14. No. of partly cloudy days, 8. No. of cloudy days, 6.
Frosts, ——.
Thunder storm on ——. Excessive rainfalls, ——; Mean Max. Temp., 72.9; Mean Min. Temp., 55.1.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

MAY, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor, should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

Remarks on the Arrangements Necessary Previous to Performing Operations.

[By CHARLES T. PARKES, M. D., Chicago, Illinois. Professor of the Principles and Practice of Surgery and Clinical Surgery in Rush Medical College.]

Gentlemen—Before the first patient is brought into the amphitheatre, I desire to make a few remarks about the arrangements necessary previous to the performance of any operations, and thus answer the questions asked.

During the past six months or more we have not used any sort of antiseptic fluid as a wash to aseptic wounds—none for any purpose whatever other than a 1 per cent solution of carbolic acid in water in which to place the instruments. We are perfectly satisfied with thoroughly boiled and thus sterilized water as a cleansing material—cheap, efficacious, easily obtained, and reliable. We do not believe that antiseptic fluids are harmless in fresh wounds, and do not think their use at all necessary when proper and careful preparation has made the site of the operation surely aseptic, and the similar preparations have placed in the same condition the hands of the operator, those of his assistants, and all instruments to be used.

We try to impress upon ourselves, and upon every one having anything whatever to do with the patient or his surroundings, the fact that the patient's life is positively endangered by the slightest relaxation of vigilance in maintaining a thorough asepticism in all things. How is this condition secured? The site of any operation is first thoroughly washed and scrubbed with soap and water. If any hair grows upon it this is shaved off. Then it is again washed with soap and water. Secondly, the surface is thoroughly washed and bathed with a solution of mercuric chloride, 1-1000, if near the outlets of the body; 1-2000 anywhere on the general surface. If any natural creases or puckerings exist, these must be carefully opened out and cleansed in the same way. After these washings the surface is sprinkled lightly with iodoform, and a large compress of sterilized gauze soaked in a 2 per cent solution of carbolic acid in water is bound on the surface, covered with an impervious material such as gutta percha tissue, and left on until the surgeon is ready to make the incisions. By carefully carrying out these processes the surface of the body at the site of any operative procedure is rendered absolutely aseptic, and the danger from infection of any wound by any microbe from the surface rendered practically impossible. The same procedure is carried out by myself and every assistant and nurse, in order to render the hands and arms aseptic. Particular attention is given to the finger nails. During an operation the hands are frequently washed in sterilized water only, if the operation is an aseptic one; if not, in some antiseptic fluid. The clothing of every one about the patient is prevented from carrying septic material to the wound by having the person enveloped in a clean gown. The arms should be bare; long sleeves are frequent carriers of all kinds of infectious matter into wounds. The immediate surroundings of place of incision should be covered with dry towels, then again covered with towels wet in a 2 per cent solution of carbolic acid in water as a means of safety.

The instruments are sterilized by being thoroughly scrubbed in soap and water, then rubbed dry and kept in boiling water for one-half hour, after which they are placed in the 1 per cent solution of carbolic acid, in which they are kept until used, and to which they are returned when out of use during operation after being washed clean.

All instruments should be so constructed that they can be easily taken apart, so that all joints and irregular surfaces may be cleaned. The only sponges used are pieces of sterilized gauze, and this is rendered sterile by subjecting it to prolonged boiling in hot water, after which it is kept in tightly stoppered bottles dampened with a 2 per cent solution of carbolic acid in water, taken out as used and then thrown away. When used they are squeezed as dry as hand pressure will make them. Sea sponges are used only in abdominal operations, and here only because they are more easily managed and accounted for.

The ligatures used are either catgut or silk, prepared so as to be positively aseptic and according to the following method: The silk is boiled in water for one-half hour and then preserved in a 5 per cent carbolic acid solution. If any piece of silk comes in contact with any external object it is discarded or again sterilized by boiling.

The catgut is immersed in a 5 per cent carbolic acid forty-eight hours, in 1-1000 bichloride of mercury in strong alcohol for one week, and it is then preserved for use in strong alcohol or in equal parts of strong alcohol and oil of juniper.

We use the silk and catgut indiscriminately for either of the purposes mentioned when thus prepared, and always cut the ends short.

The dressings after the wound is closed, as you have frequently seen, are always dry iodoform, iodoform gauze, and borated cotton. No solutions of any kind are ever put into an aseptic wound, the idea being to add in no way to the irritation always produced by the use of the knife and other instruments. If the wound is not much

irritated there will not be any greater flow of serum than the absorbents are able to carry away; hence you seldom see a drainage tube used. If one is necessary the sterilized perforated rubber drainage tube answers every purpose. Now, if the wound is already aseptic, how will you proceed? Carry out exactly similar procedures as have been described for an aseptic operation. The septic or suppurating surface should be thoroughly irrigated and cleansed with some one of the antiseptic fluids recommended for such purposes. For instance, a saturated solution of boric acid in hot water, or one teaspoonful of tr. iodine to a quart of hot water, or a 5 per cent solution of carbolic acid in water or less strong, or a solution of mercuric chloride not stronger than 1-3000 in water, in my opinion. The last mentioned, mercuric chloride, is the most popular antiseptic agent and the one most commonly used, because it is the most powerful destructive agent used to destroy micro-organisms. But, gentlemen, I begin to believe that thoroughly sterilized hot water is as efficacious as any of them, and has, I am sure, the advantage of being harmless to the patient. All the others possess some poisonous properties, many of them are dangerous when used in large quantities, and to be of any use under the circumstances we are considering, the quantity used must be large. If the suppurating surface is large and old, holding a considerable quantity of free pus, this can be all washed away by the water alone. If it is lined by a dense membrane of granulation tissue, the old pyogenic membrane, I doubt the probability of the strongest and most deadly of antiseptics being able to destroy micro-organisms lodged in it—in fact, I sometimes think that the coagulating properties of these fluids are likely to fix the micro-organisms in their breeding places, quieting them for the time, but a menace and perhaps a real harm for the future. The best way to me is to scrape away with the sharp spoon, as you so frequently see me do, all the unhealthy and septic lining down to the healthy tissue

underlying them and then use only the sterilized water for washing. If the scraping is done, I am sure the strongest antiseptic fluids are harmful, as well as I am sure that they are harmful to use in all large cavities, such as empyemic cavities, pus cavities with tuberculosis of the spine, etc. They should never be used about the brain or abdominal cavity. After the septic surface has been treated as suggested, the operative procedure is executed as already described, except that it is very seldom that the wounds are entirely closed by suture. It is usually best to pack the cavity with iodoform gauze, to be left in until loosened by developing granulations. In this way the wound can be kept perfectly aseptic for any length of time, provided the external dressings are changed at proper intervals, and the same care practised at each dressing as was carried out during the primary operation.

I am sure that if you follow out the details of the directions given you, adding to their perfection, if you can, in the matter of cleanliness and the avoidance of the entrance of any foreign substance into the wounds made, that you will seldom, if ever, be troubled with pus wounds. The wounds you make or treat will heal kindly, rapidly, and firmly, without much pain and without temperature. You have repeatedly seen me make the most extensive wounds, and subject patients to prolonged and severe operations, and I have just as repeatedly shown them to you at the end of a week or two with wounds soundly healed and the patients free from any signs of suffering or exhaustion.

FRACTURE AND DISPLACEMENT OF THE FOURTH DORSAL VERTEBRA.

The patient we bring before you is a man who fell from the height of eighteen feet four years ago. At first he had a good deal of pain in his back. When he fell he was holding rivets in building a tank, the part of the body struck being between the two shoulders. He then had no power. He can not lift either leg. (Prof. Parkes here demonstrated the absence of sensation in all parts below

the fourth rib by a series of pinches not felt by the patient.) You see demonstrated the absolute loss of motion and sensation as high as the fourth rib. It is the same on both sides. We will now ask him to breathe. If you are accustomed to see a naked person taking a long breath you would notice a very different movement during the act of respiration from what is present in this man. It is almost entirely abdominal, and the abdominal walls are moved purely by the contraction of the diaphragm. The action of the diaphragm pushes the abdominal walls out, and they fall in when it is relaxed. Now let us see what is the nature of the accident that would produce these symptoms. An injury to the spinal cord, by which its function is destroyed, would do it. Let us look at the spinal column by turning the man on his side slowly and carefully, moving the entire body at once.

First, I notice a fullness, a distinct round prominence between the shoulders, but he tells me that he has always been round shouldered; still this prominence is abrupt; stands out from the general bend. In the neighborhood of the cervical region of the spinal column I make a series of impressions to detect where the soreness is, and find none. About the middle of the posterior border of the scapula he complains of pain on pressure. Now, if you look at the spine above and below this point I think you will be able to see easily a prominence which you could not find anywhere else, and it is tender at this point, especially when I make lateral pressure. I get something else, a harsh, grating sensation, as if two bones were rubbed together, the sign of fracture termed crepitus. Hence we know that this man has a fracture and displacement of the fourth dorsal vertebra. The displacement corresponds with the fourth intercostal nerve, and that limits the point at which sensation and motion end in this case.

These injuries exactly explain to you all the symptoms you find present and already elicited by our inquiries. Your anatomical knowledge tells you of the nerves which

are given off here. He has motion and sensation above the injured vertebra, but neither below it.

The patient is unable to pass water in the usual manner. He has had several doses of magnesia sulph. to move his bowels.

This is a very interesting case for you to study and remember. You will meet with them frequently. They will be among the most important cases that you will have to treat, because the sequelæ of them are so terrible and the ending so universally fatal. There is only one condition possible, where these symptoms are present, from which the patient will recover, and that is where there is a laceration of some blood vessels or contusion of the spinal cord, in which case the symptoms are sometimes only transient. It is never—or so nearly so that I may say never—entirely relieved. Of course, the vitality of the parts below the injury is very much impaired and you will expect to have disturbances of both the bladder and rectum; and when you come to introduce the catheter you will remember that the urethral canal has lost its sensibility. It is always best to use the soft catheter to relieve the bladder of its contents. Never be without one. Be careful not to introduce into the bladder any septic materials; be sure that your hands and your catheter are antiseptic. Be sure that you do not bring on cystitis; it will come on soon enough. You must use the catheter often enough to prevent overdistension. It must be left in until you are sure that there is no residue in the bladder. If the urine becomes a little cloudy, then you must resort to antiseptic solutions as washes. Wash out the bladder with boracic acid or a very mild solution of the bichloride, 1–20,000. Then, it must be remembered that the abdominal walls are paralyzed and that you must stimulate the bowels. You can do this by the use of the sulphate of magnesia or other cathartics. But the greatest trouble which you will have is from the effect of pressure on the patient's body from contact with the bed. A constant pressure of the clothing

and of his own weight on the bed produces sloughs. If you subject your own body to pressure at one point continuously for five minutes there will be produced a redness, and, if continued, this would lead on to inflammation and sloughing or gangrene, even with the sensation of the parts perfectly normal. Special attention must be given to the patient to prevent the occurence of these bed-sores. This is accomplished in the easiest manner by means of a water bed with which the compression is equal on all parts, the patient sinks into it and the pressure is changed constantly. If you can not get a water bed, then you must resort to cushions and pads as other means of comfort to the patient, together with frequent changes of position.

A fracture like this in the dorsal region of the spinal column is more likely to get well than if it were in the cervical; while a fracture in the lumbar, or sacral, regions is still more favorable.

Now, is there anything to be done for this patient? Yes; special care is to be given him, particularly with reference to the movements of his body. In removing the patient from the place of injury to his home, or to the hospital, or in changing his position in bed, be very careful not to twist the spinal column. Be very careful to move all of the parts of the body at the same time. Extension and counter-extension will sometimes remove the pressure and give relief, and should always be tried. This method has in some cases taken off the pressure and restored fractured bones to their normal condition. If the application of this method replaces the fracture and relieves the symptoms at once, you will, of course, make some application to the patient's body to retain it in this position. The best means is a plaster of paris jacket, made out of a blanket. The plaster of paris will fit every elevation and depression of the body, will be comfortable to the patient, and will prevent movement. If by all these efforts you fail, is there any operation which is justifiable?

Of late years surgeons have begun to believe that they are justified in cutting down upon the seat of fracture and removing all loosened fragments or portions of bone which seem to produce any harmful pressure. This is done by means of the chisel, or trephine, after making a long central incision down to the spinous processes, and uncovering the laminæ and pushing aside the muscles with the periosteum. Usually the laminæ and corresponding spinous processes of several vertebræ will be removed in order to uncover the area of cord compression.

[This operation was performed a few days later. A comminuted fracture was found. The laminæ and spinous processes of two vertebræ were removed. There was an increase of area of sensation and motion to a distance of six inches below the original line. There has also been an improvement in the action of the bowels and bladder. Treatment is being continued by means of an extension apparatus.]

The difficulty in these cases consists in the fact that the procedure merely removes the cause of counter-pressure, but does not relieve the direct pressure which is produced by the cord being actually bent over the lower portion of the fractured body of the vertebra and held in that position by the weight of the body above the seat of fracture. In many cases also the injury has been so severe as to destroy the continuity of the cord, hence no operation can relieve them.

Strychnine as the Antidote in All Cases of Alcoholism and Its Associate Diseases.

[Read before the Medical Society of the Resident Students of the Charity Hospital.]

It is my desire this evening to relate, as briefly as possible, some observations on the effect of strychnine in cases of alcoholism. For the past year no subject has afforded me more interest. The use of strychnine was suggested to me by Dr. Bemiss, who requested me to give it a

thorough test, and, I am pleased to say, the results have been most gratifying. Out of forty-four cases, twenty-four of which were male subjects and twenty females, all white, but one death occurred; and in only one case did the disease refuse to yield to treatment. The results at first were of little note, and, though our patients recovered, it required as much time as by other methods. It was not until the strychnine was given in large doses that its effects were noticeable.

Let us now see how alcohol affects the system. The effects of strychnine can then be better understood.

Alcohol in its place is undoubtedly an excellent drug; but when taken to excess it is a slow poison that affects the entire system. In small doses, it stimulates the heart's action and increases the functional activity of the brain; but by its continued use and in large doses, it precipitates the pepsin, and impairs the digestive powers. In the nervous system, it attacks first the higher centres; the lower centres last. For this reason it is not an uncommon thing to see a man under the influence of liquor able to walk, but devoid of the power of reasoning. In the treatment of alcoholism, what then do we need? Is it not an agent whose physiological action is opposed to that of alcohol?

The agents most commonly used are bromide and chloral. Bromide diminishes the heart's action, depresses organic functions, lowers the temperature, lessens the supply of blood to the brain, and has a sedative effect on the sympathetic system. It, therefore, hastens the action of alcohol, and, though temporarily quieting, is not beneficial. Chloral will first raise the arterial tension, but soon lowers it; and though it does not affect the motor centres, its action is otherwise similar to bromide.

In giving these remedies we simply anæsthetize our patient the more thoroughly, and while under the influence of these supposed curative agents, the effects of the alcohol wear off, provided no injury has been done to any of the

vital organs. If the case be chronic, and anorexia and nausea exist from the excessive use of alcohol, it becomes necessary to resort to the use of local agents to cure the patient.

Digitalis, in large doses, is also recommended; but I do not think it a safe agent. In the first place, its action on the blood itself is not known. It is probably recommended for its action on the heart and arterioles, stimulating both, and thereby increasing the blood pressure. It is apt to cause nausea and vomiting, and lethal doses have caused paresis.

What we desire is an agent which will overcome the evil effects of alcohol, and restore to their normal condition those organs which have been affected—an agent which will stimulate the heart's action, increase blood pressure, act first on the higher nerve centres, increase the saliva and theflow of the gastric juices, in fact, stimulate to renewed vigor every organ in the body, and set every nerve tingling.

Strychnine will supply every want. I have had under my observation cases of acute, subacute, and chronic alcoholism; about a third of these cases were associated with delirium tremens. Nearly all suffering more or less from anorexia and troubled with nausea. Some have come in shaking from head to foot, miserable from loss of appetite, and, at times, wild with the delirium. It has been my delight to see these same unfortunate people leave a few days later freed from all such symptoms.

The usual plan of treatment was as follows: Upon admission a thirtieth (1-30) of a grain of the sulphate of strychnia was injected hypodermatically, increasing the dose one-third every three hours, until it was equal to a tenth. This being the maximum dose, it was given three times daily, though as much as a sixth of a grain has been given at once. As soon as the patient convalesced the same dose was continued by the mouth. There can

be no fixed rule for this treatment. One should be guided by the symptoms that present themselves.

It would require too much space to relate the cases that I have seen treated with strychnine. But I recollect three especially that impressed me with the value of this agent.

The first was a case associated with delirium. Patient had been on a spree for one month. He was so violent that it became necessary to strap him to the bed. The first and second night he was very restless, but on the third day he was quiet; that night slept a little. On the fourth day he was perfectly conscious, and drank some milk. In two weeks his appetite was entirely restored, his mind was perfect, and he told me he had not felt better for months.

The second, though quiet and perfectly rational, had no appetite, and complained of a dull pain in the head. He had been drinking for two weeks. This patient left at the end of a week with no headache and a good appetite.

The most remarkable case was that of a woman 40 years of age. She had been under treatment for two months, and was supposed to have nephritis, as her urine contained albumen; suffered continually from nausea and vomiting, and, as she could retain no food on her stomach, the nurse had been giving her toddies. I tried all the anti-emetic agents that I had ever heard of, but with little effect. Another examination of urine showed that there was still albumen, but no casts. As I had seen a case similar to this before, I questioned the patient, and learned that she had been an habitual drinker, and, as she expressed it, had had many a "boozer."

This woman was immediately put on the strychnine treatment. Her toddies were stopped, and milk ordered instead. It was nearly one month before there was the slightest change, but, so great was my faith in strychnine, that I persisted in its use. About the end of six weeks my patient was better, and at the end of two months had a splendid appetite. Stranger still, there was only a trace

of albumen in the urine. She left shortly after, and, at last accounts, was earning her living by cooking.

With such convincing proofs, it seems impossible to doubt the efficacy of strychnine, and I trust that those of you who have not had this experience will at some future time be enabled to corroborate these facts.

I am informed by Dr. Bemiss that there have recently been cases in his practice successfully treated with strychnine in which the minimum dose given was 1-6 grain.

Hospital Reports and Clinical Notes.

A CASE OF LARREY'S AMPUTATION.

Service of Prof. Souchon, reported by C. Y. Brownlee.

G. A., white, male, aged 20 years, brakeman by occupation, had his right arm caught between two cars on Nov. 29, 1889. He was admitted to the hospital about six hours after the infliction of the injury. The limb was found to have sustained severe contused and lacerated wounds, above and below elbow, the neck of the radius was fractured and the joint was opened. An attempt was made to save the limb. Drainage tubes were inserted and a 1:4000 bichloride drip applied and continued for twenty-four hours, when it was seen that erysipelas had set in. Patient was then transferred to erysipelas ward, where he was treated. In about two weeks, when he was sent back to ward 8, there had been a great deal of sloughing, the joint was open and suppurating, and pus had burrowed beneath the skin nearly up to the shoulder. Nothing now remained but to amputate at shoulder joint. Patient being anæsthetized with ether, as he was very weak, Prof. Souchon proceeded to make the regular Larrey incision. Digital compression was made upon subclavian artery, where it passes over first rib, by Dr. Parham, while Dr. Matas caught the bleeding vessels as they were divided. The time from the commencement of

the operation until all hemorrhages were controlled was about one minute and a half. The arteries were now tied, a light packing of iodoform gauze applied, flaps brought together and sutured, stump dressed, and patient placed in bed. Patient did well for first three days; his temperature, which before the operation had been for some time 101 to 103 degrees F., fell to nearly normal. On fourth day he was seized with almost uncontrollable vomiting, which was rapidly exhausting patient. Brandy and milk were given by the rectum, fly-blisters were applied over the epigastrium, and the usual anti-emetics given by the mouth, and in two days the vomiting ceased. Stump was dressed daily. There was some suppuration, but the greater part of the incisions healed by first intention. Packing was removed on second day and tube inserted. The temperature, after the operation, never rose above 100 degrees F., and patient's general condition rapidly improved. He was discharged four weeks after operation, stump having entirely healed.

CASE OF ANEURISM OF ARCH OF AORTA.

Service of J. I. De Grange, M. D., reported by S. M. Fortier, R. S

Patient was a white male, aged —, a native of South Carolina, and one year a resident in Louisiana.

In the spring of the year 1882, he contracted syphilis, tertiary symptoms manifesting themselves three years later. On the 15th of September, 1889, a difference in the tone of the patient's voice was noticed, and as he also suffered from a cough, he applied to hospital for treatment, insisting upon an examination, as he was under the impression that he was the prey of the bacillus tuberculosis.

Condition upon admission—Weak, emaciated, and some cyanosis of lips, hoarse, with an irritable, nervous cough.

Inspection revealed bulging, with pulsation limited to an area corresponding to the course of the transverse arch, *i. e.*, appearing in the region of the upper border of the second chondro-sternal articulation of the right side, then

passing from right to left and from before backward to the left side, etc.

Right pulse is somewhat weaker than the left one.

Apex beat is an inch below and one-half inch to the left of left nipple.

Percussion—Dullness corresponds to region above described.

Vertical and horizontal lines of dullness over cardiac region very much altered.

Vocal Fremitus—By introducing the fingers above, and pushing the skin downward, about one inch below the manubrium, a tumor, somewhat compressible and elastic, was observed. Pulsations were of an expansive character, separating the hands when placed upon the tumor.

Auscultation—A systolic murmur at apex may be heard, increasing in intensity toward base of heart, where it is replaced by a double murmur, being substituted at root of neck by a bruit of a rasping or sawing character. The bruit is accompanied with a thrill synchronous with the aneurismal pulsation.

There were dysphagia, dyspnœa, pain, and hoarseness, owing respectively to pressure of tumor upon œsophagus, trachea, and left recurrent laryngal nerve. Laryngoscopic examination disclosed a paralysis of the left vocal cord.

Treatment—Patient was placed in bed, rest secured; diet limited, avoiding irritating and indigestible food, stimulants, and large quantity of fluids.

Bichloride of mercury, gr. 1-16, iodide pot. gr. x s., with syrup of iodide of iron gtt. x. and water, half an ounce, were administered three times daily.

The patient left the Hospital feeling much better. The aneurism did not diminish in size, but the dysphagia and other pressure-symptoms greatly moderated under the anti-syphilitic treatment.

Answered—Night drug clerk (2 a. m., with glaring eyes)—"Well?" Customer—"No; sick."—*Puck.*

Proceedings of Societies.

PROCEEDINGS OF THE MEETING OF THE MEDICAL ASSOCIATION OF ALABAMA.

Held in Birmingham, Ala., April 8, 9, 10, and 11, 1890.

[Report of our Special Correspondent.]

The first day, April 8, was devoted to the work of organizing and putting things in proper working shape.

The meeting was called to order by the president, Dr. C. H. Franklin.

Prayer was offered by Rev. L. S. Handley; then followed addresses of welcome by Mayor Thompson, and Dr. W. H. Johnston, president of Jefferson County Medical Society. The president's annual message was read and committee reports were made. The feature of the evening session was the annual oration of Dr. Harry T. Inge, of Mobile, Ala.

On the second day of the meeting papers were read, the first of which was that of Dr. B. J. Baldwin of Montgomery, on —

HEADACHE AND NEURALGIA RESULTING FROM REFRACTIVE ERRORS.

I think that you will grant that opthalmology has kept well abreast in this progressive march with its correlative branches.

I have not the time in the few minutes allotted me in this essay to give just praise to those pioneers who rescued opthalmology from the hands of charlatans, and, wiping off the cobwebs of obscurity, brought the science from a state of incorrectness, inaccuracy, and darkness into an exact, clear, demonstrable, and beautiful science; but I do want to give my hearty endorsement to a number of younger workers who deserve great praise for directing the attention of the profession to the subject of eye strain as a factor in the causation of headache and neuralgia. I do not mean to class myself as an unconditional follower

of Dr. Stevens. I care not to go into the battle that has lately been raging between Dr. Stevens and the New York Neurological society on the subject of peripheral irritation in the eye as a cause of chorea and epilepsy. In fact, I care not to go into the subject so far as it relates to muscular insufficiencies, but I prefer to confine myself principally along the line of my observations, which deal mostly with internal eye strain in connection with anomalies of refraction.

It may be that Dr. Stevens claims too much for his treatment of chorea and epilepsy. I rather think he does, but that he deserves the thanks of the profession, and a host of headache sufferers, I do not see how any fair minded investigator can deny; for he has by his persistence and ingenuity in his special line of work directed the attention of the profession to a class of important eye-troubles which has hitherto been very generally overlooked or incorrectly diagnosed.

There is no question in my mind, and that is based on what I have seen in my practice, that many forms of intractable headaches and neuralgias are the result of eye strain due to a faulty construction of the eyeball, and I propose later on to recite a few cases, the relief in some of which by the correction in the errors of refraction has been almost magical.

Accommodation is accompanied by contraction of the pupil and convergence of the optic axes. I wish to direct your attention especially to the contractions of the ciliary muscle, as here is the point from which the irritation principally arises. We know that high muscular tension, continued for any length of time in any part or system of muscles, will result in great fatigue, worry, and even pain. Why, therefore, is it not to be expected that in conditions of the eye where prolonged contractions of the ciliary and internal recti muscles exist, there will not follow headaches, dimness of vision, muscular weariness, and confusion?

I have in my own experiments produced headache, dimness of vision, and vertigo in fifty seconds, by directing patients to look intently at the finger placed two and a half inches in front of the nose. This is a simple but exaggerated way in which to demonstrate the effects of muscular tension on the nervous system. There are three conditions of the eye in which we have these muscular contractions, viz: hypermetropia, myopia, and astigmatism.

In the eye of the hypermetrope the refractive power is too low, and parallel rays of light entering such an eye would be brought to a focus behind the retina. An effort of the accommodation is therefore required to focus such rays at a nearer point and give distinct vision. How much greater is the strain upon the ciliary muscle when near objects are looked at? In the hypermetropic eye, there is never any rest for the ciliary muscle as long as the lids are open, and, consequently, the eye never has the opportunity, as does the normal eye, of periods of rest in viewing distant objects and regaining its strength after long continued close work. Its ciliary muscle is therefore always in a condition of strain, which, after prolonged worry and over work, will undoubtedly lead to headache, neuralgia, mental confusion, dizziness, and even nausea and vomiting.

By correcting the error of refraction the muscles are relieved of this unnatural tension and contraction, and the eye is enabled to do its work with ease and comfort.

It must be remembered and kept well to the front in your mind that the eye is very bountifully supplied with nerves from the cranial and sympathetic system. There is no other organ which is so intimately connected with the nervous centres, and none which has so many cranial nerves distributed to it, and nearly all these nerves in strong relationship in their origin. The ever active muscle, the ciliary, is supplied by the third nerve. This nerve arises from a section of gray matter under the acqueduct of Sylvius, and the nucleus of the fourth nerve is a continuation of this tract of gray matter, while both are unit-

ed with the sixth pair by a set of posterior horizontal fibres, and there is a strong probability of the relation between the fifth and optic nerves. We know that increased action of the centres of the fifth alter the sensibility of those for vision, and Hutchison has reported a case in which photophobia was produced by inflammation of the cornea in a blind eye.

In reviewing the connection and association in origin, the intimacy in function, and proximity along their course of distribution, how is it possible not to conclude that an interruption or annoyance to the the function of one of these eye nerves may not compromise more or less the action of them all, and finally lead to serious nervous complications?

In my own practice I have seen cases with constant headaches and neuralgia, with occasional spells of blindness accompanied by dizziness, vertigo, and nausea, following the slightest use of the eye, almost instantaneously relieved by the correction of the refractive error.

I do not wish to convey the idea that it is my belief that all cases of headaches and neuralgias are due to errors of refraction—far from it—but I do say that these refractive troubles play a most important part in their production, and it is well to eliminate the eye as a factor in the beginning of an investigation as to the cause of headache. It not infrequently comes to the notice of specialists, where prolonged and useless medication has failed to cure headaches, which are quickly relieved by the proper adjustment of glasses.

DR. W. E. B. DAVIS, OF BIRMINGHAM, READ A PAPER ON THE TREATMENT OF LOCAL AND GENERAL PERITONITIS.

From a study of the experiments of Pawlowsky, Grawitz, Wegner and others, he thinks the following points pretty well settled:

First—Simple peritonitis, when caused by a sufficient

quantity of a chemical irritant, will produce death by the extent of the inflammation.

Second—Simple inflammation may terminate in septic peritonitis, by producing a weakened condition of the walls of the intestines, which permit the passage of septic germs from the intestinal canal into the peritoneal cavity.

Third—While pathological germs in a small quantity may be absorbed by the healthy peritoneum without producing a peritonitis, the same quantity combined with a chemical irritant may produce a violent inflammation—the irritant having prevented the absorption of the germs and caused the exudation of a nutrient fluid for their multiplication.

Fourth—Large quantities of septic fluids and microbes always produce suppurative peritonitis; yet, a small quantity of either may be absorbed and destroyed, unless the peritoneum has been weakened by antecedent pathological changes.

Fifth—A septic fluid may gravitate into dependent parts of the peritoneum and become shut up, either by plastic inflammation or by a coil of intestine, and thus be prevented from producing diffuse peritonitis, but after a time this may rupture and produce death from general peritonitis.

Sixth—The germs of septic peritonitis will be found in the kidneys and other organs of the body, and in greater quantities, according to the extent and duration of the inflammation.

Seventh—The condition of the peritoneum and the nature and quantity of the septic product will determine the rapidity of the inflammation, which usually ends in 48 hours to 6 days, but death may be produced from shock in a few hours. Tubercular inflammation is always slow in its progress.

From a consideration of the foregoing principles, he says the following indications for treatment must be arrived at:

1. Promote absorption of the inflammatory products of

simple peritonitis as rapidly as possible, and thus relieve the inflammation and prevent the possibility of septic peritonitis.

2. In the early stage of peritonitis, whether simple or septic, where the cause can not be determined, hasten the absorption of inflammatory products, etc., with purgatives.

3. When medical treatment fails to give relief, septic fluids should be removed by operative procedure.

4. In localized peritonitis — with circumscribed pus formation — the pus should be removed and the abscess cavity drained.

5. In acute septic peritonitis, operative procedure must be adopted early or there will be no chance of recovery offered by the operation, as the inflammation will become more extensive the longer it continues, and, too, there will be so great a quantity of septic germs absorbed into the system, that death will result from septicæmia, even though the local inflammation should be remedied by a late operation.

He quotes from Habershon and others, and states that it has been demonstrated, that in the large majority of cases, peritonitis is a symptom of some well recognized lesion of the abdominal or pelvic viscera, and that the only rational treatment must be based upon this conception of the disease. Peritonitis is not a "disease distinct," as taught by Bichat, and upon which teaching the treatment of Alonzo Clark gained such great popularity. The "opium splint" is irrational, for it not only locks up the products of inflammation, but as shown by Wylie, Johnson, Baldy, and others, and by his own experience, subjects the patient to one of the greatest dangers of the disease, viz., obstruction of the bowels from adhesions.

In case of perforation of the bowel, opium is indicated to relieve pain and shock, and to prevent peristalsis, and further escape of the intestinal contents into the peritoneal cavity. Again, morphine hypodermically may be used, with benefit in some cases when there is persistent and

uncontrollable vomiting; but at the same time, calomel in small and frequently repeated doses may be dropped on the tongue and the bowels induced to act. There are many cases in which it is absolutely necessary to give a hypodermic injection for pain, but this should never be given in such doses as recommended by the advocates of the opium treatment, and should not be administered at all unless the patient's condition is being made more grave by the shock provoked from pain.

The first two indications for treatment are best met by free purgation, as taught by Tait and others, and the majority of those who have adopted this plan select the magnesium salts, as they produce very large watery stools. When the stomach rejects salts, calomel may be used.

He refers to a large number of cases treated by him in the most satisfactory manner by purgation — and among them several cases of threatened peritonitis, after laparotomies. During the past year he has not waited for symptoms of peritonitis after a laparotomy, but begins the use of small doses of salts, and if not retained, of small doses of calomel, a few hours after the patient gets from under the influence of the anæsthetic, and aids the purgative by the administration of enemas of milk and whiskey every third hour, which relieve thirst, and stimulate and nourish the patient, if retained.

In these cases he has had to give an occasional hypodermic of morphine, but this did not prevent the bowels acting. He has had to depend on calomel oftener than salts, as it was not rejected. He reports cases illustrating how purgative treatment aids in diagnosis, and others to show how all symptoms may be masked by opium, and an operation delayed too long, and concludes by stating that it is very important not to resort to the free use of morphine, unless an operation has already been decided on, and this administered to relieve pain and lessen shock.

After cases of abortion, or delivery at full term, in addidition to large doses of ergot, to produce rapid involution

of the uterus, he has his patients, within twelve or sixteen hours, take a decided dose of salts to prevent peritonitis.

He reports a number of cases of perityphilitis, and advocates early operative interference. Since the cæcum and appendix are always completely invested with peritoneum, as demonstrated by Bull, the abscess of the appendix must be intra-peritoneal at the beginning, as has been shown by the experience of McBurney, Weir, Wylie, and others.

He agrees with Wylie that should the symptoms of local peritonitis, in the region of the cæcum, not begin to improve by the fourth or fifth day from saline treatment, and local applications over the seat of the inflammation, an incision should be made down through the muscles and the peritoneum dissected up, until a place is found where the abscess is attached, and then opened. While the operation would be easier if delayed, the danger of the abscess rupturing and producing acute septic peritonitis must be borne in mind, and hence the increased difficulty in doing the operation is more than compensated for in the risk saved to the patient.

Cases are reported to show that a negative result with the hypodermic needle should never cause a moment's delay in operating. He operates just as promptly when he can find no pus.

He indorses the views of those who advocate the removal of the appendix in frequently repeated attacks of appendicitis, for the same reason that he would remove the tubes and ovaries for recurring attacks of pelvic peritonitis —when they are the cause of the inflammation.

In acute septic peritonitis, as met with in child-bed fever, or after perforation of the bowels, or from the emptying of the contents of an abscess into the cavity, or after operative procedures,or accidental traumatism,such as gunshot wounds, stabs, etc., nothing short of a laparotomy can afford any chance of recovery—and this will not offer much prospect of recovery unless done very early.

He quotes the experiments of Pawlowsky, and recites

his own experiments on animals to demonstrate how rapidly septic peritonitis may be developed and produce death. He also reports a number of cases of gunshot injuries and stabs of the intestine in which he has seen violent attacks of peritonitis developed in a few hours, and in which the symptoms before operation did not indicate its development. Hence, when the abdominal cavity has been entered, it should be opened and explored immediately. To wait for symptoms is to wait too long. Give morphine to relieve pain and shock, and operate even though the patient should feel perfectly well after the relief thus afforded.

In cases of perforation of the appendix, etc., the operation should be done at once — unless the patient is almost pulseless — as by so doing the shock will be relieved. The same rule will hold in cases of ruptured abscesses. In cases of perforation in typhoid fever, the condition of the patient, before the accident, must be taken into consideration, as pointed out by Mears; but, as this is a fatal accident, unless it can be remedied by operative measures, this procedure should not be condemned without having been tried in a larger number of cases.

After a review of the open plan of treatment, as suggested by Dr. B. E. Hadra — which he condemns — he recommends the following method — which should be adopted in all cases of *acute general suppurative peritonitis*, and which will allow of the complete exposure of the abdominal cavity, the removal of the cause of inflammation, and assist in restoring the functions of the intestines:

The abdomen is opened in the median line; the cause, if found, removed; the cavity thoroughly douched with hot water; all adhesions broken up, and, if tympanites is not marked, drainage tubes are introduced, through which the cavity may be washed out, as indications require. If the cause be found in the region of the cæcum the drainage tubes should be introduced through a second incision in the right iliac region.

In those cases in which tympanites is marked, causing

pressure on all the abdominal organs, and thus creating much constitutional trouble, it will require special attention, and upon this point he lays great stress; for this condition is a dangerous one of itself. Not only does the weakened intestinal wall permit of the continued passage of septic germs into the peritoneal cavity, and afford constant infection, but it must be remembered that the bowel can not be replaced without great pressure and consequent traumatism, which will often kill in a few hours from shock thus induced. In advanced cases of peritonitis it must also be remembered that the walls of the intestines are rendered inactive by inflammation, and the power of contraction can not be restored until the inflammation is relieved; and hence the bowel will continue tympanitic and the exchange of septic germs kept up, unless this condition is remedied. Dupaul punctured the intestine with a fine hollow needle in cases of tympanites, with dangerous pressure symptoms, and this has been recommended by the leading writers up to this time; even Senn refers to this as a procedure which may be resorted to. This has been tried by the author a number of times, and he was never able to see an appreciable decrease in the tympanites; and he argues that it is not reasonable to suppose that a paralyzed bowel could expel any quantity of gas through a needle. He has also practised making incisions into the bowel, and by pressure attempted to expel the gas, but this does not prove satisfactory. He considers the best method of relieving a distended, paralyzed gut, full of poisonous gas, is to fill it with hot water, as this will not only free it of tympanites, but in getting rid of the gas and feces, etc., prevents infection.

Hence, in extreme cases, he believes an opening should be made in the lower part of the illeum, and the bowel thoroughly irrigated. An artificial anus should be formed and the bowel irrigated through a soft tube as necessary to prevent tympanites and adhesions. Purgatives can have but little effect on a bowel, in fully developed septic peri-

tonitis, when nearly all the coats are inflamed; so we must reach it mechanically. With this plan the colon can be washed through a rectal tube, the small intestine irrigated as required through the artificial anus, and the peritoneal cavity drained and douched.

This method meets all the indications for treatment, and is the one which should be adopted in all cases where marked tympanites is present.

THE PRACTICAL RELATIONS OF THE PHYSICIAN TO LIFE INSURANCE.

Dr. E. H. Sholl, Birmingham.

On the physician's fidelity, conscientious ability, and painstaking thoroughness the stability of these great institutions depend. The profession has been faithful in the past, and, by eliminating unworthy risks, has been one of the great factors in the success of life insurance. He thought it advantageous to the companies if the medical blank application was separate from the agent's and forwarded by the physician direct to the home office without supervision of the agent or knowledge of the applicant. The examiner is a trustee of the company and stands in a certain sense antagonistic to the examined.

He must examine closely for any want of harmony with the full measure of health; heredity, habit, and its deviation from the true standard of right; investigate occupation, climate, means, and possible income; should examine the eye, ear, nose, throat, skin, and tongue, although these requirements may not be found in ordinary applications. They are all factors in the perfect solution of the problem.

How far does albumen in the urine vitiate the application? When intermittent, occurring at different periods or at certain hours of the day, some think it physiological and functional, albumen having been known to be present in the urine for twenty years without impairing the health.

If the quantity is large, with the tube-casts, hypertrophy of the left ventricle, gouty dyscrasia, applicant over forty years of age, if there be retinal changes, the applicant must be rejected. Exceptions occur. Related a case who, fifteen years ago, had albuminuria with dropsy, suppression of urine, uræmic coma, who is now in perfect health. Ear—Agrees with Baker in rejecting where the canal is narrow from any cause, polypi in the tympanic cavity, granulations, when there are desquamative processes in the middle ear or external meatus. Caries or necrosis of the temporal bone, paralysis of the facial nerve, fistula of the mastoid cells, when there is abundant bloody or offensive discharge of long duration, and those with pain in front, behind, or above the ear, giddiness, unsteady gait, or other evidence of cerebral trouble. Heart—Must distinguish between functional disorders and organic lesions. In certain organic troubles there is a reasonable expectancy of life. These cases might be insured at higher risks. Lungs—Prolonged expiratory murmur at apex denotes the first degenerative process. Pulse, temperature, appearance, comparative weight, and heredity should be considered.

Tobacco causes dyspeptic symptoms, weak and irritable heart, anæmia, dyspnœa, hæmorrhoidal trouble, and pulmonary difficulties. The use of alcoholic stimulants should be closely investigated. Had observed fatal effects of syphilis thirty years after original attack.

THERAPEUTIC VALUE OF PHENACETINE.

Dr. T. W. Ayres.

From his experience with phenacetine he drew the following conclusions:

1. It is an excellent antipyretic.

2. As an antipyretic it is best given in doses from 7 to 10 grains.

3. It is an efficacious analgesic.

4. As an analgesic it is best given in single doses of 15

to 20 grains, instead of smaller doses given every few hours.

5. It is valuable for its sedative action on the nervous system.

6. It is absolutely tasteless and more pleasant to take than any other antipyretic.

7. The great advantage which it has over antipyrine and antifebrine is that it is non-toxic.

PSYCHICAL RESEARCH AND PRACTICAL MEDICINE.

Dr. John E. Purdon, of Cullman, Ala., read a paper that attracted a good deal of interest from the novelty of the subject treated by him. After a rapid sketch of the history of hypnotism, in which he traced its development through Mesmerism, Braidism, and Suggestion to its present position as an acknowledged therapeutic and curative agent, he entered into the details of cases treated by himself while in charge of a British military hospital, to which certain cases of nervous disease had been sent at his request for special treatment. Dr. Purdon stated that nineteen years ago he undertook the systematic study of curative mesmerism, with the view of ascertaining if permanent good could result to his patients from the interactions of separate nervous systems alone, no other medicines being employed in the several cases during the course of the mesmeric or hypnotic treatment. Dr. Purdon was of opinion that he obtained positive results indicative of the existence of an actual dynamic bond between himself and certain of the subjects operated on, while in others he was content to regard the beneficial effects produced as depending upon more purely subjective causes. In illustration of such differences, Dr. Purdon made reference to the division of the hypnotists in France into two schools, one of which believes the body of the operator to act directly upon that of the subject, while the other agrees that all extraordinary results

are determined from within in obedience to the laws of Suggestion, the extraordinary physiology being thus identical in kind with the ordinary.

While expressing it as his opinion that it behooves the advancing members of the medical profession to obtain as full a knowledge as possible of these new therapeutic agencies, including even the socalled "faith cure" among the number, he warned his brethren that the safety of the community demanded a very conservative attitude with regard to the practice of the same. Indiscriminate use of a powerful and dangerous engine was to be deprecated, but, nevertheless, the appropriate and legitimate uses of the same in the hands of men specially educated to the practical value of that department of psychology was to be warmly commended. Dr. Purdon entirely condemned the practice of hypnotism apart from its scientific and curative aspects. In unscrupulous hands, hypnotic suggestion could be made a tremendous agent for evil, and therefore the public should be on its guard against it.

SOME REMARKS UPON RHEUMATISM IN INFANT LIFE.

By Dr. J. R. Jordan.

The paper began with the relation of the following case: On Dec. 15, 1889, delivered *H. J.* of twins (both male). On Jan. 1 was called to see one of the infants, and obtained following history: Child had cried violently ever since his birth whenever he was moved or the napkin was changed, and now the least movement of any of the the joints elicited violent screaming. Child had slight elevation of temperature, no swelling of joints, no redness, but there was well marked tenderness of both shoulders, elbows, hips, and knees. Had nodules in each groin, and two others (both on left side) on superior curved line of occiput. There was no evidence of heart trouble; patient nursed well, bowels regular, and kidneys acted well.

The mother had a "cold" at the time of the confine-

ment, but had not had rheumatism for ten years. Father had never had rheumatism. No specific syphilitic history could be obtained.

In the absence of other indications prescribed a simple liniment and gave the mother salicylate of soda, and the patient recovered in about ten days.

The speaker then went on to cite several cases of articular rheumatism in infants, as related by Pocock, Shaefer, Kauchfuss, J. Lewis Smith, Winderhofer, and others; then related the principal symptoms of the disease as it occurs and is modified in infants, calling attention to the fact that the redness, swelling, and fever are generally not well marked in infants, and related cases from authorities in which these symptoms were entirely absent.

Called attention to the frequency of tonsillitis as a symptom, or at least as an accompaniment, of the disease.

He next drew attention to the various forms of heart troubles, and their great frequency in rheumatism of infants, giving statistics. He then dwelt at some length upon the *fibrous nodules*, which are almost always present in the disease as it occurs in infants, though rare in the adult. Gave a somewhat extended description of these nodules, as to their histology, location, modes of evolution, duration, diagnosis from syphilomata, scrofulous nodules, etc. He then spoke of the complications of rheumatism, pneumonia, pleurisy, general congestion of the lungs, etc., and gave the principal points in which they differed from the same complications occurring in the adult.

He then spoke of chorea, its frequency in early life in rheumatism, and gave statistics, and closed with a few remarks upon the diagnosis of rheumatism in children. Said that modifications of the symptoms as they occur in early life are so great as often to cause the disease to be overlooked. The symptoms do not always occur together, but one set of symptoms may be present at one time, and followed, only after the lapse of months, by others, thus

creating great confusion, and throwing the physician entirely off his guard.

SYNOPSIS OF REPORT OF THE CONTINUED FEVERS IN ALABAMA.

By JOHN P. FURNISS, M. D., Selma, Ala.

This report is based on replies to 300 circular letters issued to the presidents, health officers, and other members of every medical society in the state. The letters contained the following interrogatories:

1. To what extent have these fevers prevailed in your section, and what has been the type of them?

A. The prevalence of these fevers lately has not been so great as formerly. The period of greatest prevalence was 1881, 1882, 1883, and 1884.

The largest number of cases occurred during the months of May and October.

2. If more than one type, how do you class them?

A. They are variously classified as typho-malarial, continued malarial, simple continued with typhoid complications, enteric, typhoid, and a fever that is neither malarial nor typhoid.

The majority call it typhoid, and it is a notable fact that those who entertain this opinion are the residents of towns and cities, and are among the senior members of the profession.

3. What is the clinical history of typical cases?

A. After reading the clinical history of typical cases, one can not but be impressed with the fact that, by whatever name the different reporters call them—or rather it—they all describe a disease which has the same symptoms, the same duration, and are influenced by the same therapeutics. The statement that "there is nothing in a name," is a great fallacy. The majority of intelligent patients are sufficiently educated to know that in certain well recognized diseases special dangers are to be avoided, and particular precautions are to be observed. When the patient

and his friends know the character of his complaint, he and they can co-operate and assist the physician in a variety of ways.

4. Have autopsies been made in any of your cases, or those within your knowledge? If so, what lesions have been observed?

A. Only three replies state that autopsies have been made, and in each instance the characteristic lesions of typhoid fever have been observed. Other reporters, who have observed the same fever in the hospitals of New York, in other states, and in other countries, state their belief that our continued fevers are typhoid.*

5. In your opinion, how do these fevers originate, and how are they propagated?

A. A variety of opinions are entertained as to their origin. Some hold that they are of malarial origin, some that they are caused by decaying animal and vegetable matter, and some by germs peculiar to the disease; while others believe that they originate *de novo* and in disregard of all known sanitary laws.

6. Have you met with cases of intestinal hemorrhage? If so, what percentage of cases, at what period of the disease did it occur, and what was the result?

A. Intestinal hemorrhage has been met with once in fourteen cases. Occurring in the first week, and when slight, it seemed to exercise a beneficial effect on the disease. The majority of cases occurred at the end of the second or during the third week. It was fatal in 66 per cent of cases. Even those who call these fevers malarial take precaution to avoid hemorrhage.

7. Do you consider these fevers contagious?

A. Some reporters state that typho-malarial and continued malarial fevers are never contagious. Others think they are carried by infected clothing, contaminated

*In this connection, the positive results obtained in the investigations of Dr. Kinyoun are of great interest. See "Leading Articles" of this issue.—Eds.

drinking water, and dejecta. Those who think they are communicated by continued exposure adduce instances where other members of the family and the nurses take it, when physicians and visitors do not, as a rule.

8. What treatment has been most successful?

A. All reporters have observed the inutility of quinine to abridge the duration of any of the continued fevers, no matter by what name they are called, and all avoid purgatives after the first week. The treatment adopted by the large majority has been practically expectant, with what is claimed as a judicious use of antipyretics, especially antipyrine and antifebrine. Not a single reporter mentions having tried the treatment of Brand, which has been so enthusiastically recommended and lauded by Dr. Simon Baruch, of New York, and favorably spoken of by Dr. Loomis. Brand's success is marvelous, and he claims to have lost only one out of 342 cases. All replies show that strict attention is paid to diet, and that the mortality has been light, except at Thomasville, in Clark county, where eleven out of thirteen cases died last year.

I have adopted the rule of not allowing solid food for ten days after the temperature had reached the normal point, whenever there *had* been any enteric symptoms.

TREATMENT OF ORGANIC STRICTURE OF THE URETHRA.

DR. E. W. MORRIS.

Dr. Morris thought that electrolysis ought to receive a more general trial than has been given it. It is particularly applicable in very small and resilient strictures, where it should take the place of rapid dilatation.

All strictures of recent development ought to be treated first by gradual dilatation; a larger number, particularly the "incipient strictures," may be cured by this method alone, or in conjunction with nitrate of silver and massage. But these failing, dilating urethotomy

should be done. He reports 26 cases operated on with no bad complications, except a curvature during erection in one which lasted several months.

When performed antiseptically, the incision being made on the roof of the urethra, the operation was without danger.

The sound must not be passed in the deep urethra during the first week.

CORNEAL ULCERS AND THEIR TREATMENT.

Dr. S. L. Ledbetter.

Dr. Ledbetter classified them as follows: (1) phlyctenular ulcers; (2) superficial ulcers; (3) deep ulcers; (4) serpiginous ulcers. He briefly reviewed the nature and pathology of ulcers, and considered the general management of ulcers; then described the management more in detail of the different forms of ulcers.

As to general management: 1, An accurate diagnosis to be made of the particular form of ulcer to be treated; a knowledge of the circumstances, surroundings, and physical condition of the patient, and then a rational course of treatment to be adopted.

Constitutional and constructive treatment, when necessary, and local treatment, as follows: In phlyctenular ulcers, hot fomentations, belladonna, and the actual cautery or thermocautery, when the eye is very irritable with considerable photophobia and ciliary irritation, and in the later stage, where stimulation is indicated, calomel, or the application of mercury in the form of an ointment. Superficial ulcers from any other cause treated similarly; when any indication of sepsis exists, the free use of the actual cautery, galvano cautery, scraping, and the free use of antiseptic lotions. In deep ulcers, the sheet anchor is tapping or paracentisis to relieve the tension and nervous irritability of the cornea to prevent staphyloma and iritic adhesions; to let out pus when it exists, and in cases

where stimulation is specially indicated, Saemisch's operation.

In the treatment of serpiginous ulcers, the use of the cautery and germicides: puncturing the cornea when necessary and washing out the anterior chamber with antiseptic washes to destroy points of infection which might exist in Descemet's membrane.

Several cases illustrating the peculiar efficacy of operative measures were then related; cases of different kinds, from different causes. and under different circumstances, showing the special indications for different methods; the use of the actual cautery in phlyctenular ulcers and in serpiginous ulcers; tapping in deep ulcers and the compress bandage, when there is danger of rupture, being specially dwelt upon.

CONTRACT PRACTICE.

The action of the Association in regard to contract is worthy of notice. The action as given in the resolution below shows that the Association has modified their regulations which heretofore prohibited contract practice. This morning it decided that contract practice was professional.

It will be remembered that at last year's session in Mobile, Dr. W. C. Cross, of that city, was expelled from the association on account of doing a contract practice. Action relative to this expulsion was this morning rescinded and his resignation as a member of the association was accepted. Here is a copy of the resolution adopted in regard to contract practice:

"Be it ordained by the Medical Association of the state of Alabama: Any reputable physician may practice for a stated salary for any railroad company, so far as rail road accidents and injuries are concerned; for any mining or manufacturing establishment, but not to include the salaried officials and managers of such establishments; for state, county, or municipal, educational and charitable institutions; and on plantations cultivated by tenants or

hired laborers; and that all underbidding and soliciting under this system of practice shall be regarded ethical in the same way and to the same extent as in ordinary private practice."

Officers elected for the ensuing year: President, W. H. Sanders, Mobile; Vice President, W. C. Wheeler, Huntsville; Censors, G. A. Ketchum, Mobile; J. J. Dement, Huntsville; Peter Bryce, Tuskaloosa; Orator, E. P. Riggs, Birmingham; Alternate Orator, B. L. Wyman, Birmingham. The next meeting will be held at Huntsville, beginning on the second Tuesday in April, 1891.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Special Meeting, March 18, 1890; W. E. Johnston, M. D., Vice-President, in the Chair.

Dr. A. S. Daggette reported a case of a woman, seven months pregnant, who aborted four days after a fall. The child lived about forty minutes; the skin on its lower extremities and on the lower part of the abdomen had the appearance of being parboiled, and peeled off on handling, leaving large, livid, mottled spots. This macerated condition existed only in the localities named. The afterbirth was normal. No history of syphilis.

Dr. Macfarlane thought the condition undoubtedly due to syphilis.

Dr. F. H. Edsall reported a case of

MALFORMATION OF THE EXTERNAL AUDITORY APPARATUS.

The patient, Ida G., aged 8, is of Jewish parentage, is delicate and rather anæmic. The immediate cause of consultation was constant pain in the right ear. This pain was neuralgic in character, although there was shown, upon examination, to be a recent slight purulent otitis existing in this ear. The otalgia had been of much longer standing, showing that no connection existed between the two. This ear presented no appearances different from those customarily seen in cases of acute otitis media; it

was normal in all its parts in so far as its development is concerned.

The left ear is a marked instance of arrest of development during fœtal life. The entire auricle is small, probably not more than half the size of its fellow, and its several parts show a varying degree of imperfection in development. The helix, particularly near the upper margin of the auricle, is almost wanting, and the fossa of the helix is correspondingly imperfectly developed. The anti-helix is also scarcely to be traced and the fossa of the anti-helix is, consequently, lacking also, and there is no trace of anything resembling a tragus. The anti-tragus and lobule are more perfectly, or, rather, less imperfectly, developed than the other parts, but these, too, fall short of full development. The concha is very small and shallow. An external auditory meatus is lacking and the only indication of the site of such an opening is a shallow depression, probably about one millimetre in depth, in the skin over what would otherwise be the outer opening of the external auditory canal. Upon making firm pressure over the centre of this depression it is possible to deepen it somewhat, indicating thus that there exists beneath at least a cartilaginous canal. Hearing on this side of the head, as was to be expected, is entirely absent. Neither the ticking of the watch nor of Politzer's "Hoermesser" can be heard even on close contact, according to patient's statement. Absolute reliance could not be placed on patient's statements in regard to this, as she is timid and is, moreover, somewhat dull of comprehension. But as it usually is in such cases, that the middle ear and Eustachian tube share in the defect in development, it is more thon probable that her statements were correct. The hard palate is, not infrequently, affected by the same arrest of development which overtakes the auditory apparatus, but in this instance nothing of the kind was observed.

As to what is best to do in a case like this, I think there is but one thing to be said—let it alone. Surgical inter-

ference would be meddlesome, for aside from the difficulty which would be experienced in preventing an artificial opening from closing up again, there would be little probability of such artificial canal proving of any benefit. The reason for this can be readily understood when we consider that, according to Virchow, these cases are due to a disturbance in the process of closure of the pharyngeal cleft, early in fœtal life. Therefore, inasmuch as the external ear, the tympanic cavity and the Eustachian tube are all developed either from the first pharyngeal fissure or the first and second pharyngeal arch, it usually follows that marked imperfections in the development of the external auditory apparatus are accompanied by corresponding defects in the other portions of the auditory apparatus developed from the fœtal structures named. In consequence of this, even if an open pathway for sound waves were successfully maintained, the results, in cases like the one I have named, would probably be nil, due to defects in the tympanum.

Moreover, in a patient as old as this one, I am inclined to believe that, even were the tympanum fully developed, hearing would at best be very imperfect, because of the long continued disuse of the organ, just as we find a squinting eye becoming amblyopic in the course of time from lack of use, although I have no data bearing on the subject of the effect of disuse on the auditory nerve.

Cases like the one I have related, while not extremely rare, are sufficiently so to make them of interest as curiosities, although they are of little practical value.

Dr. Lippincott: Four patients presented themselves at my office within three weeks with foreign bodies which had entered the eye, and in the first three cases I made an effort at extraction with the magnet. In two I succeeded in withdrawing the steel from the neighborhood of the retina and the optic nerve with the magnet, and there was a recovery of a moderate degree of vision. In the third case, suppuration took place subsequent to the removal of

the steel; the steel was removed at the operation, and everything appeared to go well for about six days, and then irritation appeared and suppuration subsequently occurred. In the fourth case the patient was so positive that nothing had entered his eye that, although all the signs pointed in that direction, I did not feel like taking the responsibility of urging an operation, because if steel was not in his eye any operation would have interfered with its recovery. The man went to the point of refusing an operation. He went home and returned in two weeks with severe inflammation of the eyeball. I enucleated the eye and found a large piece of steel.

The cases are not specially instructive, except in so far as to suggest that if the foreign body happens to be of steel or iron, or something that will respond to the magnet, an effort should perhaps generally be made to withdraw it. There are cases, of course, in which that would scarcely be allowed, as from the nature of the injury an inflammation of the eye might be excited which would involve the other eye. But if the wound happens to be not in a very vital point, an effort should be made to withdraw the foreign body, and in that my experience lately would seem to show a certain degree of success can be anticipated. The last case was instructive as showing how little dependence is to be placed upon the opinion of a patient. The patient generally thinks that nothing went into the eye; in nine cases out of ten, I do not believe the patient thinks a foreign body has entered the eye. The man in my case was certain.

Dr. Allyn: I had a case quite similar about two months ago, which bothered me a good deal, owing to the lack of activity in the inflammation. The man was struck by a fragment of steel, which punctured the cornea, and cut a hole directly back through the iris. He reached my office within two hours after the injury, when he was absolutely blind to all light; could not see a finger or anything. He maintained, as the doctor has said they all do,

there was nothing in the eye, he had simply been struck in the eye, and a physician had removed the foreign substance. I told him it was my opinion the steel was in the eye, and asked him to inquire of the physician if it was really a metallic substance he had picked out, and on his return he told me that it was nothing but a piece of dirt. I told him to come back in a day or two, giving a chance for inflammation. The next day he returned feeling perfectly comfortable, and has never had to this time a particle of pain. There was a small particle up in the anterior chamber, which resembled metal covered with pus, and for two or three days I was uncertain whether or not it might be metal. Finally under the treatment, the particle completely cleared, leaving adhesion of the inner border of the iris to the anterior surface of the lens. He continued to get better, and maintained there was nothing in the eye; I strongly maintained there was something in it, but the patient wishing no operation, I left the case from time to time, the eye improving, but at the last examination, I found a band reaching through the lens and striking backward into the centre of the eye. At the end of that band I am sure there is a piece of metal.

Dr. W. C. Shaw: I was called recently to examine a man for life insurance, a very healthy man, who said he had not had occasion for a family physician for himself, never having been sick. When he was about to go I asked for a specimen of his urine. In the bottle, the fluid looked as clear as crystal. I put the specimen in my pocket, and came to the office and examined it, and found it to have a specific gravity of 1012, and to be full of sugar. This is the only specimen of so low gravity and containing sugar I have ever had.

Dr. Lippincott: That is very low specific gravity. I saw a case of saccharine diabetes in Philadelphia before I came to Pittsburgh, and the man had lived twenty-five years with that sort of urine. Dr. Austin Flint, Sr., had

told the man twenty-five years before I saw him that he would be dead within a year, but the man told me he was enjoying fairly good health at that time.

Dr. Lange: Dr. Shaw's case is peculiar, inasmuch as urine with a specific gravity of 1012 full of sugar is a rare specimen. In the text books and pocket manuals for the examination of urine, you will frequently find it stated that no urine of a specific gravity of less than 1012 can contain sugar. Dr. Shaw's case—the urine presenting a specific gravity of 1012 and full of sugar—is an exemplification that this statement is erroneous. I myself have more than once obtained specimens of less than 1020 specific gravity, which though not "full" contained some sugar.

Dr. McCann: The following case recently came under my observation: A German suffering from cancer which involved the rectum about three inches above the verge of the anus in which the whole anterior wall was involved and fully three-fourths of the rectum, the disease extending fully two inches up the rectum. The patient, suffering from the distress which attends this condition, came under my care. The question as to excision of the rectum, or colotomy, came up. I determined to resort to another operation; one which does not involve the technique of a formidable excision, but which is equally effective. The patient being etherized and placed in a proper position, I introduced my finger into the rectum as far as I could, and then with a Volkmann's spoon scraped out the growth slowly piece by piece, avoiding the wall of the bladder in front, the base of the bladder, and guarding against entering the peritoneum. Thus by a careful and slow—not an elegant operation by any means—but a careful scooping out, just as is the habit in scooping out cancerous growths from the cervix uteri, I was able to remove the entire growth. In doing this, I did not destroy the external sphincter; I did not damage the wall of the bladder. I avoided opening the peritoneal cavity, but I certainly cleaned away every portion of the dis-

eased tissue down to the peritoneum. The operation required a considerable length of time. Fortunately the sphincter was so easily dilated that I had abundance of room, and after having removed a portion of the mass was enabled by the use of the Sims's speculum to hold back the posterior wall of the rectum, the portion least diseased, so that I had a very fair view, and drawing down the rectum I was able to get beyond the diseased area and into that portion of the rectum where I found the mucous membrane was normal. After having done this, the surface was carefully washed with an antiseptic solution and the bowel plugged with iodoform gauze. The bowels moved on the third day. The rectum was again washed out, plugged for a time with iodoform gauze, and afterward allowed to remain without any treatment whatever. The result was that the distressing pain from which the patient suffered was relieved at once. Since that operation six months have elapsed. During all of this time, until quite recently, the patient has been free from pain. Recently, however, a new growth or rather a recurrence of the growth has appeared upon the anterior wall of the rectum. The patient has promised to come back for a repetition of the treatment. As a result of this operation, there was no incontinence of fæces. The external sphincter was left undisturbed. The internal sphincter was involved in the growth and removed; he had, however, control of the bowels. The operation did not result in contraction or stricture of the rectum. Recently I assisted a friend in the removal of a cancerous growth from the rectum in which a more formidable operation was undertaken. The perineum was split from the point of the coccyx clear into the rectum and then an effort was made to cut out the diseased tissue. A portion of the diseased tissue was removed, but the growth was so extensive that its complete removal with the knife had to be abandoned. It occurred to me at the time of that operation, and in thinking over the matter since, that the

safer operation is to simply scoop out all of the tissue possible, to clean away the diseased tissue, and to make your patient as comfortable as possible, because you can not hope to remove a malady which is going to destroy him sooner or later.

ANNUAL REPORT OF PROF. S. E. CHAILLÉ, DEAN OF THE MEDICAL DEPARTMENT OF TULANE UNIVERSITY OF LOUISIANA.

[Read at Commencement Exercises held on April 1, 1890.]

To Prof. Wm. Preston Johnson, LL. D., President of the Tulane University of Louisiana:

MR. PRESIDENT—Originating in 1834, our medical department is the oldest institution of learning now existing in this State; it is the parent of that University of Louisiana, which in 1884 became the Tulane University; it is the oldest medical college in the Southwest, and it is the largest medical college south of Philadelphia and Chicago. During the fifty-six years of its existence, 9,286 names have been registered on its record of students. Of these, 2,500 have been graduated in medicine, and 199 in pharmacy, and the strength of the Medical Department depends chiefly on its support by these 2,700 graduates.

Graduated by this institution in 1853, I, since 1858, have served continuously as one of its officers, and during all of these thirty-two years the welfare of the Medical Department has been the chief labor and the chief ambition of my life. Hence it is with exceeding gratification that now, at the close of the fifth year of my service as dean, I am able to present some convincing proofs of the increasing prosperity of the Medical Department.

During every one of these five years something of moment has been done to increase its usefulness and to promote its progress. Our college buildings have received much needed and costly repairs; many valuable improvements have been added to these buildings; our unattrac-

tive yard has been transformed into ornamental grounds; valuable additions have been made to our means of instruction; and, recognizing that laboratories are indispensable to the best teaching of medical science, a pharmaceutical laboratory was established in 1887 and a microscopical laboratory in 1889. While every one of the substantial improvements has promoted either the better instruction of our students or their comfort, it has become more and more difficult to obtain our diploma, and this has become so valuable that the number of students who leave other colleges in order to take their last course and graduate here, and the number of medical graduates who also seek our diploma, is constantly increasing.

Still more conclusive evidence of our increasing prosperity is found in the facts that during all the twenty-four years, from 1861 to 1886, the greatest number of students in any one year was 230; that in 1885 the number was 223, and that this number has annually increased to such extent that during the present session (1889-90) the number has reached 373, an increase of nearly 70 per cent during the past five years.

The three chief causes of our increased prosperity have been the increasing prosperity of Louisiana, Texas, Mississippi, and the adjacent states; the valuable pecuniary aid bestowed by the wise administrators of the university; the faithful discharge of laborious duties and the cordial support given to the dean by his able and distinguished colleagues. Should search be made for any one man to whom the chief credit should be given he would be found in the person of him who this day, for the first time during the past thirty-two years, is absent from our annual commencement; who, for twenty years, presided with enviable dignity over every one of them, and who now lies in pain on a bed of sickness, from which neither the grateful affection of his colleages, nor their profound respect, nor their professional skill, have yet succeeded in rescuing him. Our dearly beloved and exceptionally hon-

ored emeritus professor sowed the fruitful seed whose gratifying harvest it has been my good fortune to aid in reaping; and no man more fully shares my satisfaction that as yet no detriment has come to the important interests transferred, by his own choice, from his charge to mine than my faithful friend, Dr. T. G. Richardson, with whom thirty-one years of labor were passed in a cordial union of brains, of hands, and of hearts.

From the present and the past, attention is now called to our immediate future, every year of which will be marked, it is confidently believed, by some proof of important progress. For the benefit of the next session two valuable improvements are contemplated. The lecture-rooms of medical colleges are more continuously used than in any other institutions, and yet our four lecture-rooms are supplied with hard and antiquated benches which inflict sufficient physical discomfort to detract from the best mental efforts. It is hoped that the administrators will aid the medical faculty to remove this cause of complaint, and thus make a much needed contribution to the value of their property and to the welfare of the Medical Department. In addition, the medical faculty also proposes to increase the number of its instructors at the bedside of the sick, and thus to improve the teaching of clinical medicine, the branch of chief importance to medical education, and also the branch on which chiefly depends the special reputation of our college.

Present indications justify the prediction that if no public disaster should occur to retard the increasing prosperity of Louisiana and its adjacent states our next session will be attended by not less than 400 students. In any case this number will soon be reached, and whenever this may occur the capacity of our lecture rooms will not permit of any further increase. Hence the grave question is before us—What is to be done to enable the Medical Department to continue its onward march and to extend its benefits to a greater number of those whose lives will be devoted

to man's supreme interest in this world—the preservation of health and of life? Not only will our lecture-rooms be soon overcrowded, but our laboratories are already overcrowded, and no room is left for other laboratories, which the future must have if the Medical Department is to continue to sail prosperously on the great tide of modern progress.

It is manifest that in a very few years a larger building, with all modern improvements, will be indispensable to any further increase in the number of our students. The medical faculty will certainly not be able to supply this need, nor will the administrators probably be. Therefore the sole present hope is that some philanthropist may contribute what is so much needed—needed not to benefit pecuniarily the members of the medical faculty or any other individuals, but solely to benefit the public. There is no knowledge from which mankind derives greater and more widespread good than from the knowledge of medical science. On it depends the alleviation of the agony of death, the restoration of the sick to happiness and usefulness and the preservation of health. The United States now numbers its annual dead by many ten thousands, its annual sick by millions, and all of its many millions of people greatly need better care of their health. Whosoever aids the cause of medical education helps to relieve an incalculable amount of human suffering, helps to promote public prosperity, and also helps, to far greater extent than is usually believed and taught, to replace the selfish and brutalizing influence of physical pain and of dire want by the sound and active morality which successfully contributes to the common welfare. The frequency of philanthropic contributions to other good causes and their great rarity to the cause of medical education is a striking proof of how inadequately are appreciated the great public benefits conferred by the latter.

An additional indication of recent progress is to be found in the fact that during the past two years the doors of our

pharmaceutical laboratory have been opened to women desiring to become skilful pharmacists. Four have been admitted and have worked side by side with the male students, to the probable advantage of both males and females. One of these students has this year completed her second full course and has ranked third in the most advanced class of which she was the sole female member.

Our regulations prohibit the conferring of our degree on this very meritorious student who is destined to adorn the profession of pharmacy. For this reason, and also because her courageous independence and her professional education are the offspring of a widowed mother's love for her fatherless children, and therefore deserving the homage of all men, I shall be pardoned by other meritorious students for honoring by unusual mention the accomplished pharmacist and the gentlewoman, Mrs. Eliza Rudolph.

Among other duties, one of mine has been to maintain good order in a class of 373 students, endowed with the restless vigor, the high animal spirits, and the impatience of control characteristic of youthful manhood. The only rule to guide them has been my pledge that every student should receive all of the courtesy and consideration due by a gentleman to gentlemen, as long as but not a moment longer than their conduct might deserve it. The result has been that my attention has not been called to a single instance of disorderly conduct. It is, therefore, my pleasant duty to congratulate the class of 1890 for conduct characteristic of gentlemen, and cordially to thank every member of it for prompt and cheerful deference to the dean's authority.

Graduates of 1890—Though many of you now have neither money nor influence, yet all of you do possess the sterling worth and the kindly hearts characteristic of all manly men, and these possessions, together with the medical knowledge you have gained, will enable you to acquire both money and influence. The means by which you have gained the sincere respect of the medical faculty

and your diplomas will secure you reputation and success in whatever community your lives may be passed. It is hoped that you will prove faithful sons of the college which has given you professional birth, by increasing its reputation and its prosperity. This can be done by every one of you. For, the good reputation you may gain will increase the reputation of this college, and every pupil you may send to it will add to its prosperity.

Imitating the example of the fathers of some of you, you can beget worthy sons and send them here. In truth, the grandsons of all of your fathers would be especially welcome, and would surely find here even greater advantages than you have enjoyed. In behalf of your faculty I cordially wish you the reputation and the success you covet, and with heartfelt interest in your happiness and prosperity I bid you farewell.

CORRESPONDENCE.

RIBERI'S SEVENTH INTERNATIONAL PRIZE OF TWENTY THOUSAND FRANCS AT THE ACADEMY OF MEDICINE, OF TURIN.

At the regular meeting held by the Royal Academy of Medicine, of Turin, on December 13, 1889, the international prize of 20,000 francs, offered by the late Prof. Riberi, through the academy, to the best essays on any medical subjects, was awarded to Prof. W. His, of Leipzig.

The subject of his essay was, "On the Anatomy and Physiology of the Embryo, with Special Regard to the Development of Man."

There were many competitors. Very valuable contributions were received from distinguished scientific gentlemen of Italy and other countries.

But three were especially placed on the first line by the examining committee:

1. Prof. Von Beneden, of Liege, for his numerous embryological researches, and especially the latest very important investigations on the first changes which take place in the ovum immediately after fecundation.

2. Prof. Preyer, of Jena, for his remarkable work on the Physiology of the Embryo.

3. Prof. Wm. His, of Leipzig, widely known for his various works on the history of the development of man.

If the prize could have been divided into three parts, the committee would have been happy to give a share to each of the above named gentlemen. But, as such a partition is contrary to the rules, the academy, after mature consideration, decided in favor of Prof. His, as the one who had best fulfilled the requirements of the programme.

Dr. His, acknowledging the honor, returned one-fourth of the prize to the academy with the following noble words:

"I hope that the academy will accord me a favor. I "wish to employ one-fourth of this prize (that is, 5,000 "francs) to the encouragement of those studies which "are the foundation of medical science. It seems to me "that the best means to attain it would be to divide the "money among the two young Italian physicians (gradu-"ates of your university), who are willing to enter upon a "scientific career, and go to work for some time in the "laboratories of anatomy, physiology, histology, and em-"bryology."

This letter speaks for itself. As one of the pupils of Prof. Riberi, a graduate of that university, and corresponding member of the academy, we are pleased to call the attention of the American profession to this fact, and, by so doing, we intend to discharge a debt of gratitude to the generous donor.

Dr. John Dell'Orto.

Leading Articles.

ENTERO-MALARIAL FEVER.

The manifestations of malaria are truly protean. Every practitioner whom fate has settled in a malarious region knows how many shapes malarial infection assumes. Typical cases of malarial toxæmia are among the easiest to diagnosticate. Their characteristics are so marked that the unprofessional eye can easily recognize them. At the other end of the scale, where no distinct type can be made out, there seems to be no sharply defined boundary between the manifestations of malaria and those of other intoxications. The frequency of the coexistence of malaria with other morbific agents was long ago established; and it is very common to see in malarious localities the course of a disease influenced by an intercurrent malarial infection.

Perhaps the most important of these morbid combinations or mixed infections is the socalled typho-malarial fever. Under another name, *entero-malarial fever*, Dr. J. J. Kinyoun, bacteriologist of the Marine Hospital Service, describes the mixed diseases and the results obtained from a microscopical and bacteriological examination of the blood. (*Abstract of Sanitary Reports*, April 11, 1890.)

During the past year, Dr. Kinyoun made a search in a number of cases of malarial and enteric fevers for the purpose of establishing the presence of the *plasmodium malariæ* in the blood, and of the bacillus of Eberth in the spleen or intestinal canal. His investigations were made on more than a hundred men, who all contracted the disease in one locality (Virginia). They were sailors or laborers who plied between New York and Richmond. In the majority of instances, only enough water was taken aboard to last from New York to Richmond; in Virginia, the crew drank river water, or water from stagnant pools. This kind of water was also used on the return trip. It has

been observed that malarial infection is more frequent on vessels that use stagnant water on their homeward trip; this would indicate that drinking water may be a prolific source of malarial infection.

Among the cases examined by Dr. Kinyoun were several cases of mixed infection, in which the malarial and typhoid germs were associated. These cases presented clinically deviations from the general course of either disease, according as the one or the other intoxication predominated.

Two cases were observed in which the malaria-symptoms predominated, and masked the enteric trouble. The disease began with chill, nausea, etc., and no suspicions of the coëxistence of typhoid fever were aroused until the fourth or fifth day. On admission to the hospital, the blood of the patients was examined for the malarial organism, the *plasmodium malariæ*. This was found in abundance, and the cases were put on appropriate treatment. In one case, three days after the chill, there was nothing abnormal on physical examination, except a slight tenderness in the epigastric region and a considerable enlargement of the spleen. The bowels were constipated. A microscopical examination of the blood was made and a large number of the *plasmodia malariæ* were found free both in the serum and within the corpuscles. This established the diagnosis of malarial fever. On the fifth day after admission several suspicious looking spots appeared on the abdomen; on the next day there was slight epistaxis, a tendency to diarrhœa and tenderness in the right iliac fossa. A bacteriological examination of the fæces was made, and after several trials a bacillus was isolated, which corresponded to the bacillus of Eberth. At the same time an examination of the blood showed that it still contained the plasmodium, though in diminished numbers and confined to the corpuscles. During the next week the enteric symptoms became so marked that a microscopical examination was not needed to establish the diagnosis of typhoid fever.

In the second case of this group the microscopical examination revealed the presence of the plasmodium in the blood; and, later on, the bacillus of Eberth was isolated from the fæces.

In a second group of cases the enteric symptoms were well marked. The patients had just returned from the south, where malaria was rife. As a matter of routine, the blood was examined for the parasite, which was found confined to the corpuscle, and not free in the serum. A bacteriological examination was made in each case, and the bacillus of enteric fever isolated, thus establishing the coexistence of both factors in the disease. In one case an exacerbation occurring during convalescence was attributed to an indiscretion in diet; but another exacerbation occurred in twenty-four hours, and malaria was suspected as the cause. A fresh examination of the blood revealed the presence of the plasmodium. Antiperiodic treatment was resumed, and the case progressed favorably.

Dr. Kinyoun calls attention to his cases for the purpose of demonstrating that there is a combination of the two diseases, producing two distinct sets of symptoms, and that it is difficult, if not next to impossible, to demonstrate it without recourse to both microscopical and bacteriological examination, notwithstanding the statement made by an eminent scientist (Councilman) that enteric fever can be differentiated from malarial infection by examination of the blood. This class of cases, without doubt, gave rise to the fallacy that malarial fevers not infrequently terminate in typhoid, this opinion being held largely by the medical profession in malarial districts.

Kinyoun's observations on the blood of malarial fever were not attended with any difficulty. He usually drew the blood from the tip of the finger, and rarely found it necessary to draw blood from the spleen. In examining the fæces for the bacillus of Eberth, the failures were more numerous than the successes, owing to the large number of other bacteria present.

Clinicians had claimed before the birth of bacteriology, the coëxistence of malarial and typhoid intoxications. The article on "Typho-Malarial Fever," contributed to Pepper's "System of Medicine" by Dr. S. M. Bemiss, shows a clear conception of the independent relations of the two infections, and also describes a case strikingly similar to one mentioned by Kinyoun, namely, that in which exacerbations due to malaria occurred during convalescence. While the well trained eye of the clinician can discern the phenomena arising from each infection, there is still a margin of uncertainty in the doubtful cases, due to the varying degrees of perfection attained by clinical observers. At the bedside, individual experience and acumen go a great way in deciding a diagnosis. A want has been felt; a something has been needed to enable the practitioner to determine in his own mind the nature of the infection with which he has to deal. The newest of sciences, bacteriology, comes to the aid of the practitioner and provides him with means of removing all doubt, and making diagnosis a matter of positive demonstration.

* * *

In this connection, we would like to give expression to a thought which was as difficult to keep down as the ghost of Macbeth's victim. In the southern states there is no lack of malaria, and in Louisiana there is certainly more than we care to have. But with this abundant material for study right at our hands, where do we read that any investigator in our part of the world is trying to immortalize himself by discovering the true malaria germ? It is rather late now to enter the contest, for the *plasmodium malariæ* occupies the field, and examinations for this sprightly germ will shortly become as common in the hospitals and in private practice as examinations for the bacillus tuberculosis now are. The only southern claimant to the discovery of malarial organisms in the blood is Dr. Jos. Jones, of this city; but he has not followed up his investigations, and the credit of establishing a direct causal

relationship between certain organisms and malarial symptoms goes to Laverau.

THE STATE MEDICAL SOCIETY.

The Fates are against us. Our levees are giving way in many places, and the water from our great river is bringing sorrow and misfortune to many homes. Our profession always shares in public calamities, and the present distress will affect the plans of many of our brethren throughout the State. As to the prospects of attendance at our next meeting, the following letter from Dr. Richard H. Day, of Baton Rouge, La., will give a good idea:

My Dear Doctor: I have desired to write to you for some time past, but protracted sickness, and pressing calls when able to go, have prevented. The outlook for a successful meeting of our state society is discouraging. High water must materially lessen our attendance, and a miscalculation as to the time of the meeting of our state legislature throws our meetings together, and of necessity crowding and great confusion. Still we must do what we can for the honor of our profession and the usefulness of our society.

I would suggest that acts desirable to be passed be gotten up in your city and carefully prepared by some competent person, to cover all the points with great explicitness, so that whatever we may be able to pass through the Legislature may not prove unavailing as former acts have done. We should by all means reorganize the board of health, so as to make it in reality a State board (as it is not now); and should see that it can not be invaded by political influences, through the Governor or his partisans. We must make the right to practise medicine in this state, based upon qualification, determined by a board of medical examiners, entirely unconnected with and independent of any medical school or college. Let us strike for higher qualifications than a mere diploma, and let it be known that we are working for better intelligence in the practice of medicine, solely and entirely for the health and happiness of the people of our state.

In haste, yours truly, Richard H. Day.

The picture is not a bright one, but we should not give up hope. The Fates may be a little hard on us, but we feel confident that, in spite of crevasses and their attendant evils, there will meet at Baton Rouge a band of men impelled by devotion to the society, and determined worthily to maintain the dignity and honor of the profession.

Abstracts, Extracts and Annotations.

MEDICINE.

NOTES ON LEPROSY.

We clip the following items from the *Weekly Abstract of Sanitary Reports*, April 11, 1890:

Concerning leprosy in Minnesota, it is announced that Dr. Christian Gronvold, of Norway, Goodhue county, has been asked to make a thorough investigation and report.

Attention is called by Dr. Gronvold, in a letter to the board, to an incorrect statement by a public lecturer to the effect that there are now 160 lepers in the three northwestern states of Wisconsin, Minnesota, and Dakota. The published report, on which the above misstatement was based, is from the pen of Dr. G. Armauer Hanson, who states that "of 160 lepers who have come to these States, only thirteen, whom I have myself seen, and perhaps three or four more, are now alive. Among all the descendants of lepers that I have seen (and I have seen them in the third generation—great-grandchildren), not one has been leprous."

* * *

The following is a copy of the translation of an editorial in the leading Chinese newspaper, *Wei Sun*, published in Hong-Kong, December 3, 1889, with reference to the return from California and Australia of leprous prostitutes to Hong-Kong and Canton, which elicited comments from American, Australian, and Hong-Kong newspapers:

"*Leprous Women as Prostitutes.*—There are government asylums for lepers. Men and women having contracted the disease of leprosy are compelled to enter the asylum as inmates, for fear of infecting those of sound health.

"It is recently heard that sometimes most of the females in the leprous asylum, being slightly infected with leprosy, are married to the lower or water population; but those being more heavily infected would secretly frequent the private houses of ill-fame, where they receive and bid adieu to incomers and outgoers, and those who derive

pleasure from them can hardly escape without contracting that loathsome disease.

"Recently there is another rumor circulated that the last mentioned kind of leprous women are sold into foreign countries, in great numbers, to be the denizens of irreputable houses, and the injury that is to be wrought by them is immeasurable and without limit."

SURGERY.

TREATMENT OF FRACTURE OF THE PATELLA BY IMMEDIATE OPENING OF THE JOINT AND METALLIC SUTURE--CASE OF OLD FRACTURE—RECONSTRUCTION OF THE LIGAMENTUM PATELLÆ.

By Dr. Just Lucas Championniere.

The following memoir was presented to the Academy of Medecine (Feb. 11, 1890), which may be worthy the attention of all physicians. It does not relate a very extensive experience, but one large enough to furnish data for drawing conclusions as to results. This experience is constantly expanding; for, instead of fourteen cases mentioned in the memoir, I have now a record of sixteen cases—a new one for a recent fracture, and a special operation for an old fracture, complicated with detachment of the ligamentum patellæ. I bound the superior fragment of the patella, directly to the tuberosity of the tibia, with two large silver wires, which form a veritable artificial patellar ligament (Jan. 30, 1890).

The extreme simplicity of the sequelæ, the perfection of the result, the absence of muscular atrophy after recent fractures, the restoration of muscles in old fractures, the prevention of all pain and articular complications, the inutility of all apparatuses, the possibility of walking after three weeks, make this method of treatment the one which will in future supplant all other methods.

Since Lister and his pupil, H. Cameron, called attention to the advantages of treating fractures of the patella with sutures, isolated cases have been published, but no comprehensive studies of the subject. This was doubtless owing to the fact that nobody had at his disposal a sufficient number of cases in a short time to study the value of the method. I bring today fourteen cases of suturing

successfully practised without accidents and with excellent results.

They will, I hope, permit me to develop the view that the proper treatment of the patella is by making immediately a broad opening into the knee joint, followed by suturing of the patella. This treatment should be employed in all cases in which it is not contraindicated by some cachectic condition, such as diabetes or Bright's disease. I have even regretted having refused to operate on an old man, who would doubtless have supported the operation very well, and who remained almost a cripple in spite of careful treatment in the ordinary way.

My fourteen cases are thus grouped: four operations for old fractures, one operation for a refracture after healing under ordinary treatment, and nine operations for recent fractures.

The operations for recent fractures, which are the most interesting, were performed between the first and twelfth days after the injury, and the latest ones were operated on as soon as possible. Two were performed within twenty-four hours, and one in less than twelve hours. In the future I shall always act thus; it is all the more important to do so, because fracture of the patella is one of the most painful accidents, and a broad incision at once puts an end to the pain. It must be confessed, however, that the appearance of the knee joint laid open so soon, is not very encouraging. The articular and periarticular disturbances due to fracture of the patella are considerable. Extravasated blood inside and outside the joint, laceration of the capsule, great œdema of the synovial membrane, impart an ugly appearance to the immense wound. But the opening of such a wound need not terrify a surgeon well grounded in the principles of antisepsis, and it is this very appearance of the joint which furnishes the strongest reason for surgical intervention. It can readily be understood that after removing all these clots, emptying the synovial sac, and clearing the fragments of the patella of all adhering matter, the joint is in a measure renovated, and the complications, which usually prove fatal, are avoided. It is then that we can perceive how vain are the hopes of surgeons who expect to obtain union by mere coaptation of the fragments, They can do nothing to improve the condition of the joint, and even coaptation is impossible with all that blood in the synovial sac.

So, from the very beginning, the joint may safely be laid open and cleaned. But there is something more, the bone is in some sort immediately repaired. I place two large silver wires in its substance; the edges of the fragments are brought in close apposition, and at once the quadriceps extensor is restored. Indeed, from the moment that the operation is completed the bone is solid; and it is a source of much gratification to the surgeon to see effectual contractions of the quadriceps extensor, and thus know that there will be no tendency to atrophy of this muscle, which forms one of the prominent features among the sequelæ of fractures of the patella.

It has just been said that there was no pain after the operation. In fact, on the day after the operation all pain disappears, never to return.

The periphery of the joint should be carefully drained; this will aid in securing a painless course of the disease. I have shown this in cases of large wounds, especially in resections of the knee, of which my cases number forty. From these cases I have concluded that these operations are less painful the more the main wound is enlarged.

Further, the operation is not followed by complete immobilization. For eight days a grooved splint is used to prevent movements of the limbs; after the dressing is removed for the first time, the limb is kept in a moderately firm appliance. From this time on slight movements may be made without injuring the joint.

The chief point, however, is the rapidity with which function is restored to the limb. The patient may be permitted to walk between twenty and twenty-five days after the operation. One of my patients began to walk on the eighteenth day. It must be borne in mind that this refers only to the first attempts at walking; but of course the patient should not resume walking as a steady thing. In regard to the continued walking, patients present some differences, but they all begin to walk again very soon. One patient could walk forty days after the operation, and another thirty-five days after. These cases were not exceptional.

However, some cases were particularly serious. One man, while carrying a heavy load, fell and literally crushed the patella. It was broken into eight pieces, which were bound together with sutures into a sort of checker work. He recovered without difficulty in spite of a small slough

of skin. In another case, a detached fragment of bone was removed and thrown away. The union was perfectly solid and quickly obtained.

In all these cases, bony union takes place a short time after the operation; it is impossible to detect any interval between the united fragments. The wires can be felt through the skin. The solidity of the patella is complete. No difference in the muscular development of the two legs is noticeable. The restored patients are perfectly solid, and capable of carrying very heavy burdens.

The experience which I had with my first case, in 1883, authorizes me to say that the results obtained are permanent. The silver wires never have a tendency to become eliminated; they do not act as irritating foreign bodies. Only once had I occasion to remove the broken end of one of them.

What treatment of fractures of the patella can rival this? No pain; very little apparatus; perfect harmlessness; resumption of walking in three weeks, and perfect restoration of the power of walking in six or eight weeks. These results are all the more complete the sooner that surgical intervention is resorted to. Half-way measures should be rejected, and small openings be avoided.

Such is the most perfect type of intervention. However, after ordinary methods have been employed with bad results, recourse may yet be had to such intervention with success; but the result will not be as perfect as when the operation is performed soon after the injury. The excellence of the operation is such that it should be tried. I have performed it five times under the following circumstances:

The first time was in 1883, in a subject that I had treated for four months without obtaining union; he could neither stand nor walk, nor lift anything heavy. After the operation perfect union was obtained, and the patient could walk well. The subject resumed his occupation as drayman.

The second case was a woman of 56 years, who, before the operation, and one year after the fracture, was unable to walk, although she had been carefully treated with Malgaigne's hooks. Her thigh was in a discouraging state of atrophy; she could not move the end of her foot. After the operation, she walked without difficulty, and resumed her work. The union was solid.

The last three cases were still more curious. In these, the separation of the fragments could not be completely overcome, in spite of all efforts. As a result of this, the fragments with the two silver wires constitute a veritable hinge. After this union, which joined the ends of the quadriceps extensor, this muscle was restored to its normal condition. The legs became strong again. These patients had been crippled, one for one year, another for thirteen months; but they are now in possession of all their movements, and working only improves their condition.

A fifth subject, finally, walks with the aid of this metallic hinge. The patient had been well cured of a fracture of the patella, but in an accident it had been refractured. After the operation, electricity and massage restored the atrophied muscles, which seemed at first to be beyond repair.

These cases should not encourage us to employ ancient methods of treatment first, and, in the event of their failure, to resort to the operation. These secondary operations are always inferior to the primary ones. I wish to affirm, above all, that primary suturing of the patella, after wide opening of the knee joint, is the best and surest means of treating the fracture.—*Journal de Médecine et Chirurgie Pratiques.*

RAPID CURE OF BUBOES BY THE INJECTION OF IODOFORM VASELINE.

Prof. Poutan claims to obtain excellent results in the treatment of buboes by the injection of vaseline, impregnated with iodoform, which makes a kind of permanent iodoform dressing in the interior of the ganglion. His operation is as follows:

1. Antiseptic cleansing of the parts with Van Swieten's solution.
2. Puncture with a lancet, if the skin is thin; with a bistoury, if the pus is deep seated.
3. Evacuation of the pus, with complete expression of the liquid contents.
4. Injection of liquefied vaseline containing iodoform.
5. Dressings of bichloride cotton.

The puncture need not be made in a dependent position, as there is no subsequent flow. It should be central, so that the pus may be forced into it from all sides.

The evacuation of the pus should be complete and gradually made, although it is sometimes quite painful. The pain may be relieved by the injection of a few centigrams of cocaine around the bubo. After the expression of the pus a few syringefuls of Van Swieten's solution should be injected, to wash the walls of the pocket. The iodoform vaseline is then gently injected from a glass syringe previously charged and kept warm in water. The cavity of the bubo should be filled, but not distended. Immediately after the injection and before the fluid has an opportunity to return, a cold dressing of cotton moistened in Van Swieten's solution is applied and kept in place by a spica bandage. This process renders occlusion nearly complete, because the cold application causes the vaseline to congeal in the lips of the wound, where it forms a plug. The dressing also aids in the occlusion.

After the first day all pain disappears and improvement takes place so rapidly that cure without cicatrization takes place, upon an average, in six or seven days. In some cases it is necessary to renew the vaseline. In three months forty-one buboes were treated by this method. In more than half of this number there was a cure, on an average, in less than five days; the longest time required was twenty-three days.—*Le Scalpel—Jour. Amer. Med. Assn.*

A NEW DISINFECTANT FOR SEWAGE.

Mr. Woolheim, a Londoner, is said to have discovered a disinfectant which far surpasses anything now applied for that purpose. This is "amniol," a gas which, when introduced into a sewer, rapidly destroys the microbes of putrefaction and of disease. The odor in the sewer pipe is almost instantly displaced by that of the gas introduced, and in less than an hour the sewage thus treated is deodorized and sterilized.

Dr. Klein has in part confirmed the claims of the discoverer, in so far that one sample of sewage examined by him was found to be absolutely sterile after having been treated by the amniol method.

It is to be hoped that further experiments will soon be made with this agent, which will enlighten us as to how long the putrefactive processes can be delayed by it, and the character of microbes it is capable of destroying. If all that is claimed for "amniol" be true, then we will have a new boom in sanitation.

GYNÆCOLOGY.

A REPORT OF TWO DIFFICULT OVARIOTOMIES.

Read before the Allegheny Co. Medical Society, March 18, 1890, by J. J. Buchanan, M. D., Pittsburgh.

The three specimens of ovarian cyst which I present for examination represent two ovariotomies which were interesting by reason of the difficulties of their execution, and in one instance the unusual position of the tumor in relation to a loop of the small intestine. All were intra-ligamentous, and all were successfully enucleated by the method of the late Dr. Miner, of Buffalo.

Case I.—Operation, Dec. 17, 1889, at Mercy Hospital. This patient, a married woman, 33 years of age, without children, had noticed an abnormal enlargement of her abdomen for eight years. Of slow growth at first, this tumor had rapidly increased during the past year, and had been the cause of great pain. About one year before operation she had begun to resort to the use of morphine to relieve her pain, and had gradually increased the amount to 8 grains per day, always taken at a single dose. She had emaciated greatly, and had developed markedly the classical *facies ovariana*, now so rarely observed, thanks to early diagnosis and operation. The cyst at the time of operation was considerably larger than the pregnant uterus at term.

On the left side, above Poupart's ligament, could be felt a gobular mass, which proved to be the fundus uteri.

When the abdomen was opened the free surface of the cyst presented, and before evacuation by the trocar, everything appeared favorable.

When the contents had been partially evacuated, it was found that the cyst was implanted in the broad ligament, and its base extended over the entire width of the pelvis. After some omental adhesion had been tied off, a careful examination of the situation of the cyst was made. It had originated in the left ovary (as the position of the vessels subsequently showed) and had separated the folds of the left broad ligament, pushed its way behind the uterus, to which it was intimately attached, and imbedded itself deeply in the right broad ligament where its greatest development had taken place. A beginning of the enucleation was made by separating the peritoneal and fibrous

investment from the body of the cyst at the fundus of the uterus. The circumcision of these external layers was then continued at about the same level, and the enucleation proceeded with as rapidly as the density of the tissues would permit. A pedicle was finally made at the left cornu of the uterus, which was tied, burned, and dropped.

The tattered remains of the broad ligaments were brought together with a continuous silk suture, an aperture being left for the insertion of a glass drain into the cavity left by the growth. Several gallons of hot distilled water was used to flush the peritoneum and the wound cavity. The margins of the sac were stitched into the lower angle of the external wound and the incision closed.

The following day the patient developed an acute bronchitis, and her temperature on the second evening went to 103¾ deg., with a pulse of 140. She was very ill for six days, and it was only by the persistent use of enemata of brandy, and peptonized food, and large doses of carbonate of ammonia by the mouth that her strength was sustained. Her abdomen remained flat and the incision healed in the usual aseptic manner, the drainage tube being withdrawn on the third day.

On account of the aggravation of her cough by recumbency, she was encouraged to leave the bed on the eighth day, and on the twelfth day was walking about the room. Her recovery thereafter was uninterrupted. She has since menstruated for the first time for ten months, and since the first week after operation has taken no morphine.

Case II.— Operation Feb. 6, 1890, at Mercy Hospital. This patient was also a married woman, 36 years of age. Three years ago she noticed a lump in her left iliac region, which gradually increased in size till it was much larger than a pregnant womb at term, having doubled in size in six months. The growth was painless, and the patient, at time of operation, in robust health.

Abdominal incision revealed the tumor completely covered in front and below by adherent omentum and a strip of small intestine, which was attached to the tumor vertically from the umbilicus to the pubes, and which disappeared behind the pubic bone. By enlarging the incision above the navel, and to the pubes, room was made for manipulation. A large mass of omentum was lifted from the tumor and cut between ligatures. When this had been stripped from the tumor, a more satisfactory examination

could be made. On either side of the vertical strip of small intestine extended a thin vascular membrane, which on the left lost itself in the peritoneal investment of the tumor, and on the right was everywhere closely adherent to it. There is no doubt that this was the attenuated remains of the mesentery. The cyst was tapped high up on the left side, and a thick, yellow, ovarian fluid evacuated. As the cyst collapsed, its walls were found to pass to the lateral margins of the pelvic brim, and to be closely attached to the posterior surface of the uterus. Enucleation offered the only chance of extirpating the growth, and it was determined to make an effort to accomplish this. It was also a very serious question as to the best manner of dealing with the vertical strip of bowel which formed a sort of equator for the cyst. Its mesenteric attachment being obliterated, or rather spread out and amalgamated with the covering of the cyst, it was deemed advisable to begin the enucleation by a vertical incision through the serous coat of the cyst immediately to the left of and parallel with the strip of bowel; for on this side the covering seemed thinner. By lifting together the strip of bowel and the covering of the tumor to the right of it in a continuous layer, it was hoped that this pseudo-mesentery would afford sufficient blood supply to preserve the vitality of the gut. The enucleation proved very tedious on account of the extent of surface involved, and the tenuity of the covering which was to form a mesentery for the gut and which it was, therefore, desired to preserve intact. This, however, proved impossible, and a large rent was made in the false mesentery.

When the enucleation was complete and the pedicle secured, an examination showed that the rent above mentioned had left about ten inches of intestine without mesenteric attachment. It then became a question whether a continuous suture of this rent or a resection of the bowel would be the better plan. The former was decided upon, and a continuous silk suture was applied to the whole length of the rent, in the hope that the middle of the strip of intestine would get sufficient blood supply from anastomoses through the covering of the gut itself, and by new vessels thrown across the line of suture. Fortunately it so transpired.

The ovary was then sought for and found to be the size of a large orange, and also intra-ligamentous. It was

emptied, circumcised, and enucleated; it had no pedicle. Its contents were heavily charged with oil globules.

The operation had now occupied the major part of two hours, and it seemed hopeless to attempt any repair of the tattered remnants of the broad ligaments, even if the patient had been in condition to endure a continuance of the operation, which she was not, being in a condition of profound shock. A glass drain was therefore inserted, after profuse flushing of the cavity, and the wound closed and dressed with double cyanide gauze. For six or eight hours after being put to bed, she lay almost pulseless, and required repeated hypodermic injections of whisky and enemata of hot salt water to revive her. After reaction was established, her recovery was uninterrupted; her bowels were moved on the sixth day by repeated doses of Rochelle salts. A rise of temperature above the normal was noted on but one occasion, prior to the movement of her bowels on the sixth day, when the thermometer showed 100.5 deg. She walked out of her room on the twelfth day, and on the sixteenth left the hospital.

I have been unable to satisfy myself as to the manner in which this tumor and the small intestine assumed the relations which existed between them. Two explanations suggest themselves: the first that the subserous tumor pushed its way behind the prevertebral peritoneum and insinuated itself between the layers of the mesentery; the second, that the intra-ligamentous tumor, when small, contracted a broad adhesion to the bowel and mesentery, which latter, as the tumor grew, became greatly attenuated, as it was widely stretched and firmly glued to the surface of the growth. A more deliberate and careful examination after the enucleation of the large cyst might have thrown light upon this question, but the condition of the patient rendered it hazardous.

An interesting point in this case is that, had this woman been tapped at the usual site, the trocar would certainly have perforated the bowel.

In closing this report I cannot refrain from calling attention to the fact that these operations were both done in a general hospital, and expressing my conviction, as I did in this society five years ago, that no reason in the world exists for fencing off the abdomen from the domain of the general surgeon; and further, that special abdominal hospitals exist for the convenience and profit of their owners,

and are by no means necessary for the safety of the patients.

REPORT OF FOUR CASES OF LAPAROTOMY; TWO CASES OF INTRALIGAMENTOUS CYST, ONE DERMOID CYST, AND ONE REMOVAL OF APPENDAGES, TWO OF THE CASES REQUIRING HYSTERECTOMY.

Read before the Allegheney Co. Medical Society by X. O. WERDER, M. D., Pittsburgh.

1.—Tait's operation. Patient 38 years of age: has had five children, the youngest of which is 9 years old. Since the birth of the last child she has never been well, suffering with constant pelvic symptoms and reflex neuroses, especially severe pains about the left side of the chest; had been treating her for more than two months with hypodermic injections of morphine, gr. ¾ often being required to relieve her. Vaginal examination revealed an adherent retro-flexed uterus, with great tenderness of the uterine adnexa.

Laparotomy was performed Dec. 7, 1889. The retro-flexed uterus, which was held in its abnormal position by small fibrinous bands, was replaced, and the ovaries and tubes on both sides were removed. I had intended to perform a hysterorraphy at the same time, in order to prevent displacement of the uterus, but after removing the appendages close to the uterus, taking in the slack in the broad ligaments, I found the uterus in perfectly normal position, so I did not think it necessary to do anything further. The patient made an uninterrupted recovery, the temperature never going beyond 99.4 degrees. The veins in the broad ligaments were varicose, containing a number of phleboliths. The tubes were somewhat thickened; the fimbriæ destroyed. The right tube was adherent to the ovary, but the adhesions were separated during the operation; both tubes and parts of the broad ligaments were studded with small cysts. The ovaries were cirrhotic, the left one very small and hard, the right one consisting chiefly of a number of cysts, very little of the ovarian stroma remaining intact. While the pelvic symptoms were completely relieved, the reflex neuroses were improved, but not cured, up to the present time.

2.—Mrs. D., 42 years old, no children; was suffering with a right ovarian cyst, which had been growing for about four years. Had also an adherent retro-flexed uterus

very much enlarged. For some years she had been subject to severe menorrhagia, which during the last four months had become so severe that she was obliged to remain in bed almost half her time. These hemorrhages had weakened her down very much; she was very anæmic and had the appearance of a woman of about sixty. Operation was performed Jan. 9, 1890, Dr. J. J. Buchanan assisting. I found an intra-ligamentous ovarian cyst, the capsule completely enveloping the cyst except on its anterior aspect; the largest part of the tumor was very low down in the pelvis. The tumor was shelled out from its capsule, which, however, proved an exceedingly difficult task, as the walls of both cyst and capsule were very thin, causing them to tear through quite frequently; they were also very firmly adherent, rendering the operation very difficult and tedious. Some of the adhesions were very vascular; the hemorrhage during the operation was truly frightful; once or twice the blood welled up from the pelvis in such quantities that I feared I had torn the iliac veins. Most of the operation had to be done by the fingers, unaided by sight, as the tumor was so deep that nothing could be seen. During the dissection my fingers picked up the right ureter, which was firmly adherent to the tumor, but which I succeeded in separating without injury to the ureter. On two occasions the patient was pulseless during the operation, but was revived by hypodermics of whisky, of which several dozen were given. The operation, from the time she was placed on the table until she was removed to bed, lasted almost one and one-half hours. After the tumor had been removed I washed her out freely with hot water, which returned perfectly clear; this was repeated after placing the stitches. A pretty large quantity of water was left in the abdominal cavity to counteract the great loss of blood; a drainage tube was inserted. The patient's pulse had considerably improved upon the abdominal flushings, but, shortly after, it commenced to get weaker and weaker in spite of stimulation by mouth and hypodermically, and she died within ten hours after operation, from shock, never having rallied therefrom. About two hours after operation she had a violent fit of vomiting, which expelled a considerable quantity of bloody fluid from the drainage tube, saturating even the outer dressings, but when the nozzle of a syringe was passed down into the abdominal cavity and operated, there was only a

small quantity of dark blood withdrawn, showing that there had been no new bleeding, and that the fluid expelled from the tube was simply the water left in the abdominal cavity stained with blood.

3.—Large dermoid cyst. Hysterectomy. Mrs. G., 52 years of age, is the mother of a large family. Two years ago menopause became established. About ten months ago she noticed the appearance of a tumor, which increased very rapidly in size; for about four weeks before operation she was hardly able to leave the bed. She had several attacks of profuse uterine hemorrhage during that time, it being the first show for two years.

Laparotomy was performed Jan. 22, 1890. Found a large dermoid cyst of the size of a uterus at six months pregnancy, with universal adhesions, especially to mesentery, omentum, intestines, sigmoid flexure, and pelvic walls. Upon emptying the cyst and separating the adhesions, the tumor was brought up into the abdominal wound, when it was found that a large portion of the base of it was a solid mass which was attached to the right side of the fundus uteri. This having been detached, it was found that the uterus itself was disintegrated to such an extent that in removing the diseased mass I removed a part of the uterine wall, leaving a large ulcerated cavity with ragged edges and filled with a soft, friable and cheesy mass, which extended almost to the endometrium. There was no bleeding from this surface whatever. A hysterectomy, therefore, became necessary. An elastic ligature was passed around the cervix, the body removed, and the pedicle brought into the lower angle of the abdominal wound. There was still some free bleeding deep down in the pelvis, apparently coming from some vessels in the sacro-uterine ligaments, which had been torn in bringing up the uterus. It was exceedingly difficult to reach the source of the hemorrhage, but at last I succeeded in grasping the bleeding points with two large Spencer Wells's pressure forceps which I left attached, the handles being left outside of the abdomen. These were removed on the second and third day respectively.

The contents of the cyst were a thick creamy fluid looking exactly like pus, a large bunch of hair, and one little piece of bone attached to the internal cyst-wall. The abdomen was well flushed with hot water. No drainage tube was inserted, as a glass drainage tube in such close

proximity to the two large clamp-forceps in the abdominal cavity seemed rather risky. The abdominal wound was closed in the usual way.

This patient, from which everybody present at the truly frightful operation, including herself, gave a fatal prognosis, rallied well from the shock and made a good recovery, her convalescence at no time being complicated by any untoward symptoms. The portion of the tumor attached to the uterus, which had become softened and broken down, involving the uterine structure with its endometrium, the uterus itself being greatly enlarged, had all the appearances of malignant disease, but according to the microscopical examination of Dr. Matson, it fortunately proved to be a fibroma which, I suppose, had undergone a process of disintegration. This condition of the uterus sufficiently explains the hemorrhages which the patient had been subjected to during the last few weeks preceding the operation.

4.—Intra-ligamentous cyst. Ovariotomy and hysterectomy. Mrs. G., referred to me for operation by Dr. J. M. Stevenson, had a large ovarian tumor, which had been growing for quite a time, but which had increased more rapidly during the last few months so that it had attained the size of a full grown pregnancy. Though 67 years of age and mother of a grown up family, her physical condition was good, and she was regarded by her physician, Dr. Stevenson, and myself, a fair subject for operation.

The operation was performed Jan. 25, 1890. No adhesions were encountered; the tumor was emptied and drawn out of the abdominal cavity, but when the pedicle was reached it was found extremely large and thick, and on closer examination a part of it proved to be the uterus. It was an intra-ligamentous cyst so closely attached with its lower portion to the uterus that it was thought preferable to remove the uterus with the cyst than to attempt any enucleation, as this certainly would have been exceedingly difficult, and could not have been accomplished without a great deal of hemorrhage, as the parts were exceedingly vascular, and the veins very much dilated. It was, therefore, thought less risky, considering the age of the patient, to remove the uterus with the pedicle than to expose her to the danger of an exhausting hemorrhage. This was done without any bleeding whatever, so that the usual toilet of the peritoneum, or flushing of the abdominal

cavity, was omitted. The uterine stump was treated as in the first case, with an elastic ligature, and brought out to the lower angle of the wound, uniting peritoneum below the ligature, so as to shut out the pedicle from the abdominal cavity. The patient made an elegant and uninterrupted recovery. There was one peculiarity about this uterus. The tumor being so large that it was completely drawn out of the pelvis, necessarily drew the firmly attached uterus with it, which caused such a stretching of that organ that the lower portion of it felt like a long, hard cord included in the pedicle of the tumor. This had the effect also of stretching and elongating the vagina, the upper part of it being very much contracted and funnel shaped, the uterus being entirely out of reach.

Neither of these two cases of hysterectomy, even the one who had the large clamp forceps in the abdominal cavity for three days, ever required a single dose of opium or morphine to relieve pain; both seemed to be perfectly comfortable and contented.

Eulogy.

DR. JOHN PINTARD DAVIDSON.

On the morning of Sunday, March 30, 1890, Dr. John Pintard Davidson, having entered upon the 78th year of his age and having just completed his third year of service as president of this society, passed quietly away —— forever.

On the morning of Monday, deeply sorrowing, we followed his body to its last resting place in Lafayette cemetery and saw it laid away within sight of the quiet home that had been his these last few years.

That evening was held the regular annual meeting for the election of officers of the Orleans Parish Medical Society; but in the presence of the empty chair, the idle gavel, the members who had gathered together felt themselves unwilling, unable to name a successor; they adjourned, directing a committee to draw up resolutions to be presented at a Memorial Meeting to be held on the evening of April 5.

In obedience to that command, we, the committee, submit to you these just and moderate words of praise of one in whom justice and moderation were chief characteristics, begging your indulgence for departing from the usual forms—forms too common for the commemoration of this uncommon man.

"Oh, eloquent, just, and mightie death! whom none could advise thou hast perswaded; what none hath dared, thou hast done; and whom all the world hath flattered, thou only hast cast out of the world and despised; thou hast drawn together all the farre stretched greatnesse, all the pride, cruelty, and ambition of man, and covered it all over with these two narrow words, *hic jacet*."

So, more than 200 years ago, wrote one of the greatest, the wisest, and the wittiest of a time that teemed with the great, the wise, and the witty. To-day his words keep all the deep sense, all the penetrating sorrow of their fresh utterance. To-day we have gathered up more learning than the brilliant courtier, statesman, and poet even in his wildest flight of fancy feigned. Have we more wisdom? Have we more truth? Are we not trying to cozen ourselves into the belief that the inevitable "*hic jacet*" covers over naught but "farre stretched greatnesse," and that "all the pride, cruelty, and ambition of man" are but the false malice of life toward the living? We hear the same hollow words of praise fall like the rain of heaven upon the just and the unjust; who is to divide them? It may be an amiable weakness, but it is fast robbing the good and the brave of the last and only sure reward that mankind pays to worth and valor. The actions of the just will no longer be known from the dust into which all have returned, and unless the men of to-morrow are more sincere and manlier than their fathers, to write an epitaph will be but to pen a lie.

Over the grave of Charles Lescluse, a young botanist, was inscribed in Latin:

> Seest thou the blossoms springing from this grave?
> Earth to these ashes as her last gift flung them,
> Happy is he this resting place she gave;
> Who loved the flowers, now sleeps here among them.

The man we are met here to honor loved the truth, not the mere verbal truth that many, who are false enough, pride themselves in having, but that essential truth of character which manifests itself in a lifetime marked by a prompt and cheerful performance of duty and a close cleaving unto principle.

It was not by the possession of transcendant intellectual endowment that Dr. Davidson made so deep an impression upon his associates, both lay and medical. His intellect was broad and sound, rather than penetrating; well-balanced rather than brilliant. But if his was not the genius that changes the pace of a science, his neither was the restless and shallow cerebration that is caught and carried away by every novelty, and is constantly mistaking the callow ducklings of its hatching — begotten for the most part of suggestions from some more masculine mind — for full-fledged and resplendent swans. Nor was opportunity ever afforded to make of himself an investigator. For fifty-eight long years — from the day of his graduation, in 1832, to the very week of his death — he never put off the chafing harness of a general practitioner.

These qualities of mind, this long life of toil, gave him a calm and stable judgment, illumined and modulated by a vast and well-remembered experience, making him an invaluable consultant both in professional matters and in the emergencies of daily life.

The physical well displayed the mental man. Seated in his large chair, the hands resting upon its arms, the head bowed forward, there was something Napoleonic in the whole figure. The face expressed less surliness, less resolution, more kindliness, more humor. One saw in the short, compact, well-muscled body, the round limbs, full chest, thick, square shoulders, rosy skin, well proportioned head, energy, activity, self-reliance. So, too, it was easy to read in the bright hazel eye and the lines about it, the nose and mouth, the whole expression of countenance, those qualities which endeared him to us all

—sprightliness, humor, kindliness, justice, probity. His was the typical *mens sana in corpore sano*, and each reflected the other.

His habits were physiologically perfect. He rose early —lighting his taper for that exquisitely clean shaving, which he would no more have omitted than the washing of his face—eating moderately, almost abstemiously, exercising abundantly, and seeking rest and sleep early. Stimulants and tobacco he used very sparingly, although he kept almost constantly in his mouth a minute fragment of *Perique*, which he renewed from time to time. Thus upon occasion he could endure great fatigue, and preserved in perfection to the very end of his seventy-eight years almost every physical faculty. Conversely, his mind was absolutely unimpaired. His memory was exact and minute, and he could illustrate or adorn every occasion with an incident drawn from his own or another's experience, or from a field of reading by no means narrow. Reading was the pastime of his leisure, and to the end embraced not only standard works of general information, but the best professional books and journals. With these qualities, he never grew old or old-fogyish; and it was this combination of persistent youth with all the advantages and experience of age which rendered him so especially charming to the younger members of his profession. How he listened to them; how he encouraged them; how he aided them, always with the appearance of being one of themselves; how carefully he repressed, if he ever felt moved to utter those chilling formulæ: "You are not old enough to see the truth of that yet," or, "You will know that I am right when you are as old as I am," what young doctor does not know?

A life which had seen the rise of almost every modern invention, from the friction match to the telephone—they are commonplaces now—had passed through the vicissitudes of a four years' war, not as surgeon merely, but as captain of a company on hard-fought fields; which had

known both poverty and riches; which had brushed the lives of all sorts and conditions of men, a quick intelligent life must have gathered knowledge of the remedy for most of the remediable difficulties and disasters which beset a human pathway. To restless youth, chafing under the pain and irritation of harassing circumstances the advice given with cheerful certainty, born of long experience, that it was the best that could be done in the dilemma; or the gentle calm of conviction, that if naught could be done kindly time would at length bring relief, came like the cool air of morning after a fever-tossed night. This young-old man took no advantage of the prerogatives of age, but in silence held up to us all the untarnished mirror of a spotless life. Honesty, which has no degrees, is debased by many, alas, to the comparative, but it is impossible to say what incalculable good the example of his perfect probity did all who knew him, but particularly the members of our own profession. The fierce and cruel competition of our day, which is the parent of so many professional meannesses, heart-burnings, and wrongs, caused him not anger, but a pitying sorrow. Gently, kindly, and firmly, he set his face against it, and when he himself fell a victim, as he often did, he sighed, half smiled, and passed on in silence.

Dr. Davidson was a sincere and consistent Christian, possessing the all-embracing "charity" in the full apostolic sense. In the ordinary acceptation of the word, his charity was boundless. It was so long suffering that it was taxed to the limits of endurance, and so universal that it was universally imposed upon. Yet it never grew less. Truly, "his pity gave ere charity began." Those of us present saw evidence of this at his funeral in the quiet display of an unusually genuine grief, and read the record of his beneficence in many a tear-stained face.

The good old doctor! Small doubt that his younger friend, who loved him much, and who preceded him on

that far journey whence there is no return, had him in mind when he wrote:

The good old doctor mild as wise,
With pleasant jest for all he met;
The kindly humour in his eyes
Flashed through the lips so gravely sweet.

* * * * * *

All perilous soundings on his chart
Were pricked by faithful memory:
He knew the limits of his art
As seamen know the unfathomed sea.

* * * * * *

Not passing with averted face
The wayfarer fallen by the road,
Naked, and bruised, and in disgrace,
Fainting beneath life's bitter load.

Into his wounds the oil he poured,
Gave food and wine for benison,
Nor of his pouch's scanty hoard
Forgot the pence to help him on.

When civic strife ran fierce and high,
His was the storm-assuaging speech
That bade the wordy tumult die,
And linked the neighbors each to each.

He is gone! All that remains for us is to scatter these few, poor, dry words over the grave where the spring flowers are growing, and to return with what hearts we may to our tasks among the living. The warm heart, the active brain are still; the faithful hand is cold. He is gone, and forever!

Not utterly, the voice of duty cries; the tenderness, the courage, the devotion of such a life are immortal. Evil is but error, and weakness waneth continually; the good is the true, and the truth endureth forever.

Respectfully submitted by the committee,

Henry Dickson Bruns, M. D.,
P. E. Archinard, M. D.,
A. G. Friedrichs, M. D.,
Chas. Chassaignac, M. D.,
Committee.

[A biographical sketch of Dr. Davidson will appear in our next issue.]

Book Notices.

The Year-Book of Treatment for 1890. Philadelphia: Lea Bros. & Co., 1890.

The Medical Annual and Practitioner's Index; a work of reference for medical practitioners. Eighth Year. New York: E. B. Treat & Co., 1890.

The "Year-Books," of Lea Bros. & Co., are not strangers to the medical world, and hence do not require a formal introduction in the shape of a detailed description of their scope and contents. They are virtually small annual encyclopedias of the progress made in the department of practical medicine. All sources of information have been pressed into service in the compilation of this valuable work. The list of contributors contains only the names of British writers, each of whom is a recognized power in the field in which he works.

The "Medical Annual," like the "Year-Book," of Lea Bros. & Co., is a product (largely) of British brains, and, further, is also like it in being a very creditable production, Too much praise can not be given to those who endeavor to condense in small space the colossal amount of news furnished by the medical journals of the world. The general practitioner can not spend half of his life in looking through a mass of current literature to find the progress made in the practice of medicine or surgery. The practitioner who desires to know what real progress has been made can at a glance place himself abreast of the times by consulting either of these two valuable publications. He will there find a concise summary of the substantial additions to the sum of our knowledge in all the branches of practice. The matter has been furnished by men who exercise discrimination in the selection of their material, and present the condensed matter in a plain, intelligible way.

While these two works have the same scope, still they could both occupy positions in the physician's library at the same time without either incurring the suspicion of superfluity. The arrangement of the text is not the same in both works (that of the "International Medical Annual" being alphabetical), and, besides, a subject treated by

different men, of undoubted ability, receives illustrations and side lights drawn from each writer's experience, which impart the stamp of individuality and enhance the value of the contribution.

Such books, in these days of much journalism, have become indispensable; and the success that they have met with is a reliable index of the thorough manner in which the works in question supply the desired information to busy practitioners.

A. McS.

Medical News and Miscellany.

TENTH INTERNATIONAL MEDICAL CONGRESS—TO BE HELD IN BERLIN AUGUST 4 TO 9.

The Committee on Organization of the Tenth International Medical Congress, R. Virchow, President; E. von Bergmann, E. Leyden, W. Waldeyer, Vice Presidents; O. Lassar, Secretary General, have appointed the undersigned members of an American Committee for the purpose of enlisting the sympathy and co-operation of the American profession.

We are assured that the medical men of our country will receive a hearty welcome in Berlin. The Congress promises to prove of inestimable value in its educational results, and in securing the ties of international professional brotherhood. It is most important that the American profession should participate both in its labors and fruits.

Delegates of American medical societies and institutions and individual members of the profession will be admitted on equal terms. The undersigned, therefore, beg to express their hope that a large number of the distinguished men of our country will appreciate both the honor conferred by this cordial invitation and the opportunity afforded us to fitly represent American medicine.

The Congress will be held at Berlin, from the 4th to the 9th of August.

The arrangements in regard to a few general meetings and the main scientific work, which is delegated to the sections, are the same as in former sessions. A medico-scientific exhibition, the programme of which was published a few weeks ago, is to form an ingredient part.

It is to the latter that the Berlin Committee is very anxious that both the scientific and the secular press should be requested to give the greatest possible publicity.

The office of the Secretary General is Karlstrasse, 19 N. W., Berlin, Germany.

S. C. Busey, Washington, D. C.
Wm. H. Draper, New York.
R. H. Fitz, Boston, Mass.
H. Hun, Albany, N. Y.
A. Jacobi, New York.
Wm. T. Lusk, New York.
Wm. Osler, Boston, Mass.
Wm. Pepper, Philadelphia, Pa.
F. Peyre Porcher, Charleston, S. C.
J. Stewart, Montreal.

110 West Thirty-fourth Street,
New York, April 7, 1890.

Mr. Editor—In a letter dated Berlin, Karlstrasse, 19, March 22, Dr. Lassar, the Secretary General of the Tenth International Congress, directs me to inform the medical profession of America that a programme of the Congress and other communications will be distributed two months before the meeting amongst *those who have registered previously and received their tickets of membership*.

The latter can be obtained by sending application and $5 to Dr. Bartels, Leipsigerstrasse, 75, Berlin, S. W. By so doing the members will save much crowding and time during the first days of the Congress.

For the American committee of the Tenth International Medical Congress. A. Jacobi, M. D.

The Arkansas State Medical Society, at its annual meeting in 1889, adopted the following wise resolution:

"On motion, the committee of arrangements was instructed to prohibit, in the future, the exhibition of secret or proprietary articles in connection with the meetings of this society." L. P. Gibson, M. D., Secretary.

Antipyrin in Menstrual Colic.—Antipyrin has, of late, been given in cases of uterine colic and cramps, occurring during menstruation, with excellent results. The drug is administered in the form of a clysma in a single thirty-grain dose. The sedative action is observed in about half an hour; in some cases a repetition of the dose is called for in twelve hours. Dr. Windelschmidt has used this treatment in a number of cases, and always with satisfactory results. Usually a slight hypnotic action seemed to be also exerted by the drug. Other unpleasant accompanying symptoms, aside from sweating and slight ischuria, were not observed.—*Muchener Med. Wochenschrift, August 20, 1889.*

MORTUARY REPORT OF NEW ORLEANS

FOR MARCH, 1890.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	6	6	8	4	8	4	12
" Congestive	.....	1	.....	1	1	.....	1
" Remittent	6	1	3	4	2	5	7
" Typho	4	4	4	4	6	2	8
" Typhoid	2	....	2	.....	2	.....	2
" Puerperal	3	.....	2	1	3	.....	3
" Typho-Malarial	1	.....	.....	1	1	.....	1
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	2	.....	2	.....	.....	2	2
Diphtheria	8	1	2	7	.....	9	9
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	6	3	6	3	3	6	9
Pneumonia	38	22	36	24	45	15	60
Bronchitis	13	4	10	7	6	11	17
Consumption	37	35	40	32	72	.....	72
Cancer	13	5	7	11	18	.....	18
Congestion of brain	8	8	8	8	12	4	16
Bright's Disease, Nephritis	16	6	13	9	22	.....	22
Diarrhœa (Enteritis)	16	9	9	16	12	13	25
Cholera infantum	6	.....	2	4	.....	6	6
Dysentery	6	1	5	2	5	2	7
Debility, General	2	1	2	1	3	.....	3
" Senile	14	20	13	21	34	.....	34
" Infantile	3	4	3	4	.....	7	7
All other causes	173	83	141	115	180	76	256
Total	383	214	318	279	435	162	597

Stillborn children—White, 12; colored, 14; total, 26.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for city — White, 24.90; colored, 36.95; total, 28.20.

DIPHTHERIA RECORD FOR MARCH, 1890.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	8	1	9	4	1	5
2	3	.....	3	.....	.....	.....
3	2	1	3	.....	.....	.....
4	3	.....	3	2	.....	2
5	1	.....	1	.....	.....	.....
6	2	.....	2	2	.....	2
7	.....	.....	.....	.....	.....	.....
	19	2	21	8	.....	9

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—MARCH.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	39.0	47.0	31.0	.02
2	38.0	45.0	30.0	.....
3	46.0	56.0	36.0	.....
4	53.0	65.0	41.0	.....
5	60.0	67.0	53.0	T
6	61.0	66.0	56.0	.01
7	57.0	65.0	49.0	.04
8	54.0	61.0	46.0	.10
9	55.0	62.0	48.0	.....
10	62.0	73.0	52.0	.....
11	69.0	76.0	62.0	.....
12	72.0	80.0	63 0	.....
13	70.0	79.0	62.0	.02
14	50.0	53.0	46.0	.90
15	54.0	65.0	43.0	.....
16	49.0	58.0	40.0	.....
17	56.0	71.0	42.0	.....
18	67.0	75.0	59.0	T
19	72.0	80.0	65.0	.....
20	73.0	79.0	67.0	.....
21	74.0	78.0	69.0	T
22	72.0	75.0	68.0	.....
23	66.0	75.0	57.0	.....
24	64.0	75.0	54.0	.....
25	70.0	77.0	64.0	.36
26	69.0	77.0	61.0	.....
27	73.0	80.0	66.0	.....
28	70.0	76.0	65.0	.....
29	60.0	70.0	51.0	.....
30	65.0	77.0	53.0	.....
31	70.0	80.0	60.0	.....
Sums	....	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.114.
Highest barometer, 30.486, 2nd.
Lowest barometer, 29.765, 21st.
Mean temperature, 61.6.
Highest temp., 80, 19th; lowest, 30, 2nd.
Greatest daily range of temp., 29.0, 17th.
Least daily range of temperature, 7.0, 14th.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..64.6	1876..59.5	1881..59.6	1886..58.6
1872..58.9	1877..60.7	1882..67.9	1887..62.1
1873..60.2	1878..66.4	1883..61.7	1888..61.3
1874..66.3	1879..64.5	1884..64.8	1889..61.0
1875..63.3	1880..65.5	1885..58.4	1890.. —

Total deficiency in temp. during month, 35.
Total excess in temp. since Jan. 1, 464.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 45 miles, S., on 21st.
Total precipitation, 1.45 inches.
Number of days on which .01 inch or more of precipitation fell, 7.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875.....10.84	1880..... 6.66	1885.... 6.99
1876.....11.32	1881..... 2.75	1886.... 8.41
1877..... 4.94	1882..... 0.92	1887.... 3.37
1878..... 4.63	1883..... 5.01	1888.... 6.45
1879..... 1.36	1884..... 8.24	1889.... 3.86

Total deficiency in precip'n for month, 4.69.
Total deficiency in precip'n since Jan. 1, 11.40.
No. of clear days, 15. No. of partly cloudy days, 8. No. of cloudy days, 8.
Frosts, killing on 1st and 2nd, light on 3rd.
Dates of lunar haloes, 30th. Thunder storm on 13th. Mean Max. Temp., 69.8; Mean Min. Temp., 53.5.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

JUNE, 1890.

ORIGINAL ARTICLES.

No paper published or to be published in any other medical journal will be accepted for this Department. All papers must be in the hands of the Editors on the first day of the month preceding that in which they are expected to appear. A complimentary edition of twenty-five reprints of his article will be furnished each contributor should he so desire. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.

Notes on Examination of the Urine, of Sputum, and of Tumours, from the Pathological Laboratory of the Charity Hospital, New Orleans.

By HENRY DICKSON BRUNS, M. D., Pathologist.

In the preparation and presentation of these notes, beyond the hope of contributing a few items of information, I have been actuated by a further motive. I have hoped, by drawing the attention of my colleagues to the interesting facts that may be elicited or ideas suggested by a review of even the scant data furnished to me in connection with the examination of urine, fluids, and pathological specimens from their patients, to arouse their interest and persuade them, first, to call the microscope to their aid in the elucidation of their cases more frequently; and, second, in so doing to put the pathologist in full possession of every noteworthy clinical fact and symptom. It is only by complete coöperation between the clinician and pathologist, that the information gathered and supplied by the latter becomes of any value. The appearance presented by a certain tissue or tumour may be curious and interesting, but until we know that it was accompanied by such and such clinical appearance and symptoms it can not

possess much practical value. Now you will see that during the past year the pathologist has not once been called to examine the blood of a malarial patient, although the literature of the time has teemed with descriptions of the organisms said to be present in this disease, and Osler has asserted that he considers them of as high a diagnostic value as the tubercle bacillus, and that an examination of the blood of patients suspected of having malaria has become as routine a matter in his practice as the examination of the urine on other indications.

Examination of Urine.

From November 7, 1889, to January 1, 1890, there were examined in the department 128 specimens of urine. It is useless to trouble you with a consideration of the specimens examined before the first date, when the old order gave place to the new. Before this time examinations of urine were made and the reports written by the resident student assigned to the department, whether he had any previous training or experience in the kind of work or not. The specimens were brought from the wards in all sorts of vessels and bottles of doubtful cleanliness, and labeled with the ward and bed numbers only. The labels, we have reason to believe, sometimes became changed during transportation. Since November 7, every ward in the hospital has been furnished with jars for this purpose. These jars can be hermetically closed, and being wide-mouthed are easily cleaned. When emptied of their contents in the laboratory, they are immediately rinsed thoroughly and filled with a mixture of hydrochloric acid one-third and water two-thirds, and returned to the wards. There they remain filled with the acid solution until they are to be used again. Each ward is also furnished with a number of commercial Manilla tags, which are tied firmly to the jars.

The tags bear on one side the numbers of the ward and bed, the date, and names of the physician and resident student requesting the examination, and on the re-

verse there should be the race, sex, age, of the patient, the duration of his illness, prominent symptoms, clinical diagnosis, and all other noteworthy points in the case. There should be, I say, but it is astonishing how difficult I have found it to elicit even the bare facts I have enumerated. My confrères do not seem to realize the importance of this work, and usually leave it to be done by the student of the ward, who can not be expected to be so far advanced in his profession as to be able to distinguish the essential from the non-essential—a matter always of difficulty. However, a certain amount of interesting matter has been gathered together.

From November 7, 1889, to January 1, 1890, there were examined in the department 128 specimens of urine, seventeen being reëxaminations.

ALBUMEN.

Of the 111 specimens, forty-eight contained albumen (reëxaminations not counted); thirteen of the forty-eight contained a trace; twelve ranged from about 1 per cent to 5 per cent (inclusive); nineteen from 6 per cent to 25 per cent; and four from 26 to 50 per cent moist albumen. Of the forty-eight containing albumen, the presence of this material was accounted for by the contained pus in eight instances. One, a case operated on for stricture, urinary abscess, etc., in which the wound was still unclosed. In one, nephritis was suspected. One, a pregnant woman with lower extremities œdematous (pus one-fourth by bulk; 5 per cent albumen). Two were cases of mitral insufficiency, with œdema of the face and extremities. The other three cases were ordinary cases of cystitis. Forty cases then, in which albumen was found were due to renal disease.

Of these the age was not given in	17
Between 10 and 25	5
Between 30 and 40	7
Between 40 and 50	2
Between 50 and 60	7
Over 60	2
	40

Of the forty, twenty-nine were males, eleven females; twenty-six were white, and fourteen negroes, or of mixed blood. Of the forty, thirty-four were acid in reaction; five were alkaline, and one neutral. The specific gravity ranged from 1005 to 1025 The relations are more exactly shown in the following table:

TABLE No. 1.

	Acid.	*Alkaline.*	*Neutral.*	*Specific Gravity.*
Seven (7) specimens containing a trace	7	0	0	1010-25; av. 1015+
Sixteen (16) specimens containing from 1 to 5% (inclusive)	13	2	1	1005-24; av. 1012
Fourteen (14) specimens containing from 6 to 25% (inclusive)	12	2	0	1006-23; av. 1014+
Three (3) specimens containing from 26 to 50% (inclusive)	2	1	0	1019-24; av. 1021

Albumen was associated with casts in twenty-one of the forty specimens. The following table (No. 2) shows the amounts of albumen with which the casts were associated:

TABLE No. 2.

	Trace.	*1-5% (Inclu.)*	*6 to 25% (Inclu.)*	*26 to 50% (Inclu.)*	*Totals*
Epithelial c'ts	0	0	3	0	3
Granular casts	1	5	3	0	9
Hyaline casts..	2	4	1	2	9
Totals..	3 (42+%)	9 (56+%)	7 (50.%)	2 (66+%)	21
No casts	4	7	7	1	19
					40

The symptoms were not reported in twelve cases.

The table, No. 3, shows the relation to the albumen and casts in the twenty-eight cases in which the symptoms were reported.

TABLE No. 3.

	With casts.	*Without casts.*	*Totals.*
Heart lesion	2	1	3
Œdema of face	3	3	6
Œdema of lower extremities	4	3	7
Anasarca and ascites	3	3	6
Pregnancy with convulsions	1	1	2
Pregnancy with persistent vomiting	1	0	1
Uræmic convulsions	3	0	3
Malaria	1	1	2
Pneumonia	1	1	2
Scabies and tinea circinata	1	0	1
Phthisis pulmonalis	1	0	1
Apoplexy	1	0	1
Symptoms not reported	0	0	12

There was one specimen from a case of frequent and painful urination; one from a case of stricture with urinary fistula; and four specimens from cases of cystitis, in which the amount of albumen was too large to be explained by the causes given; and moreover, in two of the cystitis specimen casts were found. Nothing could better illustrate the importance of an examination of the urine than these cases, for the finding of the pathologist must have led the clinician to regard them from a point of view widely differing from his first. The same is true of case 22, a white boy 11 years old, of German parentage. When admitted he had been ill ten weeks and had been under treatment for cerebro-spinal meningitis. He was having convulsions, looked drowsy, the eyes were crossed, and he was subject to crying spells. An examination of the urine showed 10 per cent of moist albumen and at once settled the diagnosis. He was placed under suitable

treatment, when he at once improved greatly and the albumen diminished to a trace. And now observe: The first examination of the urine was made on November 22. and thouhg five examinations were made from time to time no casts were found until January 6. when granular and hyaline casts were found in abundance. though the albumen had sunk to a conspicuous trace. Casts have persisted up to date (March 8). Although the books contain many cautions concerning the examination and reëxamination of the urine. the extreme importance of these examinations is rarely realized until we are brought face to face with such a case. It is interesting to observe that of the three cases in which albumen was found during pregnancy, casts were observed in two.

SPECIMENS NOT CONTAINING ALBUMEN.

Casts.—Not only were casts found in twenty-one specimens containing albumen. but in the sixty-three specimens not containing albumen they were found six times, 9½ per cent. One was a case of uræmia. in which albumen. 1 per cent, was found on first examination. then disappeared (though the hyaline casts persisted) to reappear after a month's time as a conspicuous trace. Here the specific gravity was 1019 when the albumen was 1 per cent; fell to 1010—1009 when it disappeared. and rose to 1021 when it reappeared. The reaction was acid. In one case two examinations were made at intervals of some days, and on both occasions hyaline casts were found. At the first examination there was a heavy sediment of uric acid crystals. The reaction was acid, the specific gravity 1025-1029. Such a case teaches the important lesson, that because the urine on two occasions contains no albumen and has a rather high specific gravity and correct reaction, we can not eliminate the presence of grave disease of the kidneys unless we have made a carefully microscopic as well as chemical examination. The patient was a negro, about 40

years of age, but unhappily no clinical notes were sent to me. Another of these cases was a white man, æt. 40, who suffered from an abscess of the nates of three years duration. The casts found were hyaline, the reaction of the urine acid, and its specific gravity 1027.

A fourth was a negro about 40, ill of endo-carditis and general anasarca. Large numbers of hyaline and finely granular casts were found; the reaction was slightly acid, and the specific gravity 1020.

A fifth was an old white man, who complained of pains in the back, dizziness, and dimness of vision, and had slight œdema of the lower extremities. The urine contained a few granular casts; its reaction was acid, and its specific gravity 1023.

In the sixth case crystals of uric acid were found and hyaline casts. The reaction was strongly acid, and the specific gravity 1023.

The average specific gravity of these six cases was 1021+.

OTHER ABNORMAL AND UNUSUAL CONSTITUENTS.

The following table shows the other abnormal and unusual constituents found in the sixty-three specimens not containing albumen, and the relation of these constituents to age, sex, and race:

TABLE No. 4.

	AGE.		SEX.		RACE.		
	5-20	21-	M.	F.	W.	B.	
Spermatozoa	.....	.....	3	.....	3	.....	3
Blood corpuscles	.....	2	3	.....	3	.....	3
Urates	1	3	3	2	2	3	5
Uric acid.	1	4	3	5	6	2	8
Calcium oxalate.	1	7	6	2	8	.....	8
Totals	3	16	18	9	22	5	27

Total males	77	Total whites	80
Total females	34	Total blacks	31
	111		111

Table No. 5 gives the relations to symptoms so far as these have been furnished me. Thrice in the one hundred and eleven examinations were itch insects (acarus scabiei) found, and thus the physician obtained from an examination of the urine an unexpected but useful indication.

TABLE No. 5.

	Symptoms not given	*Edema of face*	*Edema of lower extremities*	*Frequent urination*	*Painful urination*	*High temperature*
Spermatozoa	3	.....	.....	.....	.....	.....
Blood corpuscles	1	.....	.....	.....	.....	.....
Urates	2	.....	1	1	1	1
Uric acid	1	.....	1	1	1	.....
Calcium oxalate	.....	1	1	1	1	.....

	Weakness and dizziness	*Pain in back*	*Stricture of urethra*	*Dysmenorrhœa*	*Premature delivery*
Spermatozoa	.....	.....	.....	.....	.....
Blood corpuscles	.....	.....	.....	.....	.....
Urates	.....	.....	.....	.....	1
Uric acid	1	1	.....	.....	1
Calcium oxalate	.....	1	1	1	.....

	Entometritis	*Alcoholism*	*Murmur at apex*	*Acute synovitis*	*Senile gangrene*	*Tertiary syphilis*	*Catheter broken in bladder*	*"Bright's disease"*
Spermatozoa	....	....	....	....	....	....	....	....
Blood corpuscles	....	....	....	....	....	1	1	....
Urates	....	....	1	....	....	....	....	....
Uric acid	....	1	....	....	....	....	....	3
Calcium oxalate	1	....	1	1	1	....	1	....

Finally I have had occasion to observe, that at times when a specimen having an acid reaction contains but a very faint trace of albumen, and the ring test with nitric acid is applied, the acidity at the point of junction of the acid specimen and the nitric acid is sufficient to dissolve the small amount of albumen, and no ring appears; but if the specimen be rendered slightly alkaline, either before making the test, or by adding very carefully a little alkali to the urine standing upon the nitric acid, the characteristic ring appears. This is not to be confused with the cloud of mucous which appears as the urine becomes alkaline; for if the test be allowed to stand for a few minutes, this mucous cloud lifts, its lower border being marked by a fine, sharp, white line, and below is left a clear space at the lower portion of which, just at the junction (usually high coloured) of the urine and acid, is seen the faint nebulous ring characteristic of a trace of albumen. This, it seems to me, is a matter of no little importance.

Examinations of Sputum.

During the year 1889 sixty-three specimens of sputum were examined for the tubercle bacillus in the department. The patients were: White, 58; negroes or mixed blood, 5; males, 42; females, 21. Bacilli were found in 29 specimens; none in 34. Further analysis shows that in the whites bacilli were found in specimens from 19 males and from 7 females; they were not found in specimens from 21 males and from 11 females. In the blacks they were found in specimens from 3 females, and not in specimens from 2 males. The age of the patients was only furnished me in 4 cases. Of course no indication of any value can be drawn from these small figures, especially as they contain sources of fallacy, which can only be partially eliminated by a consideration of a vast number of cases. Thus some physicians have the sputum examined in a larger number of their pulmonary cases than others, and it depends upon the kind of wards these may be serving in, whether white or black, male or female cases,

shall predominate in our tables. Again, some must be more expert diagnosticians than others, and as the sputum is only examined where phthisis is suspected, the cases of the former will furnish a larger percentage of instances of the finding of the bacillus. Something, however, can be done (it can not be done in considering the examinations of urine, as many urine specimens come from out-cases,) by using the percentage method. Thus, during the year there were treated in the hospital 4,507 white patients; hence the sputum was examined (fifty-eight cases) in but 1.22 per cent of all the white cases. Of the cases examined, 44.8 per cent had bacilli in the sputum; hence .54 per cent of all the white patients in the hospital during the year *are known* to have had the bacillus in their sputum. Or, we know that 442 white patients were treated for diseases of the respiratory organs during this year, the sputum was examined (fifty-eight cases) in 13+ per cent; of cases examined4 4.8 per cent had bacilli in the sputum; hence 5.8+ per cent of the white patients with diseases of the respiratory system *are known* to have had bacilli in the sputum. Of the 1,938 negro patients, 259 were treated for diseases of the respiratory organs; of these the sputum was examined (five cases) in 1.8 per cent; of the cases examined the bacillus was found in 60 per cent; hence 1.08 per cent of the negro patients with diseases of the respiratory organs *are known* to have had the bacillus in the sputum. It is to be regretted that the sputum of the negro cases was so seldom examined. However, the percentage of the finding of the bacillus in the specimens examined shows a remarkable agreement—44 per cent in the whites, 60 per cent in the negroes. I greatly desired to extend this analysis to the questions of sex and age in the two races, but unhappily the ages of the patients from whom the sputum was derived were furnished me in only four instances, and the tables contained in the hospital report for 1889 contain no statement of the age or sex of the patients treated during the year.

Three cases seem to me to be worthy of citation:

1. A white woman, who had malarial fever and an enlarged spleen, had been coughing for some time, but owing to her enfeebled condition a thorough examination could not be made. Phthisis was suspected, but careful examination of the sputum showed no evidence (bacilli) of the disease.

2. A patient of Dr. A. B. Miles, a resident of Donaldsonville, La., a young white man, had acute bronchitis four years ago, and ever since has had a morning cough with free expectoration. Some time ago he spent a while in Texas, and returned much improved. He still has the same morning cough, but very lately pain in the neck and shoulder blade. Physical signs of chronic bronchitis; one side of chest "not what it should be," (shape etc.) In good flesh and colour, no hectic or night sweats; appetite and strength normal; doesn't feel sick. An examination of the sputum showed it "swarming with tubercle bacilli," and he was advised accordingly.

3. A white man, æt. 28, a patient of Dr. Miles, from north Louisiana, gave a history of winter cough for two or three years, the cough being aggravated and the expectoration increased during the past six months. There is also a history of fevers, and at 4 P. M on November 6 the temperature was 102⅖ F. On physical examination the doctor found a slight depression under the right clavicle, with increased voice sounds; in the apex of the left lung a few moist (subcrepitant râles). An examination of the fresh sputum showed (as had been expected), the "bacillus tuberculosis in fair numbers and of very large size."

TUMOURS.

Variety of tumour.	*Race.*	*Sex.*	*Age in years.*	*Point of origin.*	*Duration.*	*Remarks.*
1. Epithelioma	N.	F.	.....	Clitoris	.....	Very young.
2. Epithelioma	W.	F.	.....	Skin of forearm.		
3. Epithelioma	W.	.....	.....	Skin of cheek	.....	Originates from epithelium of hair follicles and sweat glands.
4. Epithelioma	W.	F.	*18	Skin of cheek	More than 1 year	Treated with caustics, etc.; did not seem to go deeper than subcutaneous connective tissue.
5. Epithelioma	W.	F.	*35	Skin of nose	Rapid growth	Proliferation of cells of sebaceous glands, hair follicles, and sweat glands. Vessels infiltrated with indifferent cells; size, about ⅓ by ¼ inch. Rough, papillary, and sebaceous-looking surface. Well circumscribed.
6. Epithelioma	N.	F.	.....	Vulva	Two years	When first seen, one year ago, seemed to be phagadenic chancroid. Now more extensive, involving vagina up to uterus. Microscopically, appears to be epithelioma.
7. Epithelioma	W.	M.	.....	Skin of hand.		
8. Epithelioma	N.	M.	.....	Corneal limbus	.....	Caused sharp pain, which ceased on removal of growth.
9. Epithelioma	N.	M.	.....	Penis.		
10. Epithelioma	.....	F.	.....	Cervix uteri.		
11. Epithelioma	W.	M.	.....	Skin of cheek.		
12. Epithelioma	W.	M.	.....	Tongue.		
13. Epithelioma	W.	M.	.....	Infra-clavicular skin		
14. Epithelioma	N.	F.	.....	Skin about orbit.		
15. Epithelioma	W.	M.	50	Skin on dorsal surface of foot	About 3 years	Injury to foot. Scab began to form on cicatrix and was often rubbed off, and gradually growing larger and larger, present growth was formed; pain at night; enlarged gland from groin inflamed but not infiltrated.

16. Epithelioma	W.	M.	54	Under surface of base of tongue	More than 1 year	Larger than a walnut. Gland from neck densely infiltrated.
17. Epithelioma	W.	M.	30	Skin of cheek	Two years	Patient tuberculous, and growth supposed to be the same. Stained for the bacillus. Incipient epithelioma.
18. Epithelioma	N.	M.	40	Penis—glands and prepuce	Eight years	Indurated edges. No glandular enlargement.
1. Carcinoma.	N.	F.	.....	Stump of arm	Four months.	Secondary growth after amputation for primary. Connective tissue sarcomatous.
2. Carcinoma	N.	F.	.....	Breast	Three years	Scirrhus.
3. Carcinoma	W.	F.	.....	Cervix uteri.		
4. Carcinoma	N.	F.	.....	Cervix uteri.		
5. Carcinoma.	W.	F.	.....	Breast		Scirrhus.
6. Carcinoma	N.	F.	.....	Breast		Scirrhus.
7. Carcinoma	W.	F.	.....	Breast		Scirrhus.
8. Carcinoma	N.	M.	.....	Thigh.		
9. Carcinoma	W.	F.	.....	Ovary.		
10. Carcinoma	N.	F.	.....	Breast		Last stages of inflammation, suppuration, and formation of fibrous tissue.
11. Carcinoma	W.	M.	.....	Lymph gland from temporal region		This gland was so densely infiltrated by epithelial cells from the primary growth that nutrition has failed. The infiltrated epithelial cells are greatly degenerated, and many of the new-formed capillaries have broken down, causing hemorrhage. Embryonic connective tissue greatly increased.
12. Carcinoma	N.	F.	.....	Breast		Scirrhus.
1. Sarcoma	N.	F.	.....	Muscular aponeurosis of forearm		Mixed; small round, and spindle celled.
2. Sarcoma	N.	M.	.....	Thigh		Mixed; large round, and spindle celled. Mucoid degeneration.
3. Sarcoma	N.	M.	15	Leg, probably subcutaneous connective tissue	Several months	Tumour was about the size of hen's egg;

TUMOURS—*continued.*

Variety of tumour.	*Race.*	*Sex.*	*Age in years.*	*Point of origin.*	*Duration.*	*Remarks.*
						growing rapidly one month. Points show round cells, with fine, well developed connective tissue; points are almost myxomatous, while the larger part of the growth is an attempt at the formation of fibro-cartilage.
4. Sarcoma	N.	M.	.....	Testicle	Six months	Round celled. Began in testicle itself, and grew rapidly. Skin involved. Inguinal glands not involved. Large as two fists. No ulceration. Father died of "cancer of face."
5. Sarcoma	W.	M.	.....	Connective tissue of shoulder	Five years	Small spindle celled. Loose and circumscribed.
6. Sarcoma	W.	M.	(†)	External surface of calf. Apparently periosteum of fibula	About 4 months	Tissues infiltrated and glands in Scarpa's triangle enlarged. Examination of these glands shows inflammation simply. In many places the coats of arterioles proliferating, and appearances indicate embolism from tumour.
7. Sarcoma				Foot		Small spindle celled.
8. Sarcoma				Parotid region		Round celled.
9. Sarcoma	W.	M.		Connective tissue of skin of thigh		Fibro-sarcoma. Epithelial and papillary layers much hypertrophied.
10. Sarcoma	W.	M.		Mesentery		Large round celled. In last stages of purulent and cheesy degeneration. Tumour appeared in abdomen about two years after removal of what was clinically diagnosticated sarcoma of testicle, for which castration was done.

11. Sarcoma	W.	F.		Neck		Seemed to be small round celled. The differential diagnosis between this and granulation-tissue had to be left to clinician.
12. Sarcoma	W.	M.		Scrotum	Six months	Small spindle celled. Painless.
13. Sarcoma	W.	F.	*12	Sheath of optic nerve		Small round celled, undergoing fibrous changes.
14. Sarcoma		M.		Thigh near femur		Round celled.
15. Sarcoma		M.		Testicle, epididymis		Small spindle celled. Body of testicle not involved.
16. Sarcoma	W.	F.		Sacral region		Small spindle celled. Thought (clinically) to be granulation tissue.
17. Sarcoma	W.	F.		Breast		Round celled. Gland from axilla showed round celled infiltration; undergoing cheesy degeneration.
1. Fibroma	N.	M.	18	Gluteal region	Five years	Healthy boy. Central parts undergoing mucoid degeneration.
2. Fibroma	N.	F.		Roof of mouth		Fibrous polyp, which has undergone calcification, with an attempt at bone formation at points.
3. Fibroma	N.	F.		Parotid region		Fibrous tissue predominates.
4. Lymphadeno-fibroma	W.	F.		Nose		Polyp.
5. Fibro-chondroma	N.					Fibrous tissue predominates.
1. Adenoma	W.	F.	22	Breast	Four years	Clinical diagnosis: Simple fibroma. Infiltration and hyperplasia of connective tissue. In glandular acini cell proliferation very active.
2. Adenoma	W.	F.	17	Breast		Hyperplasia of connective tissue and liquefaction of epithelium of many acini forming cysts.
3. Lymph-adenoma				Parotid region.		
4. Lymph-adenoma	N.	F.		Os uteri.		

TUMOURS—*concluded.*

Variety of tumour.	*Race.*	*Sex.*	*Age in years.*	*Point of origin.*	*Duration.*	*Remarks.*
1. Myoma (fibro-)	....	F.	....	Uterus.....	....	Polyp.
1. Papilloma	W.	M.	38	Side of tongue. Submaxillary lymph gland.....	Five or 6 months	First noticed ulcer, and some three or four weeks later swelling under jaw. At time of operation involved portion of left side of tongue and floor of mouth. At one time thought syphilitic. Growth and gland inflamed.
1. Epithelio-sarcomatous fibroid	W.	M.	60	Forearm near axilla..	About 1 year..	A tumour, thought to be sebaceous, was removed and this has grown in its place. Mixed type. The major portion is dense, elastic connective tissue, but in many spots shows a structure like round (small) celled sarcoma. The epithelium has become greatly hypertrophied, and penetrates deeply the corium, as in epithelioma, yet the appearances are not perfectly characteristic. Everywhere the vessels are engorged; their coats proliferated, and there are multiple hemorrhages. The tumour seems to be one which stands on the border of benignity and malignancy. I can not call it a sarcoma nor an epithelioma, yet it is sarcomatous and epitheliomatous; hence I have called it an epithelio-sarcomatous fibroid.

*About. †Youth.

TUMOURS.

Deducting all reëxaminations, there were fifty-nine specimens of tumour (neoplasms) examined in the department during the year ending December, 1889. Of these eighteen were epitheliomata, twelve carcinomata, seventeen sarcomata, five fibromata, four adenomata, and of fibro-myomata (uterine fibroid), papillomata, and of epithelio-sarcomatous fibroid, one each—a total of fifty-nine. These fifty-nine cases I have tabulated carefully, setting forth all the information furnished me by the clinician and the main facts established by the microscope.

As to the percentage among our population of fibromata and papillomata, these statistics are not now, and probably never will become, reliable, as these growths are almost always recognized clinically and but rarely submitted to the pathologist. Of fibromata and papillomata (again) probably only those which might be mistaken clinically for sarcomata on the one hand, and for epitheliomata on the other, ever find their way to the laboratory. With epitheliomata, carcinomata, sarcomata, and adenomata, the case is different.

The correspondence of the number of cases reported from the pathological department and those given by clinical diagnosis in the Hospital Report of 1889 is quite close. Thus there are reported clinically fourteen cases of epitheliomata against the sixteen hospital cases reported from the department (two of the cases in the table are private cases); sixteen cases of carcinoma against twelve in my table (certain cases of scirrhus are easily recognized clinically, and not sent for examination); twelve cases of sarcoma against fifteen hospital cases reported from the department (two cases in the table were private cases); a total of forty-four cases reported pathologically, against forty-two reported clinically. From this I think it may be seen that in time these statistics of the occurrence of epitheliomata, carcinomata, sarcomata, and adenomata, determined by actual microscopical examination will as-

sume a high value. I shall not, for the present, enter upon a consideration of any class of tumours except the

EPITHELIOMATA.

Here the facts seem to have certain definite indications. In the first place, there is confirmation of the view now held by many, and in which I share, that epithelioma takes origin from some long-continued irritation of epithelial tissue. This is seen in cases 4, 5, and 15. Let us consider these cases.

Case 4 was a young girl in good circumstances upon whose cheek a small sore made its appearance. For some reason, unknown to me, a treatment by many caustics and other applications was begun, under which the ulcer rapidly grew worse and larger. A well-known surgeon of the city being called in, advised immediate excision. The tumour had now been growing for over a year, but on removal did not seem to go deeper than the subcutaneous connective tissue. The portion removed was sent to me for examination, and on February 8, 1889, misled by the overwhelming infiltration and proliferation of the connective tissue, the clear delimitation of the invading epithelial columns, and their singular freedom from "nests," I put the cart before the horse, and made my diagnosis "Sarcoma, with epitheliomatous proliferation of the epidermis." Unfortunately the growth returned, and in the early part of October a secondary growth was removed, which, I regret to say, was not submitted for examination. There now appeared a localized swelling in the parotid region, and yet another surgeon being called in, it was removed and sent to me. On October 11 I returned a report that the specimen was a lymphatic gland infiltrated with young epithelial cells, and much inflamed as the result of the irritation caused by the foreign invasion. The epithelial cells were arranged in ill-defined acini. A reëxamination of the primary tumour, in the light cast by the condition of this infected gland, assured me that it was a

much-inflamed epithelioma Finally nodules appeared in the breasts, and examination (December 12, 1889,) showed that these were also lymphatic glands, so densely infiltrated with very young, really embryonic, epithelial cells, that the original lymphatic tissue was only to be recognized with difficulty. Here the arrangement of the epithelial cells was in quite definite roundish or cylindrical acini with thin connective tissue partitions.

Case 5 was a white woman, also in comfortable circumstances, about 35, and apparently in good health, though she had had syphilis in a mild form. The little neoplasm was only about ⅓x¼ inch, well circumscribed, with a rough, papillary, and sebaceous-looking surface. It was situated upon the bridge of the nose at its most prominent point and where the skin was drawn tightly over the bone. Microscopic examination shows the whole epithelial layer of the skin much thickened and raised here and there into prominent papillæ covered with several layers of horny epithelium. The true papillæ have almost entirely disappeared. Wherever a sebaceous gland opens on the surface, or a hair protrudes, the mouth of the sebaceous duct is dilated and filled with dried sebaceous matter, and the epithelial cells composing its thickened walls are much flattened by pressure. The sebaceous glands themselves contain much hardened secretion, and their cells are proliferated, and the epithelial portion of their walls increased in thickness. The same epithelial proliferation is seen in the cells of the hair follicles and the sweat glands, the lumen of the latter being almost obliterated. The walls of the blood vessels are densely infiltrated with indifferent cells, the subcutaneous connective tissue but slightly. We can not doubt, I think, that we have here the beginning of an epithelioma, the cause of which lies in the irritation produced by obstruction to the escape of sebaceous matter, probably produced in excessive amount.

Case 15.—A negro labourer, aged about 50 years, injured the dorsal surface of his foot about three years ago. Soon

a scab began to form upon the cicatrix; this was frequently rubbed off, and gradually growing larger and larger, the present growth was formed. He had pain in the foot at night, and a clinical diagnosis of epithelioma having been made, the growth was removed and sent to me for examination (November 14, 1889). Subsequently (December 19, 1889,) an enlarged gland was found in the groin, removed, and also submitted for examination. The tumour itself proved to be a very rank epithelioma; the surface composed of a thick layer of epithelial cells flattened and otherwise changed superficially and gradually assuming the characteristic "prickle cell" form in the deeper portions, where it sends thick and thin cylinders (of these epithelial prickle cells) ramifying into the subcutaneous tissue in every direction. By these ramifying cylinders the connective tissue is cut into islets and promontories of very various shapes. The connective tissue is quite free from infiltration, and in this specimen can be clearly made out a fact which has been gradually attracting my attention in other specimens of the same kind of neoplasms. These connective tissue islands and promontories possess all the characteristics of papillæ. In the centre we find a blood vessel, or vessels; this is surrounded by a loose connective tissue extending net-like from the vessel to the nearest epithelial cells—undoubtedly a circumvascular lymph space—and these epithelial cells bordering the circumvascular connective tissue net are arranged with their longer axes perpendicular to the border of the space, and are pressed together so as to give the appearance of a coating, covering, or epithelial sheath to the space, just as in the case of the normal papillæ. Such appearances far below the surface of the skin indicate that the epitheliomatous cells penetrating along the lymph tracts bring about in the invaded connective tissue changes resulting in an attempt to form a papillary layer—new-found vessels surrounded by lymph spaces, and covered with a condensed layer of the epitheliomatous cells. In

other words, we are led to think of the epithelioma, not as a mass of epithelial cells swarming down into the connective tissue, but as a tumour composed of imperfect skin, a mere embryonic mass struggling to form skin, but which, while possessing the conditions of growth, does not possess the conditions to successful development. And such a view will, I believe, have a practical value when we proceed to the removal of the growth; we will cut deeper and more freely.

Even in these eighteen imperfectly studied cases, then, we find three (almost 17 per cent) in which we can trace an indubitable local cause. Doubtless, if the clinician had been able, such a cause could have been traced in a far larger number of the cases, for the indications point strongly in that direction. Thus we can not doubt that Case 3 is precisely similar to Case 5, and owns the same cause, obstruction of the sebaceous glands a greasy skin Here the bulk of the tumour lies below the level of the papillary layer, through which the course of the hairs, sweat, and sebaceous ducts, can be traced by their proliferated epithelial (epitheliomatous) cells, confusedly pressed into nests, globules, cylinders, etc., traces of former glandular structure. But although we can only trace these three cases directly to a local cause, it may be seen by glancing at the column "Point of Origin" in the table, that with the exception of those occurring in the infraclavicular skin and the skin about the orbit, all of these epitheliomata occurred at points peculiarly liable to injury or irritation—the clitoris, skin of forearm, skin of cheek, skin of nose (sebaceous retention), vulva, skin of hand, of foot, corneal limbus, penis (glans and prepuce), cervix uteri, tongue (broken teeth).

It is evident that we can not always call in age to explain the origin of these growths; for Case 4 was not more than 18 years of age, Case 5 not over 35, and Case 17 not over 30. It is probable, also, that there is something more than the local injury or irritation at work in the production of

an epithelioma; for thousands of such injuries do not result so unhappily. It is true that Case 5 had formerly been the victim of syphilis, but she was perfectly free of all symptoms of the disease at the time the growth appeared. Case 17 was tuberculous; but Case 4, in which the disease ran a very malignant course, was an apparently healthy young girl. It is interesting to compare the latter case with Cases 15 and 18, in which, though the growth had existed three and eight years, there was no general infection. This may be explained, of course, on the supposition of some anatomical peculiarity of the part attacked, but the supposition is for the present utterly hypothetical. For my own part I can not escape the belief that while there is usually local injury or irritation as an exciting cause in epithelioma, the disease only follows in subjects who are predisposed — the nature of this predisposition being absolutely unknown. Indeed, a consideration of the cases here tabulated and presented has confirmed the views I put forward more than a year ago in a brief paper published in The New Orleans Medical and Surgical Journal: "The Pathological Aspect of Cancer, read before the Resident Students, Medical Society of the Charity Hospital, at the annual meeting, March 8, 1889." These views then (and still, perhaps,) little more than an *apperçu* founded upon a logical analysis of the observations, experiences, and theories of others, I shall endeavour to examine and correct as the years go on by the aid of constantly accumulated data.

Formulæ for the Preparation of Surgical Materials, with Some Miscellaneous Remarks.

[By F. W. Parham, M. D., Visiting Surgeon Charity Hospital, New Orleans,—being the substance of a lecture delivered before the Polyclinic Class, with some additions.]

A.—Solutions.

I. Acid Sublimate Solution (Dr. Ernest Laplace's suggestion).

ERRATA:

Page 889, A I (1) for ϑi iv read ϑiv.

,, ,, A III for ϑi ii read ϑii.

1. The *concentrated* solution, as per following:

℞. Hydrarg. chlorid corrosiv ..... ℈j. iv.
Acidi hydrochlorici c. p ..... ʒvj.
Aquæ q. s. *ad* ..... ʒviij.

M. S. Each ounce contains 10 grains H_gCl_2.

2. The *irrigating* solution. One ounce of the *concentrated* solution with water q. s. *ad.* Oij will be 1 to 1,536, which is convenient, because easy to prepare extemporaneously: called *1 to 1,500 solution.*

II. Carbolic solution.

℞. Acidi carbolici c. p ..... ʒi.
Aquæ ..... Oij=*ad.* ʒ xxxiij.

M. S. Approximates closely a 3 per cent solution.

III. Iodoform-Ether (8 per cent solution).

℞. Iodoform (vide BI) ..... ℈i. ii.
Etheris ..... ʒij.

M. S. As directed.

Uses: For thoroughly covering a surface with iodoform, the ether rapidly evaporating. On fresh raw surfaces causes severe pain.

N. B.—If kept too long will cause vesication, owing to large amount of Iodine generated.

IV. Iodoform-Glycerine emulsion.

℞. Iodoform 50
Glycerine 30
Aquæ 30

M. S. Shake before using.

Uses: For filling cavities and for injecting cold (tubercular) abscesses, when the ethereal solution would be considered objectionable on account of pain and danger of causing sloughing.

V. Iodoform-Collodion (8 per cent solution).

℞. Iodoform ..... ℈ij.
Collodi ..... elast. ʒj.

M. S. To be used as directed.

Uses: For hermetically sealing *aseptic* wounds.

N. B.—If kept too long may vesicate severely.

VI. Aseptic salt solution (6 per mille solution.)

℞. Sodii chloridi ..... gr. xlvj (46)
Aquæ, q. s. *ad.* ..... Oj.

M. S. Boil for one-half hour. Keep in a Florence flask, stopped with sterilized cotton.

Uses: 1. Where an antiseptic solution is considered objectionable, or for the final washing of a previously antiseptically-washed wound.

2. For saline transfusion, raised to blood-temperature.

N. B.—It is well to filter this solution before boiling, *especially* if to be used for the *second* purpose.

VII. Alcoholic ether solution of Iodoform.*

R. Alcoholis et etheris partes equales
Iodoformi (vide BI) q. s. *ad. sol. sat.*
M. S. To be kept closely corked.

Uses: For keeping silk (vide DII) and catgut (vide DI).

N. B.—Should be changed occasionally, owing to generation of Iodine. Silk kept in this solution for a long time is more easily broken. Best prepared in small quantities.

VIII. Alcoholic watery solution of sublimate.

℞. Hydrarg. chloridi corrosiv..... gr. v.
Aquæ..... ʒiij., ʒij.
Alcoholis, q. s. *ad*..... Oj.

M. S.—Solution of 200 parts water and 800 parts alcohol, originally suggested by Bergmann for sterilizing and keeping catgut.

Uses: 1. For preserving rubber drains.
2. For disinfecting catgut.

IX. Alcoholic solution of sublimate.

The same as VIII without water.

Uses: For preserving bone drains, decalcified bone plates, bone chips, and rigid rubber drains.

B.—Powders:

I. Iodoform, Sterilized. (Bichloride washed.)

Shake an ounce of *iodoform* with about four ounces of 1 to 1,500 sublimate solution in a good-sized bottle; filter through sterilized paper and dry at moderate temperature; keep in well-stopped bottle.

Uses: For powdering surfaces, impregnating dressings, and making solutions III, IV, V, and VII.

II. Sterilized Bismuth.

Prepared with subnitrate of bismuth treated as No. I.

Uses: For powdering where iodoform would be irritating, and for drying up moderate surface secretions.

C.—Drains.

I. Rigid Rubber Drains. (Dr. Javars.)

1. Select the red variety.
2. Place for five minutes in concentrated sulphuric acid.
3. Wash in 75 per cent alcohol.
4. Keep in solution. A IX.

Uses: In Empyema, or wherever glass drains might be used.

II.—Aseptic Rubber Drains.

1. Select the red rubber.
2. Sterilize in the Arnold sterilizer, or by boiling in ordinary kettle one-half hour.

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*Suggested, I believe, by Dr. Dawborn.

3. Keep in solution A VIII.

Uses: For ordinary drainage purposes.

N. B.—If softer tubes are wanted, keep in solution carbolic A II.

III. Glass Drains.

Sterilize by boiling, and keep in solution A I (2) or A II.

IV. Bone Drains.

1. Prepare tubes by boring and trimming into cylindrical form, or select smooth chicken bones.
2. Clean well after boiling.
3. Decalcify in 10 per cent solution Hcl.
4. Keep in solution A IX, without *any* water.

Uses: When drainage for only a few hours will be required, as these tubes collapse easily in serum.

V. Capillary Drains.

1. *Horse hair* should be cleaned first with soap and water and afterward *boiled* for half hour and kept in solution AI (2).
2. Catgut (see D I).
3. Silk (see D II).
4. Gauze strips (see E I and II).
5. Schede's twisted glass threads (see glass tubes).

D.—SUTURES AND LIGATURES.

I. Catgut.

1. Select catgut of several sizes
2. Cut into one foot lengths.
3. Place in ether five (5) days.

(4) Place in Bergmann's solution A viii ten (10) days.

(5) Keep in alcoholic ether solution of Iodoform (see A viii).

N. B.—This softens quickly when put into water at time of operating.

II. Silk.

1. Cut into one foot lengths.
2. Boil in solution A I (2).
3. Keep in solution A vii.

N. B.—Sutures thus kept a long time, become weaker, but are aseptically reliable and strong if prepared in smaller quantities more frequently.

III. Silk Worm Gut, Horse Hair, and Wire—

May be disinfected by heat, boiling one-half hour and put into carbolic solution A ii just before operating.

E.—Dressings and Sponges.

I. Wet Antiseptic Dressings.

1. *Bleached* cheese cloth or *unbleached*, deprived of fat by boiling with caustic soda or lye. Boiling with soft soap will help; wash out alkali.

2. Keep in solution AI (2) for use.

Uses: For stuffing septic wounds.

II. Dry Aseptic Gauze or Cotton.

1. Boil the *antiseptic* gauze in sufficient quantity of plain filtered water.

2. Pour off water and continue heat till dry.

3. Keep in jars covered with sublimate cotton.

III. Dry Antiseptic Gauze or Cotton.

1. Prepare the wet gauze as in E I.

2. Dry slowly over moderate heat.

IV. Cloths for Field of Operation.

1. Old cotton cloths, not useful in any other way.

2. Wash thoroughly by boiling.

3. Keep as in I.

N. B.—If used for laying instruments on to, should be washed off in carbolic solution.

V. Cloths for Sponging.

Prepare as in I, or as in II, according to indications.

VI. Sterilized Iodoform Gauze.

1. Use gauze as prepared in II.

2. Saturate a given weight of gauze with the quantity of iodoform (dissolved in solution A III) required to make 10 per cent (or 20 per cent) gauze.

3. Open out and evaporate ether at moderate heat.

4. Stuff in bottles tent-fashion.

5. Keep well closed.

Uses: As protective or for stuffing cavities, especially suppurating and tubercular.

The gauzes more difficult to make had best be purchased, such as Lister's latest gauze of double cyanide of mercury and zinc.

VII. Kocher's Ten Per Cent Bismuth Gauze—

Can be made by saturating aseptic gauze with a mixture of bismuth in aseptic water and drying at moderate heat.

Uses: Stuffing, for secondary suture.

F.—Sponges.

To Bleach, Soften, and Disinfect.

1. Select a good quality of sponge.

2. Beat with hammer on flat board.
3. Knock out the calcareous dust.
4. Put in 5 per cent Hcl for one-half hour.
5. Wash in water, preferably hot.
6. Put in 1½ per cent solution of permanganate potassium for five minutes.
7. Wash in water.
8. Put in 1½ per cent solution oxalic acid.
9. Put in Hcl solution for a minute.
10. If not free of permanganate repeat 8 and 9. Wash thoroughly.
11. Keep in solution A I (2) or A II.

N. B.—If left in Hcl too long, the sponges will be too soft to be serviceable.

Or the method mentioned in Greig Smith's Abdominal Surgery may be employed.

Borham's Method:

This is preferred by Greig Smith, after giving it a full trial.

1. Soak a few minutes in 1 per cent permanganate solution.
2. Wash repeatedly in water.
3. Place in solution of sodium hyposulphite, (one-half pound to one gallon,) with four ounces oxalic acid to gallon.
4. Wash out thoroughly in cold water.

For preparing sponges already used:

1. Wash thoroughly in hot water.
2. Place in soda solution (one pound to a dozen sponges [Tait]) for twenty-four hours.
3. Wash thoroughly in water slightly acid (Hcl).
4. Boil for one-half hour, or, better, one hour.
5. Keep in solution A I (2) or A II.

N. B.—Under no circumstances should infected sponges be used again.

Gauze, as prepared in E II, (see E V,) makes excellent sponging material.

G.—TO MAKE THE HANDS ASEPTIC.

Fürbringer's Method:

1. Wash and scrub well with warm water and soap. (The sapo viridis U. S. P. is very efficient and neat.)
2. Wash off the soap with alcohol (or ether).
3. Before the alcohol (or ether) is dry, wash in the antiseptic solution.

N. B.—The carbolic solution 3 per cent A II is efficient and does not offer the objection, which is the case with the bichloride (forming the black sulphide deposit in the nails).

H.—To Disinfect the Field of Operation.

1. Shave a broad area.
2. Wash well with soft soap and brush.
3. Wash off with alcohol or ether.
4. Wash with carbolic solution A II, or bichloride solution A I (2).
5. Place cloths (see E IV) about, so as to protect from contact with all septic surfaces.

N. B.—In some cases, where there is much dead epithelium, a dressing of soft soap, diluted with oil, might with advantage be applied for twenty-four hours or longer to remove the scurf and facilitate the disinfection. Infected wounds must be disinfected by repeated irrigations and applications of wet dressing.

Miscellaneous.

I. *Senn's Aseptic Decalcified Bone Chips—*

1. Get a tibia of young and healthy ox.
2. Clean well, assisted by boiling.
3. Cut in inch lengths.
4. Decalcify in 10 per cent Hcl solution, changing solution as often as necessary.
5. When decalcified cut into very thin chips.
6. Keep in alcoholic solution of bichloride of mercury 5 grs. to Oj.

Uses: For packing *aseptic* cavities in bones when Neuber's canalization is not desirable, or can not be employed.

II. *The Aseptic Bone-plates—*

Are prepared in the same manner, except that elliptical plates, with lumen of sufficient size, are made, instead of chips.

III. *Brokaw's Segment Rings—*

1. White ribbed rubber tubing with *lumen* of $\frac{1}{16}$ to $\frac{1}{8}$ in. diameter.
2. Cut a section three or four inches in length (according to size of ring wanted).
3. Cut into four or eight equal parts.
4. Hold these sections togefher in the form of a ring by passing a strand of catgut (No. 2 or 3) continuously through the segments *several times*, finally pushing the two ends into one of the sections of tube.
5. Tie, *between the sections*, at proper intervals, from four to six *silk* apposition threads, twelve to fourteen inches long.
6. Tbread the free end of each into a needle.

N. B.—These make admirable rings for intestinal anastomosis operations and for circular suture. They are superior to the bone-plates, because so available in an emergency, and

being *made up of parts*, they easily pass out without causing trouble, when the catgut dissolves.

REMARKS.

The principle upon which I have insisted in following the antiseptic method of wound treatment is that antiseptics are to be employed simply as a means of accomplishing an aseptic condition of the wound. In already septic wounds, or in wounds suspected to be so, the use of antiseptics becomes a necessity, because here we have septic organisms that must be killed, or washed out, before aseptics can be obtained. Of course, in recently infected wounds the use of aseptic water, *in sufficient quantity*, may get rid of the organisms, not by killing them, but by mechanically flooding them out. Such aseptic water becomes really then an *antiseptic* (mechanical) and no germicidal (chemical) antiseptic is required. But wherever septic matter can not be by the flow dislodged an antiseptic must be used. Hence, in all suppurating or sloughing wounds I resort to packing with wet sublimate gauze daily until asepsis is secured, afterward treating as an aseptic wound. On the other hand, operative wounds, if made under proper precautions, are to be regarded as aseptic wounds. The "proper precautions" become at once apparent when the truth of the statement is recognized that the surface through which the knife must pass is an infected surface; that the surgeon's uncleansed hands are infected; that the patient's clothing and that of bystanders is septic, and that the surrounding atmosphere is a source of danger. Thorough cleansing of the room with ventilation I believe to be *ordinarily* sufficient practically to abolish the atmospheric risks. Only in a specially infected atmosphere are fumigation and antiseptic spraying called for. The chief sources of danger are the patient's surfaces and the surgeon's and assistant's hands. When all these risks have been abolished, then antiseptics may be discarded in the treatment of the wound. My plan, where I have any doubt, is to disinfect with the bichloride solu-

tion, and at the end to wash out the wound thoroughly with the aseptic salt solution. I believe this plan secures sufficient immunity from the dangers of antiseptic irritation and the greatest amount of safety from wound infection.

New Orleans, May 22, 1890.

Hospital Reports and Clinical Notes.

CASE OF ANTIFEBRIN HABIT.

[By Dr. I. N. Suttle, Corsicana, Texas.]

Major B., of Navarro county, Texas, was a sufferer from necrosis of the tibia of left leg of sufficient gravity to confine him to his bed for more than eighteen months. Drs. Southworth, J. T. Suttle, and myself, having been requested to take charge of the case, found the patient's former attendant and medical adviser during this long siege of suffering, pain, and gradual death, treating by some local disinfectant, washes, etc., with emphasized direction to use antifebrin in very large doses to procure rest, repeated without hesitation in double quantity till the desired effect was produced. The first step in our treatment was amputation of the limb; and the chief difficulty in the after treatment was to deny and prevent the use of antifebrin.

He had acquired such a liking for this drug that we could well pronounce it an antifebrin habit, equal almost in its pernicious influence to the baneful effects of opium. It had evidently produced a retrograde metamorphosis, a great destruction of colored blood-corpuscles, as could be seen by the blanched appearance of the patient's lips, tips of fingers, and extremities. It was observed that when given as the physcian had directed, (a spoonful of the pure drug, his wife said,) and especially when it was repeated soon, his face became pallid, lips and fingers blue; but always, so far as the hypnotic effect was concerned, acting happily (?). During this long treatment it became so

necessary an article that more than sixty ounces had been consumed. Other preparations, as bromidia, hyoscyamus, and opium, when given to alleviate the great longing for antifebrin, were soon recognized, and the patient would call for his pet antifebrin.

This case is reported to show the insidious approach of a habit from the use of this drug, which might be called the antifebrin-habit, also the potency of its destructive influence on the life-giving element of the blood.

Leading Articles.

POSTPONEMENT OF THE MEETING OF THE STATE MEDICAL SOCIETY.

The disasters that have fallen on Louisiana in the last few months are beginning to make themselves felt beyond the immediate scene of devastation. The crevasses that have inundated a large part of the most fertile and productive region of our state rendered it impossible for the physicians practicing in those parts to give their attention to any other matters except the immediate safety of their local interests. A careful review of the situation convinced our President, Dr. C. D. Owen, that it would be impossible to secure even a moderate attendance at Baton Rouge this year and he has postponed the annual meeting until further notice; the precise date and the place of meeting will be fixed by the President.

It is to be regretted that circumstances did not permit us to hold our meeting this year; but we must bend to hard necessity.

One unfortunate effect of this accident will be that the feeble interest taken in medical organizations by the state profession as a body will grow even less. Lukewarmness

is more dangerous to a cause than excess of zeal. The success of our next meeting will depend upon the success that will attend the efforts of the President and his committees to inspire the body of the Society with the same interest that animates them.

THE BEGINNINGS OF A GREAT THING.

The volume of the *Transactions of the American Association of Obstetricians and Gynecologists* for 1889 contains, among a vast mass of valuable matter, a bit of history in the shape of the personal recollections of Dr. Alexander Dunlap, of Springfield, Ohio. A paper on the "Refinements of abdominal surgery," was read by Dr. David Barrow, now of Lexington, Ky., but a former resident student of the Charity Hospital and a graduate of the University of Louisiana. He was followed by Dr. Jos. Hoffman, of Philadelphia, on "Some accidents and complications incident and subsequent to abdominal and pelvic operations."

The discussion on these two papers was lively and instructive. Perhaps the most entertaining remarks were made by Dr. Dunlap. His words were like the echo of a voice of the distant past. It would be difficult to describe more forcibly than Dr. Dunlap the hard experience that ovariotomy had before it was recognized as a lawful surgical procedure. Dr. Dunlap's first ovariotomy was performed in 1843, since which time he has made nearly four hundred laparotomies. The president of the association, in introducing Dr. Dunlap, said: "About seventy years ago McDowell made the first ovariotomy. It is almost true to say that the operation for the time being died, after McDowell's time. In the year 1843, in July, the operation referred to by Dr. Price was made by Atlee. Two months later—forty-six years yesterday—the first ovariotomy of the west, after McDowell's, was made by Dr. Alexander Dunlap, whom I now have the pleasure of introducing to the association."

Dr. Dunlap disclaimed all right to be called a surgeon when he performed his first ovariotomy. This greatness was forced upon him. When he received his diploma, his authority to cure or to do anything else, he felt that he knew but one thing, namely, to cure fevers. This valuable knowledge was derived from one of his teachers, Prof. John T. Harrison, who said: "When you have a case of fever, salivate it, and as soon as you see signs of ptyalism, you may assure the friends of the patient that their loved one is saved." Dr. Dunlap returned home and began practice with his brother. This same brother was evidently a good observer of human nature, and a man who did not like to be ousted out of anything that he had made for himself; for he said: "Don't disturb me in obstetrics; I have learned enough to know that if you can make the community believe you can do one thing well, they will take all the rest for granted. I advise you to take surgery. * * * If you take up anything as your particular sphere of action, you must study it up and make a success of it, and then you can get credit for all the rest of your ignorance." This happened in April, 1841, and in the following August a momentous event occurred: he saw his first case of fever! In the encounter, the patient came out second best, but living. Dr. Dunlap said: "It was the most terrific scourge of typhoid fever I ever knew in southern Ohio. I had two patients, and commenced to salivate them, and in a few days I wished to leave the State. Is gave big doses and little doses, but there was no ptyalism, yet on the twenty-first day I thought the two young men to whom I had given that treatment were getting a little better, and I could say to their friends that their loved ones were safe; but I could not see any salivation, and I could not understand why they were getting better. However, on the twenty-third day I was sure they were better, and on the twenty-fifth day I could smell the calomel. Then, for six weeks I had a fearful time. The patients were getting well, but were cursing me for rotting out their

mouths. These cases made me lose faith in my teaching of medicine, and if I ever knew anything about it I would have to learn it myself at the bedside of the patient. Two years after that I got hold of a case of ovarian tumor. did not know what it was for a while. I had heard that McDowell had operated, and in one little article in an old medical dictionary it was stated that McDowell had done the operation, but it was now condemned and considered to be murderous. I happened to tell this to the patient when I was talking to her; notwithstanding, she insisted on my operating. I debated with her until she was almost dead, but she said if I would not do it she would get a common butcher to cut it out. She said: 'All I ask is for you to cut me open and let me see what it is, and I will die happy.'" [Some slanderous critics have affirmed that curiosity is a feminine weakness.]

When urged in this manner to operate, Dr. Dunlap was a graduate of scarcely more than two years' standing. It is well-nigh impossible to appreciate nowadays the colossal courage that he must have had in order to perform his first ovariotomy. But he finally yielded to his patient's pleadings, and on September 17, 1843, he removed the tumor almost as well, according to him, as he could do it to-day.

That was many years before Listerism entered the lists as the champion of modern surgery. How, then, did Dunlap proceed in order to secure such a good result as he did secure? He says: "My preparation for the operation was a careful study of the organs of the abdominal cavity, until I had them as plain to my mental vision as they would have been had the cavity been open to my eyes, and I said to myself I would not cut any of them out; but anything else that I found that ought not to be there I would cut out. Fortunately, as soon as I opened the abdomen, I found what I thought ought not to be there. In running my hand around it I burst one big sac. I sponged out the abdomen and turned out the sac, and there was a long pedicle. I could almost have shouted glory! because I

knew I could now control the hemorrhage. I finished the operation just as I do to-day. I pierced the pedicle and tied a double knot with silk; I always waxed the silk until I got it thoroughly imbued with wax. The woman lived nearly a month, and was out of all danger from the operation itself. I had been tapping her every ten days, for nearly six months, and drawing out a big wooden bucketful of water each time. The sudden checking of that flow of water from her system brought on a severe diarrhœa, with large watery stools. I got that controlled, and she appeared to be doing well, when her kidneys began pouring out a flood of water, and, as I could not stop that, she ran down and died."

Now, when we bear in mind that anæsthetics were first practically applied in surgical operations in 1846, we will at once perceive that there was a large element of courage on the part of the patient as well as the operator.

A case of this sort could not be lost to literature; so Dr. Dunlap prepared a report of the case. The fate of that literary effort will strike latter-day surgeons with some surprise. "I sent a report of the case to Prof. Harrison, and he returned it to me, saying he would not publish such an article, because it would only encourage some other man to do a foolish operation; and I tore it up — what would have been my first contribution to the literature of ovariotomy. Since that day I have done nearly four hundred laparotomies. The last was day before yesterday [i. e., September 20, 1889.]"

The same age that witnessed the birth and growth of abdominal surgery also witnessed the advent of the steam engine and the telegraph. Progress makes one year as good as ten. The wonderful advances made in a lifetime cause events of fifty years ago to seem almost as belonging to a remote past; and Dr. Dunlap, reviewing the changes made in a department of surgery which was scarcely born in his early manhood, may feel like an old-time salt viewing gigantic modern ocean steamers, whilst his memory carries

him back to voyages of four or six months' duration, with their scurvy and other attendant evils.

But a wall grows higher by the stones being piled upon one another; the topmost stones could not reach so high if it were not for the lower stones beneath, neither could an elegant superstructure of a mansion rear aloft if it were not for the plain, unornamental, but indispensable, foundation. Our modern surgery, over which we never tire of crowing, is not a thing living by itself and born of itself; it is merely the imposing capital placed upon the plain but enduring shaft, reared by men like McDowell and Dunlap,

All honor to those pioneers who ushered in the era of fearless, yet saving, surgery.

CORRECTION.

The paper in our last issue, (May, 1890,) on "Strychnia as the Antidote in all Cases of Alcoholism and its Associate Diseases," was by Denègre Martin, R. S. C. His name was accidentally omitted from its proper place, and we hasten to repair the error in not giving him credit for his interesting article.

CORRESPONDENCE.

LONDON LETTER.

[Our Special Correspondent.]

LONDON, April 29, 1890.

During the winter, which, we fondly hope, has now at length come to an end, several important changes have occurred in the personnel of medical London. Our two leading physicians—men who, for twenty years, were head and shoulders above their rivals—have ceased to practise. The one, Sir William Gull, after many months of disabling

illness, died, full, not, indeed, of years, but of honors. He was the son of a poor man, and forced his way to the front through sheer force of character and profound acquaintance, not only with ills, but the foibles of mankind. The other, Sir William Jenner, after a still longer period in harness, has, with rare wisdom, retired to live the life of a country gentleman, and to collect his scattered contributions to medical literature. He has now but one patient —the Queen. He, too, is a man who achieved success in spite of many disadvantages during the earlier years of his career. The republication of his lectures on continued fevers and rickets will be awaited with great interest, as he worked at these subjects between thirty and forty years ago with a master hand. Sir Andrew Clark, whose election as president of the Royal College of Physicians in succession to Sir William Jenner was thought to be something of an experiment, has more than justified his choice for that difficult office. He has won golden opinions on all hands, and his reëlection as president on St. Luke's Day was a foregone conclusion. Both by his official position and the magnitude and importance of his practice, he is now the leading physician in London.

The epidemic of influenza has at length come to an end, after lasting in various parts of the country for nearly four months. In this country it has been very far from "striking a whole population at a blow," as the text-books state. On the contrary, its progress has been remarkably slow. How this is to be explained is not very clear; if the infection was easily carried by persons, or articles of clothing, or merchandise, it would have been reasonable to expect that Manchester would have suffered very shortly after London, for the traffic between these two places is enormous, fast passenger trains running almost every hour of the day and night, and doing the distance under four hours. Yet Manchester did not suffer for weeks after London. In the west of England the disease appeared still later, whereas, it was present in Edinburg as early as, or earlier than, in

London. On the other hand, in a paper read before the Medical Officers of Schools Association on April 29, Dr. Symes Thompson related the experience of a school at Gloucester. Four of the attendants were attacked one after the other; they had been into the town, where influenza was then very widely prevalent; the four attendants were carefully isolated, and the boys were not allowed to enter the town; no boy took the disease. Further, some of the earliest cases in London and the suburbs occurred among patients who had been in contact with persons recently returned from Paris, where they had influenza. In many country districts the earliest cases were persons who had been in London for a few days while the epidemic was prevalent there. Dr. Thompson expressed the opinion that the disease was generally spread by personal infection, but that it might be transported from country to country by the winds. The extraordinary distance which the dust of the eruption of Krakatoa was carried is quoted in support of this contention. A recent writer in *Nature* points out that in a cyclone dust and larger particles are swept up and may be carried to a great height, and borne considerable distances, until they come into the area of an anticlone, when the downward current carries them again to earth; in this way it is thought that the microbes of influenza might be carried from Russia to England. This theory is rather fanciful; the more so as the epidemics in Berlin and Paris intervened in point of time between those of St. Petersburg and London. The assertion that a few cases occurred in London before the outbreak in Paris rather tends to support the theory of contagion than to disprove it, since that hypothesis requires a gradual increase in the number of cases in any given city.

The question whether the sale of milk and flesh derived from cows or oxen suffering from tuberculosis ought to be permitted to be sold as food has at length begun to attract the attention of politicians and government officials. The butchers contend that if animals or carcasses, are to be con-

demned as unfit for human food on account of this disease, the local sanitary authority ought to compensate the dealers. This constitutes a great practical difficulty; obviously, it would be absurd to pay compensation for an animal in the last stage of emaciation from tuberculosis — such an animal ought to be worth nothing or less than nothing. On the other hand, an animal in apparent health may after slaughter be found to have a few tubercles in the lungs and pleura. This raises the further question whether the flesh of an animal with only a little localized tuberculosis is unfit for food, and upon this opinion is divided. It is probable that the medical department of the local government board may shortly undertake a special inquiry to set this point at rest.

Some interesting experiments have already been made by this department by Dr. Lingard as to the relation of tubercle, scrofula, and lupus. He finds that the same bacillus is undoubtedly present in all three, the clinical difference being probably due to a great difference in the virulence of the bacillus. Scrofula produces a chronic tuberculosis in guinea pigs, which is fatal only after eight or nine months; if, however, another series of guinea pigs be inoculated with the tubercular material from this first series, they die much sooner; and a third series still more rapidly; and the fourth as rapidly as though inoculated with the most virulent human tubercle. It would thus seem that the comparatively mild virulence of the bacillus tuberculosis, as found in scrofula, is gradually rendered more and more malign as it passes from guinea pig to guinea pig. This is a fact analogous to Pasteur's observation that the virus of hydrophobia becomes more virulent when passed from rabbit to rabbit.

An epidemic of pneumonia at Hillsborough, in 1888, afforded an opportunity for studying the etiology of this obscure malady, of which excellent advantage has been taken by Dr. Ballard and Dr. Klein for the local government board. In their report, which is about to be published, the former clearly establishes the infectious nature

of the disease, and the latter states that he has isolated a bacillus which he believes to be the specific cause of the disease.

The next meeting of the British Medical Association will be held in Birmingham in the last week of July. The president will be Dr. Wade, of that city. The address in medicine will be delivered by Sir Walter Foster; in surgery, by Prof. Lawson Tait; and in therapeutics, by Dr. W. H. Broadbent. The date has been fixed so as not to clash with the International Medical Congress at Berlin, and it is fully expected that the Birmingham meeting will be a great success, as the Midlands are one of the strongholds of the Association. It is hoped, also, that many Americans on their way to Berlin will call a halt at Birmingham.

The growth of the out-patient departments of the hospitals throughout the country has very seriously alarmed a large section of general practitioners, and a considerable agitation has been for some time on foot. As usual, however, there has been a great deal of strong language and mutual fault-finding, and very little practical action. Meanwhile the Charity Organization Society, of London, which considers that the finances of the London hospitals are badly managed, and that great abuses exist also in the out-patient departments, where people well able to pay are treated gratuitously, has been quietly at work. Knowing what it wanted, and understanding something of public business — and in knowledge of this kind our medical reformers are sadly deficient — this society has got its inquiry, the government having consented to the appointment of a select committee of the House of Lords to inquire into the working and management of the London hospitals. This has rather taken the wind out of the sails of the medical reformers; but strenuous efforts are to be made to get the scope of the inquiry extended so as to include all the hospitals in England at least, the circumstances of most of those in Scotland and Ireland being somewhat exceptional.

PSYCHICAL RESEARCH.

To the Editor of the New Orleans Medical and Surgical Journal: DEAR SIR—May I ask for the publicity of your pages to aid me in procuring coöperation in a scientific investigation for which I am responsible? I refer to the *Census of Hallucinations*, which was begun several years ago by the "Society of Psychical Research," and of which the International Congress of Experimental Psychology at Paris, last summer, assumed the future responsibility, naming a committee in each country to carry on the work.

The object of the inquiry is twofold: (1) To get a mass of facts about hallucinations which may serve as a basis for a scientific study of these phenomena; and (2) to ascertain approximately the *proportion of persons* who have had such experiences. Until the average frequency of hallucinations in the community is known, it can never be decided whether the so-called "veridical" hallucinations, (visions or other "warnings" of the death, etc., of people at a distance,) which are so frequently reported, are accidental coincidences, or something more.

Some 8,000 or more persons in England, France, and the United States, have already returned answers to the question which heads the census sheets, and which runs as follows:

"*Have you ever, when completely awake, had a vivid impression of seeing or being touched by a living being or inanimate object, or of hearing a voice; which impression, so far as you could discover, was not due to any external physical cause?*"

The "Congress" hopes that at its next meeting, in England in 1892, as many as 50,000 answers may have been collected. It is obvious that for the purely statistical inquiry, *the answer "No" is as important as the answer "Yes."*

I have been appointed to superintend the census in America, and I most earnestly bespeak the coöperation of

any among your readers who may be actively interested in the subject. It is clear that very many volunteer canvassers will be needed to secure success. Each census blank contains instructions to the collector, and places for twenty-five names; and special blanks for the "Yes" cases are furnished in addition. I shall be most happy to supply these blanks to any one who will be good enough to make application for them to Yours truly,

WM. JAMES, (*Professor*,)
Harvard University, Cambridge, Mass.

PROCEEDINGS OF SOCIETIES.

THE TEXAS STATE MEDICAL ASSOCIATION.

The twenty-first annual meeting of the Texas State Medical Association was called to order at Fort Worth, Texas, on April 23, at 10: 15 A. M., with between two and three hundred doctors present.

Addresses of welcome were made by the mayor of the hospitable city, and by Dr. W. P. Burts, chairman of the committee of arrangements, which were happily responded to by the president of the association, Dr. R. M. Swearingen, of Austin.

The president, following a custom established by his predecessors, read his annual message and recommendations. Among the subjects that he discussed in this paper was that of the regulation of the practice of medicine by the state.

Every one realized the seriousness and the criminality of the blunders which were daily being made by ignorant and unscrupulous persons who are permitted to practice the healing art. The dangers to the innocent and helpless were too apparent to need any proof, "and yet for nearly forty

years we have knocked in vain at the doors of legislative halls" without obtaining the necessary legislation. Why was this? There was evidently something wrong somewhere. It was customary to charge this to the demagoguery and ignorance of the lawmakers, but this was neither just nor true. The reader had had ample opportunity in the last fifteen years to know the members of both houses of the legislature, and he bore testimony that they were, "not only as a rule, honest, intelligent, and patriotic, but many of them personated the loftiest types of American manhood. They represent the people of Texas and crystallize into laws the wills of their respective communities. Whenever these several communities, in public meetings or conventions, express a desire for special legislation, there is no difficulty in getting it, if it does not infringe upon the rights of anyone, and the evidence is clear that it will promote the public good; but the voice of the people must and should be heard, not the champions of any trade or profession.

"Any liberal-minded man must acknowledge that a law giving to educated persons alone exclusive privileges to perform a specified work that has from time immemorial been regarded as the prerogative of all men, should have the emphatic indorsement of those for whom it is enacted: and if we shall ever secure a law that will enable us to say who shall and who shall not practise medicine, we shall abandon the policy of the past and have the people demand it for their protection, and not for ours.

"The regular physicians do not desire such laws for any benefits that can possibly accrue to them; but our persistent demands have led many good men to believe that we would, if clothed in legal authority, constitute ourselves into the sole guardians of the sick and afflicted. The erroneous impression can only be corrected by individual home work, and until that is accomplished the agitation of the subject in legislative bodies will only result in mortification and inevitable defeat."

This address was received and a committee appointed to report upon the recommendations contained therein.

The secretary of the association reported over five hundred members on the roll, with twenty-four auxiliary societies, district and county, throughout the State.

The executive session adjourned in the forenoon, and at 2 P. M. the section on practice was called to order by Dr. D. M. Ray, of Whitewright, chairman.

Dr. F. A. Schmidt, of Schulenberg, read

THE REPORT OF A CASE OF BLOOD POISONING.

While attending a case of obstetrics the doctor had contracted a violent septicæmia, and this paper was a description of his sensations and experiences while suffering from the poison, as well as a very careful and detailed description of his symptoms. The poison had evidently been absorbed through a slight wound of the index finger, of which he was unaware until, after making an examination, he felt a burning pain, such as would be caused by acids, in the member. His knee was also affected through a slight abrasion, having come in contact with some of the discharges, which had wet the bed clothes, in an effort the doctor made at lifting his patient. The nature of this poison he discussed later in his paper, but he said he knew that it was not specific, as he had known his patient well, knowing her sphere in life and her character, and was certain such diagnosis could be excluded. Sixteen hours after infection he had a violent chill lasting two hours, with a temperature of 102°: pulse, 100. Temperature rose later to 103½°: pulse, 110. Arm and leg both much swollen; points of infection black: veins very much inflamed. He began at once to take quinine. That night another chill took place; the next day, at 4 P. M., a third chill. All this time he was perfectly conscious and in possession of all his powers, and treating himself, though he had given directions to have medical aid summoned should he at any time become unconscious. On the fourth day his temperature was 101½°; pulse, 100. The swelling was stationary. During

the third day blisters of many sizes, some as large as half a dollar, closely resembling pemphigus, appeared all over his body. Fifth day improvement slow but marked. Temperature, 100: pulse, 100; a slough in points of infection: convalescence from then on. Healing occurred in one week. Desquamation over entire body. His mental impressions were carefully described. His affection had closely resembled pemphigus, except in inflammation, slough of points of infection, and continued high temperature. The source of this poison was carefully discussed. Was it in the vagina or uterus? He concluded that it was in the former, noting the facts that this patient had always miscarried, and that she had had a very persistent and offensive discharge from the uterus.

Dr. J. D. Burch, of Aurora, read the next paper,

ON CEREBRO-SPINAL MENINGITIS.

In the previous February an epidemic of this malignant disease had been very fatal at his home, and to these cases he devoted his attention especially.

The paper began by treating very fully the history of the different epidemics of cerebro-spinal meningitis, dwelling upon the symptomatology, mortality, etc., as recorded by different authorities. On February 9, 1890, he had seen a case of cerebro-spinal meningitis in Aurora, which was quickly followed by others, sixteen in all, of which seven had proved fatal. Dr. Beal, of Fort Worth, in an open letter to the *Gazette* of February 28, which was upon the subject of the Aurora fever, had said: "Is it cerebro-spinal fever? If it is, the four limited epidemics participated in by the writer were not." Dr. Burch took issue with Dr. Beal upon this point, and proposed to prove his position. He had seen the disease in Natchez, Miss., years ago, beginning as pneumonia, the brain becoming implicated later. He had seen negroes have it and die, though certain authorities deny that this ever occurs. Stillé and Flint were both quoted to show that the symp-

toms vary greatly in different cases and in different epidemics, giving rise to the different types. In those cases at Aurora the cerebral and spinal symptoms were not so prominent as were the inflammatory, eruptive, and articular symptoms. Dr. Beal had said: "I saw no manifestation of cerebral disturbance of an organic nature." This Dr. Burch controverted by speaking of the cases in which there were distinct cerebral and spinal symptoms. High temperature was the rule in the Aurora cases; sighing respiration very marked in a number of cases; ocular symptoms, indicating choroiditis, were present in a number of cases; the joints were inflamed and the eruption very marked in most cases. The disease at Aurora had shown the peculiar tendency to affect children, all the cases except two being children or young persons.

The arrival about the last of January in the town of Aurora of a sick man from Indian Territory, who was sightless and lame as the result of a disease which had proved fatal to his wife and two children, was spoken of, and it was shown how the contagion could be traced from this man to the cases which had developed, the communication between each case being mentioned. When asked for treatment, Dr. Burch said that the physicians had exhausted the pharmacopœia in their efforts to relieve the suffering of their patients. He mentioned hydriodic acid, iodide of potassium, syrup of hypophosphites and salol, as having been useful in relieving certain of the symptoms, but the most useful remedies were bromide of potassium, ergot, and opium; the latter in the form of morphia, combined with atropia, and given hypodermatically very freely, in quantities sufficient to relieve the intense suffering. This paper was received with many compliments to the author, and referred to the committee to be published.

Dr. E. J. Ward, of Ellis county, had seen a number of cases of cerebro-spinal meningitis, and had noted one feature especially, which was, the great variation of the symptoms in different cases. To illustrate, he gave the

principal points in the symptomatology of three of his cases. The first, a child of 5 years, had high temperature, (105 deg.,) rapid pulse, conjunctivæ very much injected, opisthotonos, breathing regular. Ecchymosis from feet to trunk. Result, death.

The second case was a boy of 14; pulse and temperature normal, ecchymosis same as in the first case, breathing very rapid (65, never below 50). No evidence of cerebral complication. Result, recovery.

The third case was a youth of 18 years; no eruption except a few pale spots; opisthotonos, marked with profound coma; temperature and pulse normal. Death in two days.

The mortality in Ellis county was about 75 per cent. The first cases were called malarial purpura. He had seen other cases in which the rheumatic symptoms were the most prominent.

Dr. Fountain objected to the use of the term rheumatic in this connection, as inapplicable to the conditions which gave rise to the symptoms.

Dr. Adams, of Forth Worth, thought that the thanks of the association were due Dr. Burch for his very able paper. He had seen one of the cases at Aurora on the third day of its illness, which presented the following symptoms: condition, semi-comatose; right pupil contracted; temperature, 100; opisthotonos; retention of urine. He regarded the case as typical or cerebro-spinal fever. The patient died on the following night.

Dr. King, of Waco, described a case very carefully which he had treated with calomel and antipyretics, and was heartily in favor of opium. He gave it in quantities. His case died on the third day. It had taken a remarkable amount of morphine with little effect.

Dr. West, of Galveston, spoke of the necessity of post-mortems, and of the advantage such examinations would have been in clearing up the diagnosis of the Aurora cases.

Prof. Cain, of Nashville, was invited to avail himself of the privileges of the floor and to speak to the question.

He replied by complimenting the author of the paper, and made a few remarks upon the subject to the effect that the question was an extremely obscure one.

Dr. Burroughs, of Houston, had seen cases in that city, with Dr. Powell, which he had reported in 1874 and 1875; of seven cases one had died. In treatment, he relied more especially upon ergot and bromide of potassium. Dr. Field had seen cases in Denison, where there had been some 300 in all. His treatment was quinine and bromide of potassium; the latter in twenty to sixty grain doses every two or three hours. He believed if properly given and early enough, these remedies would cure every time. He described a distinct interval, and in this interval was the time to treat.

Dr. Osborne, of Cleburne, did not believe in the contagiousness of this disease. He described a single case in his town which did not spread.

Dr. Ward expressed the opinion that it was not contagious.

Dr. Roark, of Aurora, thought that it was contagious, and founded his belief upon his late experience at his home.

Dr. W. L. York, of Decatur, had seen a number of cases, and thought there was no doubt of its contagiousness. He also thought that the weight of authority on this subject would bear him out.

Dr. Field reported a case which had died thirty-six hours after the inception of illness, in which a tablespoonful of pus was found beneath the cerebellum.

Dr. J. W. McLaughlin, of Austin, read the next paper, entitled—

AN EXPLANATION OF THE PHENOMENA OF CONTAGION AND IMMUNITY, BASED UPON THE ACTION OF PHYSICAL AND BIOLOGICAL LAWS.

The following is an abstract of Dr. McLaughlin's paper:

Force, the efficient cause of all physical phenomena, is motion, atomic, molecular, or molar. Heat, light, elec-

tricity, etc., are manifestations or modes of action of one and the same agency; these manifestations of force are co-ordinate and subject to the laws of transmutation of energy. An atom is the ultimate particle of an elementary substance; a molecule is composed of two or more atoms, and is the ultimate division of a compound substance. Each and every atom has its equivalent of force (motion) from which it cannot be separated. This may be modified by the motion of associate atoms in chemical combinations, but is never lost. When the combination is dissolved, the atoms depart with the same force they had when they entered.

Atomic force is, then, atomic motion or vibration in definite periods of recurrence: *i. e.*, the atoms of each elementary substance vibrate in periods of time which are peculiar to such elementary substance, and differentiate it from other elementary substances. In this atomic vibration in definite periods of recurrence is found an explanation of the spectra-lines characteristic of the different elements. The force contained in a compound substance is the result of and represents the aggregate motions of its contained atoms or molecules, modified and adjusted by conflicting motions. As the differences between elementary substances depend upon differences in their atomic vibrations, so differences in compound substances must depend upon differences in their molecular vibrations.

A bacterium, regardless of its shape, is a one-celled vegetable organism of microscopic size, with or without an enveloping cell-membrane, which contains a complex sub stance called protoplasm. When suitably environed, these cells have the power of growth and reproduction as have other organisms which rank higher in the scale of organization. They also have the power, in different degrees, of splitting up or decomposing many complex substances. As a rule, not without exceptions, however, each variety or species of bacteria does work, *i. e.*, decomposes substances, which other varieties of bacteria can not do.

Thus, one variety will convert urea into carbonate of ammonia; another will convert watery solutions of alcohol into acetic acid; another, the ammonia compounds found in the soil into saltpetre; another variety will decompose the cellulose of cell membranes, and is the organism chiefly concerned in the rotting of flax, hemp, etc., to obtain thin fibres for economic purposes; whilst the cells of the yeast fungus, the vegetable organisms concerned in vinous fermentation, convert the sugar, at least 95 per cent of it, contained in brewer's wort into alcohol.

How do these little microscopic cells do this work, each variety doing only a certain kind and unable to do the work of the others? The correct answer to this question will carry with it an explanation of the method by which pathogenic bacteria cells decompose the albuminoids of man's blood and convert these into poisonous alkaloids, ptomaines, and toxines.

Picture to your mind's eye the marvelous mechanism of one of these little cells with its contained molecules in active motion. Remember these are not in contact, but separated from one another by spaces, which, although infinitely small to our comprehension, are really large when compared with the size of the molecules. Remember, also, that the molecular movements are not of a haphazard sort, but are governed by fixed laws, and that, whilst similarly constructed molecules have similar modes of motion, there are marked differences, in this respect, between molecules of dissimilar construction. As the molecule receives its motion from its contained atoms, the cell protoplasm must receive its molecular motions from its contained molecules. Remember that atomic and molecular motion constitute force, and when we speak of cell motion we mean to imply cell-force, its power to do work, and the explanation, which is offered, will follow as a logical sequence.

Now it is assumed that the molecular movements of cells are timed, as it were, to different harmonies, that different

varieties or species of cells have molecular vibrations, which, in their period of recurrence are distinctive of such species or variety. Hence, the molecular movements of cells are influenced in a certain way by other cells whose molecular periods of vibration coincide with those of the first in point of time; the wave crest and trough of one cell striking the molecular waves of another cell, less firmly fixed in its structure, crest to crest, and trough to trough, the motions of the first would necessarily increase the swing of the second until its molecules are swung beyond their attractions and the cell disrupted.

The cell molecules thus set free would immediately recombine, in accordance with chemical laws, to form simple compounds; *e. g.*, in vinous fermentation the molecular combinations of the yeast cell are so timed in their motions that they can swing the molecules of sugar, held in solution, beyond their chemical attractions, and thus cause a disruption of the sugar; at the same time the molecules, thus liberated, will recombine to form a simpler compound, alcohol. Other cells can not do this work, for the reason that their molecules do not vibrate in the required periods of time. In the same manner the micrococcus aceti decomposes alcohol into acetic acid, and other bacteria do their special kinds of work, and are incapable of doing the work of others. In the same way pathogenic bacteria shake apart certain albuminoid molecules in the blood or tissue fluids of man's body, and the recombination of the molecules thus liberated forms ptomaines or toxines. Experiment and observation teach that ptomaines and toxines are not only the cause of the symptomalogy of infectious fevers, but are agencies which arrest the morbid action. In other words, the ptomaines and toxines are poisonous to the bacteria which caused them, and are natural means for arresting the disease.

Thus alcohol, the principal product of the vinous fermentation, may be regarded as the ptomaine of the yeast cell, and when it, alcohol, accumulates, in certain amounts, the

fermentation becomes arrested, and it can not be reëstablished until the alcohol, or the principal portion of it, is removed; acetic acid, butyric acid, lactic acid, etc., may be regarded as the ptomaines of their respective fermentations, and in harmony with the law that ptomaines are poisonous to the bacteria which originate them, and arrest the fermentations of which they are the product. These substances, when they are present in sufficient amounts, will arrest the fermentations which they severally represent. Now it is well known that the ptomaines which form in man's body during the progress of an infectious fever are in some way related to certain pathogenic bacteria, which are themselves regarded as causes of the infection. It is also believed that these ptomaines, when in sufficient amount, will often poison the bacteria, and thus arrest the disease; hence a close analogy is thought to exist between the processes of contagion and fermentation, and an explanation of the method by which alcohol arrests the vinous fermentation, and acetic, butyric, and lactic acid arrest their respective fermentations, would carry with it an explanation of the method by which ptomaines arrest infectious diseases.

As the explanation which is offered involves an application of the laws of wave-motion, to the motions of organic molecules, these may be better understood by examining the laws of motion as observed in waves of water. When two bodies of water meet from opposite directions, and the waves of one body coincide in the time of their upward and downward movements with the waves of the other body, the waves resulting from the union of the two bodies will be enlarged in their amplitudes; *i. e.*, the distance between the waves is increased.

If, however, the two sets of waves do not coincide in periodic time; should the crest of one set coincide with the trough of the other set, the amplitudes of the resulting waves will be diminished; or the downward force

of one set of waves meeting the upward force of the other set, they will antagonize or "interfere" with each other, and the waves may be thus destroyed.

Assuming that the motions of complex organic molecules are governed by these laws of wave-motion, we have explained how molecular vibrations of one substance may increase similar molecular vibrations of another substance when the two sets of vibrations occur in the same periodic time, and that molecules may thus be swung beyond their attractions, and the substance disrupted.

When similar molecular vibrations of two bodies do not coincide in their periods of recurrence we may expect the same results which happen when waves of water, or waves of light or sound, thus meet; one set of such waves "interferes" with the other, and when interference is complete one set of waves antagonizes or destroys the other set.

Now ptomaines are molecular combinations necessarily possessing vibrations which "interfere" with similar vibrations of the bacterium cell; "necessarily" for the following reasons: the molecular motions of the cell-protoplasm and the albuminoid must have been similar and must have vibrated in unison for the motions of one to have increased the molecular motions of the other—to swing these molecules beyond their attractions and cause a disruption of the molecular arrangements.

The molecules which are thus liberated must, because of their chemical attractions, immediately recombine to form simpler compounds. In the instance under discussion the recombination of the liberated molecules forms ptomaines. Now, it is evident that no recombination of the molecules into a new substance can occur except the molecular combinations of this substance are of such a nature that its molecular vibrations do not recur in unison with those of the bacterium cell; hence the new substance, the ptomaine, becomes an interfering

body, and, when it accumulates in sufficient amount, will arrest or destroy the vibration of the bacterium cell.

As the molecular vibrations of a pathogenic bacterium cell are in unison with those of the particular albuminoid substances which it can decompose, it is evident that the ptomaine which is formed from this decomposition would "interfere" alike with both the cell and the albuminoid; in fact, would more easily interfere with the vibrations of the plastic, unstable albuminoid than with the cell protoplasm. In either case the vibrations of the two substances would no longer recur in the same periods of time, and the bacterium cell would thus become innocuous—no longer able to produce infection.

Now, if the changed movement in the albuminoid molecules, which would amount to the same thing as a rearrangement of its molecular combinations, an isomeric change can be made permanent, so that this new molecular arrangement will be passed along through the act of generation, it is seen that the individual is, by this means, made immune from the influence of this particular variety of bacteria.

It is not improbable that this process does occur. When virulent bacteria are subjected to certain methods of treatment, they become "attenuated," (weakened in their power of decomposing other substances,) or, if the "attenuation" is complete, this power is wholly destroyed, and such bacteria will produce other attenuated bacteria, through the generative act, for an indefinite length of time. Hence, it is more than probable that albuminoid molecular combinations may be so influenced by interfering bodies, that the changed molecular combinations, which such bodies produce, are more or less permanent, and can be transmitted through generations. If this be true, it offers a simple and complete explanation of the method by which immunity is obtained from an infectious disease; through an attack of the disease; through inoculation of specific ptomaines; and through inoculation of

attenuated bacteria, for, inasmuch as the "attenuated" bacteria produce only small amounts of ptomaines, inoculations with ptomaines or with attenuated bacteria are practically the same methods.

The principles upon which this argument is based postulate the existence of a natural law, through the operations of which man and all other animal or vegetable organisms are, to a great extent, rendered immune from bacteria invasions. Experience and observation confirm the accuracy of this postulate susceptibility to invasions; bacteria (pathogenic) in this scheme represents the exception to this law of natural immunity.

The confusion of ideas and the obscurity which has enshrouded the causes of natural immunity have resulted from the erroneous vitalistic theories which have been and are yet largely entertained regarding the nature of substance or the causes of the structure and the activities of tissue. Our contention is that structure consists in definite molecular combinations; that its activities result from its characteristic molecular vibrations; and that organic molecular combinations are qualities of inheritance which each individual cell or molecular combination has acquired for itself through the laws of natural selection, heredity, and adaptation.

In an infinite number of created cells, there would exist infinite differences in their molecular combinations, which would determine species and varieties, and would also determine the lines of development which the species and varieties would pursue, as well as the extent of development which the species or varieties could attain. Thus, in consequence of this molecular structure, some cells would find their fixed point of development in unicellular organisms, whilst others would enter into, and assist in, the formation of complex multicellular organisms. All cells from the beginning, in consequence of the differences in their molecular combinations, causing equal differences in their molecular vibrations, would wage in-

cessant war upon one another, because of the actions, interactions, and reactions of their molecular vibrations, until there would eventually result an adjustment of their forces through the operation of the laws of natural selection, heredity and adaptation. "Natural selection" is that law of nature whereby she selects from a large number of organisms those varieties and species which are in best harmony with their environment. Heredity is that natural law which transmits through the race those qualities possessed by species and varieties which determine their selection by nature. By adaptation we understand that law which enables organisms during their generation to adjust themselves to their surroundings. Qualities thus acquired may, to a limited extent, in long periods of time, be transmitted through inheritance. Environment constitutes those natural causes, *e. g.*, climate. food supply, moisture, temperature, etc., which determine what varieties nature will select for purposes of propagating the kind.

No correct conception of cell-life or the life of cellular organisms can be had; there can be no correct conception of the causes of cell-immunity, whether it be a bacterium cell or the cells composing man's body, that is not based upon the evolution of cell-life through the laws of descent from the simple to the complex and from the undifferentiated to the differentiated cell-structure. It is in this manner, and in conformity with these laws, that man has acquired his natural immunity from bacteria invasions. The molecular vibrations natural to the cells and tissue-fluids of his body render him immune from the motions of other cells, (bacteria,) which otherwise would be virulent to him. Now, these molecular cell combinations and their equivalent molecular vibrations are qualities of inheritance, and represent certain adjustments of molecular force gradually acquired by the ancient ancestors of these cells through wars and battles of cells, the like of which has never occurred in the history of man.

Dr. J. H. Sears, of Waco, spoke of Dr. McLaughlin's paper. He admired the paper as an intellectual effort. It showed great study and research, and much thought, but was founded on the microbe theory, which was by no means proven. In fact, he was disposed to think the microbe was a very much abused animal; that no doubt he was the scavenger whom the Lord had provided to clean out diseased tissues, and without him certain death would follow.

The thanks of the association were tendered Dr. McLaughlin for his paper.

The executive session of the association met on Wednesday morning, with, it is estimated, five hundred doctors present.

Dr. Sims called attention to the great value of Dr. McLaughlin's paper read on the day before, and moved that one thousand copies be printed in pamphlet form, and be distributed among the members. This motion met with general approval, but on account of the financial question involved, it was substituted by one permitting the author to publish the paper as he saw most advantageous.

Dr. J. D. Osborne, chairman of the committee appointed on the president's recommendations, read the report, which contained the following that is of general interest: "We cordially indorse all that part of the message in reference to a State Board of Health, and recommend that it be incumbent upon the president to appoint said committee, and we would also recommend that this committee be authorized to secure the passage of a satisfactory law regulating the practsie of medicine, and in case of failure to do the same, they are at least to secure the repeal of the present law creating district examining boards, and to secure the passage of a law allowing none to practise medicine but those who are graduates of regular chartered schools. This is in no wise intended to be retroactive, nor to disturb the legal qualifications of those already qualified according to existing laws."

After the close of the executive session, (10:30 A. M.,) the section on "Obstetrics and Diseases of Children" was called, Dr. Wilson presiding.

Dr. E. J. Ward, of Waxahachie, read a paper entitled,

IS DENTITION A FACTOR IN THE CAUSATION OF INFANTILE DISEASES?

To trace the evolution of medical dogma from the earliest historical times would be interesting and valuable, though difficult; yet in the hands of a master would throw much light on what is now obscure, and would frequently lead us to modify our harsher judgments. Many of the dogmas of the past would lose the air of absurdity which they wear to us, while no doubt many of the dogmas we cherish will appear no less grotesque to those who come after us. We in this free-thinking age imagine ourselves to be unfettered by dogmatic restraints! But in this we are greatly mistaken. This time may come, but it is not now. We are indeed met at the outset by a dogma, (we use the term in no offensive sense,) which answers negatively the interrogatory we have made the caption of this paper. We mean by a dogma, an authoritative opinion, and such an opinion has been rendered on the subject we venture to bring to your notice to-day. On this subject the consensus of medical thought is expressed syllogistically thus:

"Physiological processes are never causes of disease. Dentition in infants is a physiological process. Therefore, infant dentition is not a cause of disease." The reader then challenged the premises of this syllogism, and necessarily the conclusion. The assumption that physiological or natural processes so nearly approach perfection that any interference with them on the part of the physician will be detrimental, while "checking certain reckless dealing with nature's methods" has proved very beneficial, it has, at the same time, often prevented timely interference when it was much needed; and has, indeed, retarded medical progress. It is the mother

of the mischievous adage, "Meddlesome midwifery is bad," more mischievous indeed in what is implied than in what is expressed. Equally so is the blind obedience of the practitioner to the idea that since dentition is a physiological process it does not need his scrutiny and care. If this were true, how is the evolution of the dentist accounted for? Is it not strange that these doctors of the teeth should be required to keep in order the products of the "physiological process of dentition?"

Close examination of the teeth reveals obvious disease and imperfection from the time they were cut, which often must have existed before they were erupted; they are crowded into a jaw which has progressively diminished in size till there is not room for the full set.

This anatomical incongruity, purely physiological, not only causes disease in the teeth, but is also responsible for some of the difficulties of dentition.

The author admitted that dentition is often accomplished without manifest disturbances of health, yet so often do fretfulness, irritability, malaise, and other symptoms arise therefrom, that one almost loses patience with the doctor, who notwithstanding blindly adheres to his "physiological heresy."

The author had been interrupted in writing his paper by a robust farmer who was positively ill, having nausea, headache, and paresis of an arm, from the eruption of a wisdom tooth. As soon as the tooth was removed, the symptoms subsided. Now, if the eruption of this wisdom tooth, just as much a physiological process as dentition in an infant, can give rise to such symptoms in an adult, why may not the latter process also? The difference between the two cases is that one is able to complain and the other is not.

Every physician has seen strong men and women sick from a similar cause, just as he has seen "many cases of illness caused by the teething of infants." Again and again the author has seen summer disease in teething

infants promptly relieved by lancing the gums, when all other remedies had been tried and had failed. But are physiological processes never causes of disease? The author proceeds to show that there is much misapprehension in regard to the line between physiological and pathological processes. The four primary functions of living organisms are assimilation, dissimilation, reproduction, and growth. If an organism were so perfectly adapted to its surroundings as to perform these functions without external hindrance, it could be said to be in a purely physiological state. The internal forces of the organism are constantly marshaled against opposing forces, and it is when the former are repulsed that we recognize a pathological condition. Hence, when we speak of physiological processes, we mean the performance of functions in such a manner as is common to organisms in the condition which we are accustomed to denominate health. The merest tyro knows that none of these processes are perfect.

The author illustrated by the crayfish, which has lived always in its natural environments, and was particularly interesting and instructive, as its physiological changes could be observed without removing him from his natural or physiological condition. In the moulting season we could notice his great difficulty in freeing himself from his exo-skeleton. He pulls and tugs to free his limbs from their shells until exhausted. After resting, he renews his struggles. This ecdysis is physiological, and yet he frequently forfeits a limb or limbs, or even his life, in doing a thing nature intended he should do or die. The author has often assisted this ecdysis, just as he had "with chloroform and forceps relieved women in the throes of natural labor from the sufferings, delays, and dangers of that physiological ordeal."

The ecdysis of the crayfish is a most striking example of the frequent impotency of physiological methods, and of the fact that organized beings are seldom so nicely

adapted to their surroundings as to overcome all the obstacles of their struggle for existence. No plant or animal indeed was ever so situated, and physiological death is the natural result: a surrender of the forces of the organism to forces it can not resist—what really occurs whether from assaults of the bacillus tuberculosis or from old age.

Natural labor might as well have been used as an illustration as the ecdysis of the crayfish, both being attended with much suffering, danger, and death. It may be urged that the artificial habits of civilized women have rendered parturition no longer a physiological process, yet if we may judge by the pelves of prehistoric women, childbearing was little if any less to be dreaded in that day than now. Labor, then, must be counted a physiological process in spite of the agonizing pain, the cervical or perineal rent, and the fact that mother and child may be both lost in the ordeal.

The oculist is to be pitied who believes the eye a perfect optical device capable of all that its possessor may require of it. The powers of accommodation, probably a later evolutional requirement of the eye, may be lost, yet the eye be no less physiological. What oculist would hesitate to supply the physiological deficiency with a suitable lens? And what physician would be less culpable if he failed to recognize the frequent impotence in the processes of dentition, and for that reason fail to afford relief to the patient?

The teeth demand the greatest care from the time of their eruption. Yet, if in a physiological condition, why can they not take care of themselves? Probably in the past, when ample maxillæ gave sufficient space between the teeth, they were able to do so. Man's diet and the diminution in the size of the jaw are responsible for some obvious and hurtful changes; so that it is rare to find a set of teeth which are symmetrical; yet no one will say that teeth are not physiological; and why will the physician who commends the care of the teeth, and sees that in spite

of this they are often a source of discomfort and disease, still insist that during dentition they are not the cause of disease?

This paper did not propose to discuss the diseases of infants in which dentition was an etiological factor. Its aim was to endeavor to prove, first, that in many, if not in the majority of, cases, dentition can not be regarded as wholly physiological; and second, that diseases of infants may be caused or complicated thereby, when the physician should recognize the condition and lend the aid the case requires. It was further urged that many physiological conditions may complicate or cause disease, thus demanding the interference and skill of the practitioner. The mere fact of its being physiological is never a bar to the exercise of such skill. In midwifery the imperative need is so apparent that few would deny it. But even here the "melancholy fate of Princess Charlotte is the fate of many thousands of women every year."

Many infants are sacrificed by being kept on a milk diet, their physiological food, when even that of the healthy mother is the worst possible food, and the physician who insists upon its continuance will lose many cases from summer disease which he might have saved by a change. The stockmen, learning by experience, have discovered experimentally that their best calves and colts are raised upon a purely artificial food, not even resembling chemically the mother's milk. A similar fact was stated with regard to wild cattle and horses; and with regard to plants it was remarked that: "It is perhaps humiliating to the physician to be compelled to learn from the stockmen and husbandmen, but certain it is that we may study their methods with profit, even if the knowledge drawn from these sources does not heighten our respect for the *a priori* conclusion arrived at in the physiological laboratory, or strengthen our faith in the teachings of those who would have us believe in the infallibility of physiological processes."

[This paper was very carefully prepared, and the train of logical thought running through it was so continuous and nicely adjusted as to render it difficult to make a fair transcript. It was well received by the association, and gave rise to much interesting discussion.]

Dr. West referred to that view now popular in most of the eastern and northern hospitals—the contrary of what Dr. Ward had advocated in the case of the infant—and stated that the process of lancing the gums of teething children was almost never seen.

Dr. Fountain discussed the physiology of the question, and was disposed to agree with Dr. Ward.

Dr. Clopton thought the idea might take the form of a question as to whether the interference in a physiological process by a physician for the purpose of relieving pain, though successful, was ever justifiable. A question which he insisted on was long since settled, and ought to be obsolete. He referred to the opposition Dr. Paul Eve gave to the introduction of chloroform on this ground.

Prof. Cain, of Nashville, discussed the question as to whether dentition was ever cause of disease in infancy. The reaction had been from the old practitioner, who never went without his lancet, and who incised the gums for every ailment in the infant, to the physician who literally followed the teachings of to-day and who never lances the gums. He was most heartily in favor of a middle course, and regarded it as indisputable that under some circumstances this physiological process was the initial point of many of the diseases of infancy. He considered this peculiar condition at that time, the number of important organs in process of development, the nervous system much more developed in proportion, and thus the more susceptible to reflex irritation. He spoke of how often the teething child is seen with a fluid resembling saliva drooling from its mouth—a fluid which is acid in reaction, and very different from the bland alkaline secretion of the salivary glands, and which, loaded with millions of germs, is being constantly swallowed to give rise to innumerable

digestive disturbances. This irritating secretion is the direct effect of a reflex irritation, which begins in the swollen and tender gums, through which the developing tooth is seeking an exit, while it is also pressing by its fang on the delicate dental nerves, and giving rise to many other and, perhaps, more serious reflex symptoms.

[TO BE CONCLUDED NEXT MONTH.]

THE PROPOSED LAW FOR REGULATING THE PRACTICE OF MEDICINE IN LOUISIANA.

If our State Medical Society had held its regular meeting this year, the committee on legislation would have presented the draft of a law, having for its object the regulation of the practice of medicine in this state. The meeting has been postponed until further notice, but it was necessary to take some action, especially as the legislature is now in session, and, if not adopted at the present session, nothing could be done for two years, when the legislature will meet again. The president of the State Society, Dr. C. D. Owen, appointed several members of the profession in New Orleans to aid the regular committee on legislation in its work of framing an acceptable law; the substance of their production is given below.

It does not require a very keen eye to see that regulation of the practice of medicine is needed in Louisiana. Several attempts to correct the existing evils have been made, but the measure of success obtained by these attempts is shown in the framing of a law intended to suppress these same evils.

The last law passed on the subject undertook to accomplish too much. It aroused the hostility of homœopaths and others, and it accomplished nothing. The law now about to be introduced into the legislature is so constructed as not to conflict with the interests of homœopaths and midwives, but, on the contrary, it is expected that they will actively support it, as they will benefit by its enforcement.

In this connection we are at liberty to say that the State Board of Health has prepared a law, to be submitted to the Legislature, which will, in a great measure, supplement or aid the law drawn up by the committee of the State Medical Society. Under present conditions, the Charity Hospital of New Orleans is empowered to prosecute quacks, all fines collected from such prosecutions to be turned into the treasury of the Charity Hospital. No such duty should ever have been saddled on a charitable institution; it lies entirely outside of the province of public charity, and the time and labor devoted to prosecuting quacks would be better spent in relieving human suffering. The suppression of quackery is a function appertaining to a body like the Board of Health rather than to a charitable institution. The act prepared by the Board of Health provides that the moneys (fines) derived from the prosecutions of quacks shall be turned over to the Board of Health. It will be seen that section 11 of the act prepared by the committee of the State Medical Society provides for the prosecution and punishment (fines and imprisonment) of quacks. The two laws will thus, in this respect, conflict with each other, instead of supplementing each other; and it would be well if a conference of the parties interested could be held, in order not to wage war in legislative halls, where even the semblance of a house divided against itself would prove very disastrous.

The proposed law, which has received the indorsement of the Orleans Parish Medical Society, is, in substance, as follows:

SECTION 1. Be it enacted by the General Assembly of the State of Louisiana, That no person shall practise medicine, in any of its departments, except dentistry, within this State, unless the person possesses all the qualifications required by this act.

SEC. 2. That any person wishing to enter upon the practice of medicine, in any of its branches, except dentistry, after the passage of this act, shall present to the Board of Medical Examiners a diploma from some medical college, in good standing, and he shall present himself before the Board for examination upon the following branches, viz., anatomy, physiology, chemistry, and the general principles of medicine and surgery, but without reference to any sectarian school or special dogma or doctrine; and he shall satisfy the Board, by evidence in writing, that he is twenty-one years of age, of good moral character, and possesses at least a fair pri-

mary education. Then the said Board shall issue a certificate, in his case, in accordance with the facts; and such certificate shall entitle the lawful holder thereof to all the privileges of this act.

SEC. 3. That immediately upon the passage of this act, the governor shall appoint six graduated physicians — one from each congressional district of the State — as a State Board of Medical Examiners, whose duty it shall be to examine into the qualifications of all applicants for permits to practise medicine, in any of its departments, in accordance with the foregoing sections of this act. Not less than four members of the Board shall constitute a quorum, and a majority of those present shall be necessary to reject or accept any application; but such rejection shall not bar applicants against reëxamination after the lapse of six months.

SEC. 4. That to prevent delay and inconvenience, two members of the Board may grant a temporary permit to any applicant, and must report thereon to the Board at the next regular meeting; such temporary permit shall not continue in force longer than until the next regular meeting of the Board; but such temporary permit shall, in no case, be granted within six months after the applicant has been refused a permit by the Board.

SEC. 5. That the first Board of Medical Examiners shall meet and organize within thirty days from the date of their appointment, and shall name two members for the term of four years, two members for the term of eight years, and two members for the term of twelve years, deciding by lot or agreement among themselves as to their respective terms of service. At the expiration of the above terms each member shall be appointed by the governor for twelve years. All vacancies occurring in the Board, by death or resignation, shall be filled by the Board itself, for the remainder of such term or terms. The members of said Board shall not be members of the State Board of Health.

SEC. 6. That the regular meetings of the Board shall be held at least twice a year, at such time and place as the Board may decide, but the president of the Board may call special meetings whenever it is demanded by public necessity; the call to be issued by the secretary and signed by the president.

SEC. 7. That the Board of Medical Examiners are authorized to elect such officers and form such by-laws as may be necessary for the efficient operation of the Board. The Board shall have a common seal, and the president and secretary shall be empowered to administer oaths in the taking of testimony upon any matter pertaining to the duties of said Board.

SEC. 8. 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, who shall make such recordation in a book to be kept for that purpose only, and also certify to such recordation by an indorsement on the original certificate, which the holder thereof shall transmit or deliver to the State Board of Health; and the clerk recording 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 of such certificate to be placed on the list of registered physicians or surgeons — the publication of which is hereinafter 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 practise medicine.

SEC. 9. 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 be 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 residence; 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 Board of Medical Examiners, as hereinafter provided for.

SEC. 10. That the members of said Board shall receive, as a compensation for their services, ten ($10) 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 Board, upon the certificate of the President and Secretary. The Board is empowered to demand a fee of one ($1) dollar for the issuing of each certificate. The fee for examination shall be ten ($10) dollars. If the applicant fails to pass a satisfactory examination and no certificate is issued to him, five ($5) dollars only of his fee is to be retained. The fee for certificate of temporary permit shall be one ($1) dollar, to be paid into the treasury of the Board; said fee to be accredited to the applicant when he applies to the Board for a permanent permit.

SEC. 11. 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-five ($25) dollars and not exceeding one hundred ($100) dollars for each offense, to be recovered in an 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. 12. That any person shall be regarded as practising medicine, in any of its departments, within the meaning of this act, who shall append the letters M. D. or M. B. to his or her name, or repeatedly prescribe or direct, for the use of any person or persons, any drug or medicine or other agency for the treatment, cure, or relief of any bodily injury, infirmity, or disease. This act shall not apply to dentists or midwives in the legitimate practice of these branches exclusively.

SEC. 13. That any person practising medicine, in any of its departments, in this State, without first having obtained the certificate 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 fifty ($50) dollars or more than one hundred ($100) dollars, or by imprisonment in the parish jail for a period of not less than ten (10) or more than ninety (90) days, or by both fine and imprisonment. Justices of the Peace and the respective municipal judges shall have jurisdiction of violations of the provisions of this act; and it shall be the duty of the respective District Attorneys to prosecute violations of the provisions of this act.

SEC. 14. That the said Board shall have power to revoke any permit or certificate issued by them when, upon satisfactory proof, it shall appear that the physician thus licensed has been guilty of immoral or unprofessional conduct.

SEC. 15. 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 his services rendered, nor be allowed to testify as a medical or surgical expert in any court in this State, nor execute any certificates as a surgeon or physician, nor to hold any medical office, nor to be recognized by the State, or parish, or municipal corporations, 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. 16. That this act shall not apply to any commissioned surgeons of

the United States army, navy, or marine hospital service; to physicians or surgeons from other states or territories, in actual consultation with a registered physician of this State.

SEC. 17. That the said Board shall report to the prosecuting officer of the State of Louisiana all persons violating the provisions of this act. It shall report, annually, to the Governor of the 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. 18. That it shall not be lawful for the State Board of 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; and the said Board shall look alone to the revenue derived from the operation of this act for the compensation designated in section 10 of this act. And if said revenue is not sufficient to pay each member in full, as per section 2, then the amount thus received shall be pro rated among the members. But if there should be a greater revenue derived than shall be sufficient to pay the members, as provided in section 10, such surplus shall be paid to the Treasurer of the State, who shall receipt the Board for the amount received, and shall account for such money as other State revenue.

SEC. 19. That this act shall take effect thirty (30) days after its promulgation.

SEC. 20. That all laws or parts of laws in conflict with this act be and the same are hereby repealed.

ABSTRACTS, EXTRACTS AND ANNOTATIONS.

MEDICINE.

A CONTRIBUTION TO THE STUDY OF IMMUNITY.

[DR. H. LEO, in *Zeitschrift für Hygiene.*]

Remembering the fact that diabetic patients so often succumb to pulmonary tuberculosis, and manifest a great tendency to suppurations, Leo, at the instance of Dr. Koch, made experiments at the Berlin Hygienic Institute to determine if animals, which contained in their tissues an abnormal amount of sugar for a long time, were unusually susceptible to infection. The experiments were specially made with the view of learning if animals, which had become immune against certain infectious diseases, could be made susceptible to these same diseases by saturating their tissues with sugar.

A condition of persistent increased sugar formation was obtained by adding a small amount of phloridzin to the fodder.

Experiments with splenic fever on immune rats gave a negative result, though they were repeated frequently. Inoculations of tubercle-bacilli on white mice were not followed by important results, whereas most of the mice fed with phloridzin succumbed in fourteen days. In those of the mice which lived more than two weeks, the lymphatic glands in the neighborhood of the point of inoculation were usually swollen; several times tubercle-bacilli were found in these glands. Attempts to keep the animals longer under the effect of phloridzin failed. The expectation that guinea pigs under the phloridzin treatment would succumb more promptly to tuberculosis, was not fulfilled.

On the other hand, a positive result was obtained with glanders. White mice, which were otherwise immune against the disease, lost their immunity under the phloridzin feeding. Extended and frequently repeated series of experiments here always led to the same result. Control mice, without the phloridzin treatment, which were inoculated in large numbers with glanders, never showed the slightest trace of infection.

In what manner the phloridzin, or the sugar in secreted in increased amount in the organisms of the mice, causes the immunity to be lost, is a matter for future observations to show. — *Centralblatt für Bakteriologie und Parasitenkunde*, February 21, 1890.

THE APPEARANCE OF MERCURY IN THE TAPEWORM OF A SYPHILITIC PATIENT UNDER MERCURIAL TREATMENT.

[Ludwig Oelkers, Ph. D., in *Centralblatt für Bakteriologie und Parasitenkunde*, February 7, 1889.]

On October 21, 1889, a butcher's man, aged 28 years, was admitted to the syphilitic department of the medical clinic, (of Göttingen); he had already undergone an inunction treatment in the Bremen Hospital. This was resumed at the Göttingen clinic, and 176 grams of unguentum hydrargyri cinereum (=59 grams of mercury) were rubbed into him. While in Bremen, links of tapeworm passed from him, and in our clinic the same thing happened.

The links were remarkable for their greyish color. A dose of extract of male fern expelled two tapeworms, (tœnia mediocanellata,) the grey color of which suggested the presence of mercury. Dr. Ebstein suggested to test for mercury. A chemical examination revealed the presence of this substance. (In what form the quicksilver was contained in the parasite is undecided. The microscopical examination makes it probable that it was in the form of an oxide or sulphide.)

A segment of a tapeworm when placed between two slides, and completely cleared up, presented the following appearances: the mecurial compound was particularly deposited in the *vas deferens*, in several of the *vasa efferentia*, and the testicle-sacs. The seminal ducts contained the mercury in such large quantity that they could be traced by the naked eye throughout all their windings. In the ducts of several of the seminal vesicles, and in the vesicles, too, small particles were scattered irregularly. The vagina likewise appeared as a black tube, which, on oblique section, showed a small central lumen. In smaller amount the quicksilver was deposited on the walls of the uterus, whilst the ovaries and other organs were quite free. Oblique and longitudinal sections of the segments, stained with eosin and other reagents, showed that small particles of quicksilver could be seen in the parenchyma of the segments, in the central as well as the peripheral portions. On the surface of the segments the mercury had gathered in considerable quantity wherever rills and depressions were found. This was particularly the case about the head, where large quantities of mercury had gathered between and around the suckers; the blackish color of the head was quite visible to the naked eye.

It has already been stated that the head of the tœnia mediocanellata has a black color. This is due to a nuclear pigment deposited in the connective substance, and has no connection with the deposits of quicksilver, which are also found on the head. Neither have the mercurial deposits in the vagina and other organs any relationship to the heaps of pigment observed by Leuckart in old proglottides. Leuckart himself stated that this pigment was found only in the organs of those proglottides that were no longer functioning; but in our case the mercurial deposits were found in young as well as old segments.

The above case is the first one published which shows

that mercury absorbed from the body (skin) can pass into and become deposited in intestinal parasites. Tapeworm is here more frequently observed in syphilitic patients, but no other has been seen altered in appearance.

CO-EXISTENCE OF CANCER AND TUBERCULOSIS.

[Dr. A. Loeb, Inaugural Thesis.]

In 1838, Rokitansky stated that cancer and turberculosis were antagonistic, and that either prevented the development of the other. Lebert and Grund, however, after a series of observations, declared that the view held by Rokitansky and his followers was false and groundless; and in 1867, W. Cooke even said that cancer and tuberculosis might be related, a view also shared by Bourdet, Fritsch, and Winckel. It has many times been tried to show that cancer and tuberculosis are frequently associated. Dittrick, for example, thought that in cancer the patients waste away; that the retrograde metamorphosis is more tumultuous (*stormier*,) whereby fibrine-disorders arise, among which occurs one corresponding to the tuberculous condition. Loeb believes, on the contrary, that accident plays the chief part in combining the two morbid conditions, as each one alone is so frequent, but he also believes, in the present state of our knowledge, it is not probable that the formation of cancer is favored by tuberculosis; and further, that the cancerous cachexia undoubtedly provides an extraordinarily fruitful soil for the growth of tubercle-bacilli.

Among 1,539 autopsies recorded in the Munich Pathological Institute for 1884, 1885, and 1886, (children under 15 years not being included,) Loeb found 495 cases of tuberculosis, and 111 cases of carcinoma. Coëxisting tuberculosis and cancer were found thirty-one times, i. e., every sixteenth case of tuberculosis was associated with every third or fourth case of carcinoma.—*Centralblatt für Bakteriologie und Parasitenkunde.*

SURGERY.

THE TREATMENT OF TETANUS.

Dr. Francesco Pavlini, in *Riforma Medica*, No. 9, recommends subcutaneous injections of carbolic acid in the

treatment of tetanus. He cites the case of a boy, aged 15, who developed severe tetanus after a contused wound of the foot in the interdigital fold between the fourth and fifth toes. There were present trismus, opisthotonus, and tonic rigidity of the abdominal muscles. Warm baths and large doses of chloral had no effect upon the intensity and frequency of the attacks, the temperature rising up to 40 deg. C. On the fourth day from the commencement of the disease, subcutaneous injections of a 1 per cent solution of carbolic acid were resorted to at intervals of three hours during the first four days. As early as the second day a fall of temperature and diminution of the severity and duration of the paroxysms was observed. As the patient improved, the number of injections was gradually decreased, but the treatment was kept up until the twenty-seventh day, when the trismus and rigidity of the abdominal muscles had completely disappeared. Recently a severe case of tetanus was treated successfully in a similar manner in Bacelli's clinic at Rome.— *Wiener Medizinische Presse; International Journal of Surgery.*

[In the New Orleans Medical and Surgical Journal, April, 1890, appeared an article on tetanus, translated from the German. Inoculations with blood and other fluids failed to produce the disease; but when the fluid squeezed or scraped from the vicinity of the point of inoculation of an animal dead of tetanus was used, tetanus was invariably produced. This fact will perhaps throw some light on the efficacy of the subcutaneous injections of a carbolic solution, if made near the seat of injury.— Eds.]

Book Notices.

The Pathology and Treatment of Displacements of the Uterus. By Dr. B. S. Schultze, Professor of Gynecology, Director of the Lying-in Institution, and of the Gynecological Clinic, in Jena. Translated from the German by Jameson J. Macan, M. A., M. R. C. S., Eng. etc., and edited by Arthur V. Macan, M. B., M. Ch., Master of the Rotunda Hospital, Dublin, etc.,

with one hundred and twenty illustrations. New York: D. Appleton & Co., 1888; New Orleans: Armand Hawkins. Price, $3.50.

We are very much surprised to find that so long and useful a book could be written on Displacements of the Uterus. The work certainly covers the whole ground, and is indispensable as a work of reference; but we are afraid a great deal of it shall be forgotten in private practice, in order not to think too much — not only of the position of the womb, but of the womb itself, in the treatment of our patients. One has only to glance at the references given to show the work and research of the author. G. B. L.

Monthly Nursing, by A. Worcester, A. M., M. D., Fellow of the Massachusetts Medical Society, Physician to the Waltham Hospital. Second edition. New York: D. Appleton & Co., 1890; New Orleans: Armand Hawkins. Price, $1.25.

It is very hard to know how much to teach a nurse, and how little. A nurse may be called on in emergencies for almost any complications, and one may say that what is worth teaching at all is worth teaching thoroughly, so that you can hardly put a limit as to the amount of obstetrics a monthly nurse ought to know. It is beyond dispute that the more thoroughly they know obstetrics the better it will be both for themselves and their patients, but we must remember that a person with the capacity and education to be a thoroughly competent nurse may not have the capacity and education to acquire a thorough knowledge of obstetrics, and that by attempting to teach too much they often learn less practically than if we lowered our standard. The teaching of nurses is still in its infancy, but this little book gives a very good idea of where the line should be drawn, so that we may not really lose by attempting too much. G. B. L.

Diseases of Women—A Manual of Non-surgical Gynecology, designed especially for the use of students and general practitioners, by F. H. Davenport, A. B., M. D., Assistant in Gynecology Harvard Medical School, etc., with numerous illustrations. Philadelphia: Lea Bros. & Co., 1889: New Orleans: Armand Hawkins.

As the author says, there is quite a multiplicity of such treatises and text-books, and the gap which he mentions as being the cause of the writing of this book is evidently more clearly appreciated by the author than by his readers. However, he has written a very readable and sensible book, as far as it goes, which would have been very much improved by the very thing which he makes it a point to leave out — some pathological anatomy and the ordinary surgical operations of this specialty. G. B. L.

Diseases of Women and Abdominal Surgery — By Lawson Tait, F. R. C. S., Edin. and Eng., LL. D., M. D., (Honoris Causa,) of the University of New York, etc., Vol. 1. Philadelphia: Lea Bros. & Co., 1889; New Orleans, Armand Hawkins. Price, $3.

We certainly do welcome Mr. Tait's work, as there are very few fields in this specialty which have not been enriched by his genius. His operation for laceration of the perineum is certainly not only the best, the easiest, but we do not hesitate to say, the only method which as nearly as possible restores the perineum to its original condition. His operation for rectocele and vesicocele has the recommendation of quickness, but is not so evidently better than others. His wholesale condemnation of Emmet's operation we think unjustifiable. His tirade against vaginismus is certainly borne out by common sense and our own experience. And so we could go to the end of the book, approving and disapproving, but we will only mention one thing more, which we read with great surprise. In speaking of cellulitis he speaks of the real disease being generally pelvic peritonitis. We can not quarrel with this, but in giving the treatment he says as follows:

"Opiate pessaries and opium by the rectum and mouth with warm fomentations, and perhaps leeches over the pubis, are the best remedies." Though Tait was not the first man to use purging in general peritonitis, even in abdominal operations, he certainly is one of the foremost champions in its advocacy. This advocacy led us to use the purging treatment with success in peritonitis, and that led to the same treatment with us in pelvic peritonitis and cellulitis — a treatment that in our hands has produced immeasurably better results than opium. Any sentence recommending opium in this disease reads strangely as

coming from Tait. We look forward to the second volume with much interest. G. B. L.

Syllabus of the Obstetrical Lectures in the Medical Department of the University of Pennsylvania. By Richard C. Norris, A. M., M. D., Demonstrator of Obstetrics, University of Pennsylvania. Philadelphia: W. B. Saunders, 1890. Price, $2.

We have never seen much advantage in books of this kind, for it has to us been always easier to remember the contents of a more complete treatise than the answers to special questions. Besides, medicine has never seemed to us to have reached that scientific standpoint in which questions could be made and answered in a few words. For the students of the lecturer who has delivered these lectures they may be very useful, but other students, we think, will find it more to their advantage to study their text-books and their notes on the lectures delivered by the person who is to examine them. G. B. L.

Foods for the Fat. A treatise on Corpulency, and a Dietary for its Cure. By Nathaniel Edward Davis, Member of the Royal College of Surgeons, England. American edition, edited by Charles W. Greene, M. A., M. D. Philadelphia: J. B. Lippincott & Co., 1889; New Orleans: Geo. F. Wharton & Bro. Price, 75 cents.

This is a more interesting study than is generally supposed. We consider fat a very dangerous and almost incurable disease. Fat is used in the body for the purpose of aiding in the conversion of nutrient fluid to tissue. An accumulation of fat may show an active digestion, but shows a lowered tissue-nutrition; and on the latter depends our mental or muscular activity. There may be a few cases where it would be the physiological thing to curtail the diet in certain directions, but the very reading of this book in places will suggest that perhaps too little attempt has been made to improve the tissue building, and too much to curtail the fat producing power. G. B. L.

A Practical Text-Book of the Diseases of Women. By Arthur H. N. Lewers, M. D., M. R. C. P., London, Assistant Obstetric Physician to the London Hospital, etc. With illustrations. Philadelphia: P. Blakiston, Son & Co., 1888; New Orleans: Armand Hawkins. Price, $2.25.

This is a good book for those who have not the time to read larger works, but we are afraid that conciseness in these works is better appreciated by those who have read a great deal on the subject than by those for whom these books are evidently written. G. B. L.

Diabetes: Mellitus and Insipidus. By Andrew H. Smith, Professor of Clinical Medicine and Therapeutics at the New York Post Graduate Medical School, etc. Detroit, Mich.: George S. Davis, 1889.

This is a very good monograph on the subject, but we do not exactly see its *raison d'être*. There are so many medical books written that we certainly think a book of this kind ought to bring up something new, in an attempt to explain the pathology of the disease. G. B. L.

Text-Book of Medical Chemistry. For medical and pharmaceutical students and practitioners. By Elias H. Bartley, B. S., M. D., Professor of Chemistry and Toxicology, etc. Second Edition. Revised and enlarged. Sixty-two illustrations. Philadelphia: P. Blakiston, Son & Co., 1890. New Orleans: Armand Hawkins, 194 Canal street. $2.

Dr. Bartley has increased the list of useful text-books on chemistry intended more particularly for the use of students. He devotes the first seventy pages to a chapter on physics, most of which, while very instructive, is still slightly out of place in a work on chemistry. The second part contains a concise but clear exposition of the principles and laws governing chemical action. The section on inorganic chemistry takes more than one-half of the work. The arrangement of the text is a very good one, and, in its chemical features, follows that of standard works; but, in addition, at proper times paragraphs on the physiological action of the substances under consideration

are introduced. This feature imparts a medical value to the work. The section on organic chemistry describes the various series and groups of organic compounds. Antipyrine, antifebrine, phenacetine, etc., are considered in their chemical relations. The ptomaines and leucomaines are noticed, and the soluble ferments, (pepsine, diastase, etc.,) are touched upon. Poisons, their antidotes, and the methods of treatment take up eight pages. The closing ten pages of the body of the work are devoted to analysis of urine. An appendix contains some useful tables, and a very useful glossary of unusual chemical terms.

Dr. Bartley's work is a good one, and deserves the honor of a second edition, which it has gained.

A. McS.

Manual of Skin Diseases — with special reference to diagnosis and treatment, for the use of students and general practitioners. By W. A. Hardaway, M. D., Professor of Skin Diseases in the Missouri Medical College and in the St. Louis Post Graduate School of Medicine; Dermatologist to the Augusta Free Hospital for Children; Consulting Dermatologist to the City and Female Hospitals; Ex-President of the American Dermatological Association. St. Louis: Geo. F. Lange, 1890.

We have read this work with much care and increasing interest; it is essentially a practical book, and one which clearly reflects the views of the author. Dr. Hardaway manages to refer, however, by quotation and in foot notes, to the most recent dermatological literature, and thereby furnishes his readers with a text-book entirely up to date. The frontispiece is Heitzman's excellent diagramatic illustration of a cross section of the skin, though the anatomy of that organ is not discussed by the author. His reference to the treatment of hypertrichosis (unnatural growth of hair) by electrolysis is especially interesting when we remember that Dr. Hardaway was the first to present Dr. Michel's ingenious method to the profession, and to assert its practical value. The author states that after an experience of fifteen years in the treatment of facial hirsuties of women, fully one-third of his patients presented some sexual derangement — most frequently amenorrhœa. Hereditary influence is also to be counted as a common cause of

hirsuties. He has seen cases where sulphur has developed hypertrichosis when applied to a part for a great length of time.

Referring to the treatment of the intense pruritus that so frequently accompanies eczema, he confirms the observations of several dermatologists in the use of quinine. We are pleased to see this, and can add our own testimony to its good effects, for we have been using quinine as an antipruritic for the past two years, and with very few failures.

In an appendix a number of formulæ for internal and external remedies are given, and also a diet table enumerating what should be allowed and what should be avoided. "There is no doubt of the practical fact," says the author, "that a judicious regulation of the food and drink in many skin disorders will often yield results that could not be obtained in any other way."

This is essentially an American book, and one from which good and useful hints on the subjects treated can be obtained in the most concise form. H. W. B.

Publications Received.

The Early Detection of Pulmonary Consumption. By Wm. B. Canfield, A. M., M. D. *Reprint.*

Chronic Urethritis and Other Affections of the Genito-urinary Organs. By Matthew Berkeley Hill, M. B., London, F. R. C. S. London: H. K. Lewis. 1890.

May's Diseases of Women; being a concise and systematic exposition of the theory and practice of gynecology, for the use of students and practitioners of medicine. Second edition. Revised by Leonard I. Ray, M. D.

Practical Photo-micrography by the Latest Methods. By Andrew Pringle, F. R. M. S. New York: Scovill H. Adams Co. 1890.

The Pulse. By W. H. Broadbent, M. D. Lea Bros. & Co.

Food in Health and Disease. By J. Burney Yeo, M. D. Lea Bros. & Co.

Essentials of Diseases of the Skin. By Henry W. Stellwagon, M. D. Saunders's Question Compends.

Essentials of Examination of Urine. By Lawrence Wolfe, M. D. Saunders's Question Compends.

Transactions of the Medical Society of the State of California. 1889.

International Medical Annual. 1890. E. B. Treat & Co.

Address to the Medical Society. By Middleton Michel, M. D., on retiring from its presidential chair. A sketch of the origin and history of the Medical Society of the State of South Carolina, with brief notices of some of the brilliant men whose names illuminate its records

MORTUARY REPORT OF NEW ORLEANS

For April 1890.

CAUSE.	White.	Col.	Male.	Female.	Adults.	Child'n.	Total.
Fever, Yellow	.....	.....	.....	.....	.....	.....	.....
" Malarial	1	6	6	1	3	4	7
" Remittent	2	.....	.....	2	2	.....	2
" Congestive	2	.....	2	.....	.....	2	2
" Typho	1	1	2	.....	1	1	2
" Typhoid	2	.....	1	1	2	.....	2
" Puerperal	1	1	.....	2	2	.....	2
" Typho-Malarial	.....	.....	.....	.....	.....	.....	.....
Scarlatina	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	.....
Measles	10	1	5	6	.....	11	11
Diphtheria	7	1	4	4	.....	8	8
Whooping-cough	.....	.....	.....	.....	.....	.....	.....
Meningitis	12	1	7	6	5	8	13
Pneumonia	20	16	21	15	14	22	36
Bronchitis	7	4	6	5	5	6	11
Consumption	42	29	40	31	64	7	71
Cancer	9	5	3	11	14	.....	14
Congestion of brain	3	2	1	4	1	4	5
Bright's Disease, Nephritis	18	5	16	7	23	.....	23
Diarrhœa (Enteritis)	13	10	9	14	13	10	23
Cholera infantum	9	4	9	4	.....	13	13
Dysentery	5	2	4	3	7	.....	7
Debility, General	4	3	2	5	7	.....	7
" Senile	12	6	7	11	18	.....	18
" Infantile	5	6	7	4	.....	11	11
All other causes	132	89	116	105	156	65	221
Total	317	192	268	241	337	172	509

Stillborn children—White, 34; colored, 14; total, 48.

Population of city—White, 184,500; colored, 69,500; total, 254,000.

Death rate per 1000 per annum for city — White, 20.07; colored 33.15; total, 24.05.

DIPHTHERIA RECORD FOR APRIL, 1890.

	Cases.			Deaths.		
Dist.	White.	Colored.	Total.	White.	Colored.	Total.
1	2	1	3	2	.....	2
2	2	1	3	1	.....	1
3	5	1	6	2	1	3
4	1	.....	1	1	.....	1
5	.....	.....	.....	.....	.....	.....
6	1	.....	1	1	.....	1
7	.....	.....	.....	.....	.....	.....
	11	3	14	7	1	8

HENRY WM. BLANC, M. D.,
Chief Sanitary Inspector.

METEOROLOGICAL SUMMARY—MARCH.

STATION—NEW ORLEANS.

DATE	TEMP'RE. Mean	Max	Min	Prec'p. in inches and hund.
1	68.0	77.0	60.0	.07
2	73.0	79.0	67.0	.....
3	67.0	74.0	60.0	.81
4	72.0	84.0	60.0	.....
5	70.0	78.0	61.0	.....
6	68.0	79.0	58.0	.....
7	70.0	80.0	61.0	.....
8	74.0	84.0	65.0	.....
9	72.0	83.0	61.0	.17
10	64.0	72.0	57.0	.....
11	60.0	75.0	56.0	.....
12	68.0	78.0	58.0	.....
13	73.0	82.0	64.0	.....
14	72.0	81.0	63.0	.....
15	72.0	83.0	62.0	.....
16	73.0	82.0	64.0	.....
17	73.0	80.0	66.0	1.86
18	70.0	75.0	64.0	.....
19	66.0	74.0	58.0	.....
20	68.0	75.0	62.0	.03
21	68.0	71.0	64.0	.13
22	68.0	72.0	65.0	.21
23	74.0	79.0	68.0	.08
24	73.0	81.0	65.0	.....
25	74.0	82.0	66.0	.....
26	74.0	81.0	67.0	.05
27	70.0	72.0	67.0	.03
28	68.0	74.0	61.0	.02
29	70.0	77.0	62.0	.....
30	71.0	80.0	62.0	.....
31	....	....	....	.....
Sums	....	....	....	.....
Means	....	....	....	.....

SUMMARY.

Mean barometer, 30.120.
Highest barometer, 30.284, 11th.
Lowest barometer, 29.906, 17th.
Mean temperature, 73.3.
Highest temp., 84, 4th; lowest, 56, 11th.
Greatest daily range of temp., 24.0.
Least daily range of temperature, 7.0.

MEAN TEMPERATURE FOR THIS MONTH IN

1871..68.2	1876..68.9	1881..66.8	1886..65.6
1872..70.4	1877..67.9	1882..72.5	1887..67.9
1873..66.1	1878..71.7	1883..71.4	1888..69.9
1874..65.5	1879..68.0	1884..68.2	1889..70.2
1875..65.0	1880..71.2	1885..70.5	1890.. —

Total excess in temp. during month, 39.
Total excess in temp. since Jan. 1, 503.
Prevailing direction of wind, S. E.
Total movement of wind, —— miles.
Extreme velocity of wind, direction, and date, 40 miles, S. E., on 23rd.
Total precipitation, 3.46 inches.
Number of days on which .01 inch or more of precipitation fell, 11.

TOTAL PRECIPITATION (IN INCHES AND HUNDREDTHS) FOR THIS MONTH IN

1875..... 8.05	1880..... 6.88	1885.... 3.67
1876..... 6.41	1881..... 3.92	1886.... 5.60
1877..... 4.79	1882..... 4.83	1887.... 1.87
1878..... 1.51	1883.....14.20	1888.... 1.89
1879..... 9.17	1884..... 6.48	1889.... 2.28

Total deficiency in precip'n for month, 3.29.
Total deficiency in precip'n since Jan. 1, 14.09.
No. of clear days, 8. No. of partly cloudy days, 12. No. of cloudy days, 10.
Frosts, none.
Dates of lunar halos, 3rd. Thunder storm on 17th. Mean Max. Temp., 78.1; Mean Min. Temp., 62.5.

NOTE.—Barometer reduced to sea level. The T indicates trace of precipitation.

R. E. KERKAM, *Signal Corps Observer*

PUBLISHERS' DEPARTMENT.

Address all communications to L. GRAHAM & SON, Mgrs. Bus. Dept., 99 to 103 Gravier St., New Orleans.

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NEW SERIES: Whole No. 306.

JUNE, 1890.

VOL. XVII. No. 12.

NEW ADVERTISEMENTS IN THIS ISSUE.

INDEX TO ADVERTISEMENTS.

N. B. Advertisement forms are closed on the 20th day of the month preceding date of issue, and to insure publication in a particular number, copy must be in our hands by that date; and all advertisements or copy for the Publishers' Department must be unobjectionable to medical ethics.

PUBLISHERS' NOTES.

OUR ADVERTISERS. To the readers of our JOURNAL we can heartily commend the claims of the business firms who announce their various preparations and facilities through the medium of our advertising pages. A proper study and gleaning of knowledge from these announcements is not, unfortunately, a general habit; indeed it may be said that few avail themselves of so valuable an opportunity to keep themselves posted. Without the conscientious and energetic work of the various auxiliaries to medical practice with which our pages abound, the efforts of the physician would be sadly hampered. The advertisers furnish a large proportion of the support required by any publication; and medical advertisers are much interested in encouraging the proper presentation of medical literature: they correctly consider it as the proper medium for presenting their claims. Very many offer sample packages of their preparations gratis to those who will send for and test them. They should be encouraged in their efforts by the progressive doctors of the day, to which class only, we believe, our JOURNAL goes. There is every reason for urging this. READ THE ADVERTISEMENTS.

PROSPECTUS FOR VOLUME XVIII.

In accordance with the intimation given in our last issue, we present herewith a list of the papers that will appear in the Original Department of forthcoming numbers of the JOURNAL.

It is not, however, to be considered from the stress that we lay on this feature of our future issues, that attention and care will be lacking in the preparation of the other departments of the JOURNAL. On the contrary, the superior excellence of the original matter to be contributed to our pages will find appropriate setting in the varied character of medical literature that will be a part of the contents.

The publishers accept this opportunity to state that they already feel encouraged by the appreciative recognition by the profession of their efforts to add to the JOURNAL's value and attractiveness, and trust that this exposition of their views and purposes will, as the next volume unfolds its leaves, be found to have been realized by the subscribers to its continuance.

We are now maturing plans for a novel feature, in strict accord with modern ethics, in connection with the publication of the JOURNAL, the details of which we hope to lay before our readers in the initial number (July) of the next volume.

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DR. HUNTER MCGUIRE, of Richmond, Va., will contribute a surgical paper to our next volume.

DR. J. W. MCLAUGHLIN, of Austin, Tex., will write on "SALPINGITIS." We call the attention of our readers to the novel views of Dr. McLaughlin on "Immunity," embodied in the report of the proceedings of the Texas Medical Association, published in this number.

Dr. Geo. B. Lawrason, of New Orleans, Instructor in Diseases of Women in N. O. Polyclinic, will contribute a paper on "Vascular Neuroses." He will explain these protean affections on the basis of sound modern pathology. This paper will appear in our August issue.

Drs. Middleton Michel and F. Peyre Porcher, of Charleston, S. C., will also contribute to Vol. XVIII.

Dr. Jno. B. Elliott, Professor of Theory and Practice of Medicine, Tulane University, New Orleans, will write on some subject connected with Internal Pathology. Dr. Elliott's wide experience in the diseases of the Southwest will render his paper specially valuable to practitioners in this section.

Dr. F. W. Parham, Instructor in General and Clinical Surgery, and Dr. Chas. Chassaignac, Instructor in Genito-Urinary and Rectal Surgery, New Orleans Polyclinic, will contribute surgical papers which will be of practical value.

Dr. R. Matas, Instructor in Operative and Clinical Surgery, will also contribute a practical surgical paper.

Dr. J. D. Bloom, Instructor in Diseases of Children, will write an article, which will be illustrated. Dr. Bloom, has been using a new appliance, devised by himself, in the treatment of hip-disease in children. His apparatus fulfills all the indications for treatment, but, at the same time, the little sufferer is not confined to the bed—a point of capital importance in maintaining the nutrition of the young patient.

Dr. T. O. Summers, of Chicago, (late of Jacksonville, Fla.) will contribute a paper on "Osteomalacia."

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Our July issue 1890, the first number of the new volume, will contain an article by Dr. H. W. Blanc, *of New Orleans, on* "The Plagues of Egypt."

Our July issue will also contain a paper by Dr. J. J. Bland, *of Houma, La., on* "Abscess of the Liver."

In the March number of the *London Medical Recorder* appears the following article, commendatory of a well-known American product:

"Listerine is an antiseptic and deodorizing preparation which has for many years been a favorite with American surgeons. Its qualities are due to the essential antiseptic constituents of thyme, eucalyptus, baptisia, gaultheria and mentha arvensis, in combination with which is associated a stated quantity of benzo-boracic acid. Experience points to its reliability in obtaining that condition of asepsis which is the ideal of every surgeon, and it has the distinct advantage of being fragrant and non-poisonous. Its antiseptic and anti-fermentative properties are not confined to lesions of the surface structures, and it is largely used for internal medication, in doses of a teaspoonful, in suitable cases. It does not coagulate serous albumen, and it is thus free from the drawback which so markedly limits the action of such agents as corrosive sublimate, most of which are, moreover, extremely poisonous. Listerine, then, is an agreeable and powerful antiseptic and deodorizer, well adapted for ordinary surgical work, available for internal administration, and useful for gargles, mouth washes and lotions, for which purpose it may be employed without hesitation, seeing that no mishap can occur, even in unskilled hands."